Listado de secuencias

<110> Alexion Pharmaceuticals, Inc.

<120> POLIPÉPTIDOS DE FOSFATASA ALCALINA Y MÉTODOS DE USO DE LOS MISMOS

<130> 50694-082WO3

<150> US 62/945,431
<151> 2019-12-09

<160> 269

<170> PatentIn versión 3.5

<210> 1
<211> 507
<212> PRT
<213> Homo sapiens

<400> 1

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
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Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

```
Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320
```

```
His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
               325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
               405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Gly Pro Leu Leu Leu
               485                 490                 495

Ala Leu Ala Leu Tyr Pro Leu Ser Val Leu Phe
            500                 505
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<210> 2
<211> 513
<212> PRT
<213> Homo sapiens

<400> 2

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Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Glu Ala
1               5                  10                  15


Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr Ala
            20                  25                  30


Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser Thr
        35                  40                  45


Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu Gly
    50                  55                  60


Pro Glu Ile Pro Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu Ser
65                  70                  75                  80


Lys Thr Tyr Asn Val Asp Lys His Val Pro Asp Ser Gly Ala Thr Ala
                85                  90                  95


Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110


Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125


Val Ile Ser Val Met Asn Arg Ala Lys Lys Ala Gly Lys Ser Val Gly
    130                 135                 140


Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160


Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Val Pro Ala
                165                 170                 175
```

```
Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Arg Met Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Tyr Ser Gln Gly
    210                 215                 220

Gly Thr Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

Arg Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Pro Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Met Lys Tyr Glu Ile His Arg Asp Ser Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Phe Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu Thr Ile Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Ser
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Pro
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Gly Lys Ala Arg Asp
```

```
    370                 375                 380

Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Leu Lys Asp Gly Ala Arg Pro Asp Val Thr Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro Leu Asp Glu Glu Thr His
            420                 425                 430

Ala Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Thr Phe Ile Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala His Pro Gly Arg Ser Val Val Pro Ala Leu
                485                 490                 495

Leu Pro Leu Leu Ala Gly Thr Leu Leu Leu Leu Glu Thr Ala Thr Ala
            500                 505                 510

Pro
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<210> 3
<211> 513
<212> PRT
<213> Homo sapiens

<400> 3

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Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Gln Ala
1               5                   10                  15
```

```
Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr Ala
            20                  25                  30

Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser Thr
        35                  40                  45

Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu Gly
    50                  55                  60

Pro Glu Thr Phe Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Ser Val Asp Lys His Val Pro Asp Ser Gly Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Lys Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Ala Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Val Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Tyr Ser Gln Gly
    210                 215                 220
```

```
Gly Thr Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Leu Gln Ala
                245                 250                 255

Ser Leu Asp Pro Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Met Lys Tyr Glu Ile His Arg Asp Ser Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Leu Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Phe Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu Thr Ile Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Ser
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Pro
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Gly Lys Ala Arg Asp
    370                 375                 380

Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Leu Lys Asp Gly Ala Arg Pro Asp Val Thr Glu Ser Glu Ser Gly Ser
                405                 410                 415
```

```
Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro Leu Asp Gly Glu Thr His
            420                 425                 430

Ala Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Thr Phe Ile Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Arg Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala His Pro Gly Pro Ser Val Val Pro Ala Leu
                485                 490                 495

Leu Pro Leu Leu Ala Gly Thr Leu Leu Leu Leu Gly Thr Ala Thr Ala
            500                 505                 510

Pro
```

<210> 4
<211> 508
<212> PRT
<213> Homo sapiens

<400> 4

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Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60
```

```
Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
```

```
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Ser Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460
```

```
Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480


Cys Thr Thr Asp Ala Ala His Pro Val Ala Ala Ser Leu Pro Leu Leu
                485                 490                 495


Ala Gly Thr Leu Leu Leu Leu Gly Ala Ser Ala Ala
            500                 505
```

<210> 5
<211> 507
<212> PRT
<213> Macada Mulatta

<400> 5

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125
```

```
Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Val
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ile Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asn Ile Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg His Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Glu Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320
```

```
His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Met Thr Ser Leu Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Ile Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Asp His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Gly Pro Leu Leu Leu
                485                 490                 495

Pro Leu Ala Leu Phe Pro Leu Ser Ile Leu Phe
            500                 505
```

<210> 6
<211> 507

<212> PRT
<213> Mus Musculus

<400> 6

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Phe Val Pro Glu Lys Glu Arg Asp Pro Ser Tyr Trp Arg Gln Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Asn Ala Leu Lys Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Thr
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Thr Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160


Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175


Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
```

```
            180                 185                 190

His Asn Ile Lys Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Arg Thr Asp Val Glu Tyr Glu Leu Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Ile Ser Ile Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg His Lys His Ser His Tyr Val Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Ala Leu Asp Pro Ser Arg Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Leu Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Glu Val Ala Leu Arg Ile Leu Thr
    290                 295                 300

Lys Asn Leu Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Gln Ala Ile Gly Lys Ala Gly Ala Met Thr Ser Gln Lys
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380
```

```
Val Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400


Gly Pro Gly Tyr Lys Val Val Asp Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415


Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430


Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ala Lys Gly
        435                 440                 445


Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Ile Pro
    450                 455                 460


His Val Met Ala Tyr Ala Ser Cys Ile Gly Ala Asn Leu Asp His Cys
465                 470                 475                 480


Ala Trp Ala Gly Ser Gly Ser Ala Pro Ser Pro Gly Ala Leu Leu Leu
                485                 490                 495


Pro Leu Ala Val Leu Ser Leu Arg Thr Leu Phe
            500                 505
```

<210> 7
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 7

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Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30
```

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
```

```
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
```

625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 8
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 8

Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Glu Ala
1 5 10 15

Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr Ala
20 25 30

Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser Thr
35 40 45

Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu Gly

```
    50                  55                  60

Pro Glu Ile Pro Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Lys His Val Pro Asp Ser Gly Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Lys Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Val Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Arg Met Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Tyr Ser Gln Gly
    210                 215                 220

Gly Thr Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

Arg Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255
```

```
Ser Leu Asp Pro Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Met Lys Tyr Glu Ile His Arg Asp Ser Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Phe Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu Thr Ile Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Ser
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Pro
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Gly Lys Ala Arg Asp
    370                 375                 380

Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Leu Lys Asp Gly Ala Arg Pro Asp Val Thr Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro Leu Asp Glu Glu Thr His
            420                 425                 430

Ala Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Thr Phe Ile Ala His Val Met Ala Phe
```

```
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655
```

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 9
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 9

Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr Ala
20 25 30

Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser Thr
35 40 45

Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu Gly
50 55 60

Pro Glu Thr Phe Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu Ser
65 70 75 80

Lys Thr Tyr Ser Val Asp Lys His Val Pro Asp Ser Gly Ala Thr Ala
85 90 95

```
Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Lys Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Val Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Tyr Ser Gln Gly
    210                 215                 220

Gly Thr Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Leu Gln Ala
                245                 250                 255

Ser Leu Asp Pro Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Met Lys Tyr Glu Ile His Arg Asp Ser Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Leu Leu Leu Ser Arg Asn Pro Arg
```

```
    290                 295                 300

Gly Phe Phe Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu Thr Ile Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Ser
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Leu Phe Ser Phe Gly Gly Tyr Pro
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Gly Lys Ala Arg Asp
    370                 375                 380

Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Leu Lys Asp Gly Ala Arg Pro Asp Val Thr Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro Leu Asp Gly Glu Thr His
            420                 425                 430

Ala Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Thr Phe Ile Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Arg Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495
```

```
Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
```

690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 10
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 10

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly

```
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335
```

```
Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Ser Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Cys Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
```

```
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715

<210>  11
<211>  724
<212>  PRT
```

<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 11

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145 150 155 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
165 170 175

```
Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Val
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ile Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asn Ile Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg His Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Glu Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Met Thr Ser Leu Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
```

```
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Ile Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Asp His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575
```

```
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 12
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 12

```
Phe Val Pro Glu Lys Glu Arg Asp Pro Ser Tyr Trp Arg Gln Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Asn Ala Leu Lys Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Thr
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Thr Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Lys Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
```

```
        195                 200                 205

Met Tyr Pro Lys Asn Arg Thr Asp Val Glu Tyr Glu Leu Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Ile Ser Ile Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg His Lys His Ser His Tyr Val Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Ala Leu Asp Pro Ser Arg Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Leu Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Glu Val Ala Leu Arg Ile Leu Thr
    290                 295                 300

Lys Asn Leu Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Gln Ala Ile Gly Lys Ala Gly Ala Met Thr Ser Gln Lys
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Val Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400
```

```
Gly Pro Gly Tyr Lys Val Val Asp Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ala Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Ile Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ser Cys Ile Gly Ala Asn Leu Asp His Cys
465                 470                 475                 480

Ala Trp Ala Gly Ser Gly Ser Ala Pro Ser Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
```

595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 13
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 13

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn

```
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220
```

```
Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
```

```
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620
```

```
Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670


Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700


Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720


Asp Asp Asp Asp
```

<210> 14
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 14

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45
```

```
Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
```

```
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445
```

```
Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
```

645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 15
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 15

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu

```
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270
```

```
Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Gln Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
```

```
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670
```

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 16
<211> 721
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 16

Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Glu Ala
1 5 10 15

Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr Ala
20 25 30

Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser Thr
35 40 45

Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu Gly
50 55 60

Pro Glu Ile Pro Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Lys His Val Pro Asp Ser Gly Ala Thr Ala
85 90 95

```
Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Lys Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Val Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Arg Met Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Tyr Ser Gln Gly
    210                 215                 220

Gly Thr Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

Arg Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Pro Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Met Lys Tyr Glu Ile His Arg Asp Ser Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
```

```
    290                 295                 300

Gly Phe Phe Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu Thr Ile Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Ser
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Pro
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Gly Lys Ala Arg Asp
    370                 375                 380

Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Leu Lys Asp Gly Ala Arg Pro Asp Val Thr Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro Leu Asp Glu Glu Thr His
            420                 425                 430

Ala Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Thr Phe Ile Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Ser Ser Val Glu Cys Pro Pro Cys Pro Ala
                485                 490                 495
```

```
Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
            500                 505                 510

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
        515                 520                 525

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
    530                 535                 540

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
545                 550                 555                 560

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
                565                 570                 575

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
            580                 585                 590

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
        595                 600                 605

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
    610                 615                 620

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
625                 630                 635                 640

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
                645                 650                 655

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
            660                 665                 670

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
        675                 680                 685

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
```

690 695 700

Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp

<210> 17
<211> 721
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 17

Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Glu Ala
1 5 10 15

Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr Ala
20 25 30

Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser Thr
35 40 45

Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu Gly
50 55 60

Pro Glu Ile Pro Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Lys His Val Pro Asp Ser Gly Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu

```
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Lys Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Val Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Arg Met Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Tyr Ser Gln Gly
    210                 215                 220

Gly Thr Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

Arg Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Pro Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Met Lys Tyr Glu Ile His Arg Asp Ser Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Phe Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320
```

```
Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu Thr Ile Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Ser
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Pro
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Gly Lys Ala Arg Asp
    370                 375                 380

Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Leu Lys Asp Gly Ala Arg Pro Asp Val Thr Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro Leu Asp Glu Glu Thr His
            420                 425                 430

Ala Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Thr Phe Ile Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala His Pro Val Glu Cys Pro Pro Cys Pro Ala
                485                 490                 495

Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
            500                 505                 510

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
```

```
        515                 520                 525

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
    530                 535                 540

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
545                 550                 555                 560

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
                565                 570                 575

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
            580                 585                 590

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
        595                 600                 605

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
    610                 615                 620

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
625                 630                 635                 640

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
                645                 650                 655

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
            660                 665                 670

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
        675                 680                 685

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
    690                 695                 700

Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715                 720
```

Asp

<210> 18
<211> 721
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 18

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

```
Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
```

```
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Ser Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Cys Thr Thr Asp Ala Ala Ser Ser Val Glu Cys Pro Pro Cys Pro Ala
                485                 490                 495

Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
            500                 505                 510

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
        515                 520                 525

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
    530                 535                 540
```

```
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
545                 550                 555                 560


Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
                565                 570                 575


Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
            580                 585                 590


Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
        595                 600                 605


Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
    610                 615                 620


Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
625                 630                 635                 640


Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
                645                 650                 655


Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
            660                 665                 670


Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
        675                 680                 685


Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
    690                 695                 700


Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715                 720


Asp
```

<210> 19

<211> 721
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 19

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145 150 155 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala

```
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365
```

```
Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Ser Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Cys Thr Thr Asp Ala Ala His Pro Val Glu Cys Pro Pro Cys Pro Ala
                485                 490                 495

Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
            500                 505                 510

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
        515                 520                 525

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
    530                 535                 540

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
545                 550                 555                 560

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
```

565 570 575

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
580 585 590

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
595 600 605

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
610 615 620

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
625 630 635 640

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
645 650 655

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
660 665 670

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
675 680 685

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
690 695 700

Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp

<210> 20
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 20

```
Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Glu Ala
1               5                  10                  15


Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr Ala
            20                  25                  30


Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser Thr
        35                  40                  45


Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu Gly
    50                  55                  60


Pro Glu Ile Pro Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu Ser
65                  70                  75                  80


Lys Thr Tyr Asn Val Asp Lys His Val Pro Asp Ser Gly Ala Thr Ala
                85                  90                  95


Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110


Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125


Val Ile Ser Val Met Asn Arg Ala Lys Lys Ala Gly Lys Ser Val Gly
    130                 135                 140


Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160


Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Val Pro Ala
                165                 170                 175


Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190
```

```
Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Arg Met Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Tyr Ser Gln Gly
    210                 215                 220

Gly Thr Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

Arg Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Pro Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Met Lys Tyr Glu Ile His Arg Asp Ser Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Phe Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu Thr Ile Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Ser
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Pro
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Gly Lys Ala Arg Asp
    370                 375                 380

Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly Asn Gly Pro Gly Tyr Val
```

385 390 395 400

Leu Lys Asp Gly Ala Arg Pro Asp Val Thr Glu Ser Glu Ser Gly Ser
405 410 415

Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro Leu Asp Glu Glu Thr His
420 425 430

Ala Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
435 440 445

Val His Gly Val Gln Glu Gln Thr Phe Ile Ala His Val Met Ala Phe
450 455 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465 470 475 480

Gly Thr Thr Leu Lys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
485 490 495

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
500 505 510

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
515 520 525

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
530 535 540

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
545 550 555 560

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
565 570 575

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
580 585 590

```
Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
        595                 600                 605

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
    610                 615                 620

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
625                 630                 635                 640

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
                645                 650                 655

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
            660                 665                 670

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
        675                 680                 685

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
    690                 695                 700

Ser Leu Ser Leu Ser Pro Gly Lys Asp Ile Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 21
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 21

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15
```

```
Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
```

```
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415
```

```
Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Ser Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Cys Thr Thr Leu Lys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
                485                 490                 495

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
            500                 505                 510

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
        515                 520                 525

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
    530                 535                 540

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
545                 550                 555                 560

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
                565                 570                 575

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
            580                 585                 590

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
        595                 600                 605

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
```

610 615 620

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
625 630 635 640

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
645 650 655

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
660 665 670

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
675 680 685

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
690 695 700

Ser Leu Ser Leu Ser Pro Gly Lys Asp Ile Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 22
<211> 725
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 22

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser

```
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240
```

```
Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
```

```
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Ser Val Glu Cys Pro
                485                 490                 495

Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro
            500                 505                 510

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
        515                 520                 525

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
    530                 535                 540

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
545                 550                 555                 560

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
                565                 570                 575

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
            580                 585                 590

Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys
        595                 600                 605

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
    610                 615                 620

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
625                 630                 635                 640
```

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
645 650 655

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
660 665 670

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
675 680 685

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
690 695 700

Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp Asp
725

<210> 23
<211> 726
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 23

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

```
Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
```

```
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460
```

```
His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Ser Ser Val Glu Cys
                485                 490                 495

Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe
            500                 505                 510

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
        515                 520                 525

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
    530                 535                 540

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
545                 550                 555                 560

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
                565                 570                 575

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
            580                 585                 590

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
        595                 600                 605

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
    610                 615                 620

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
625                 630                 635                 640

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
                645                 650                 655

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
```

660 665 670

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
675 680 685

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
690 695 700

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp Asp Asp
725

<210> 24
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 24

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr

```
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285
```

```
Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
```

```
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685
```

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690   695   700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705   710   715   720

Asp Asp Asp Asp

<210> 25
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 25

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1   5   10   15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20   25   30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35   40   45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50   55   60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65   70   75   80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85   90   95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100   105   110

```
Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
```

```
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Cys Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510
```

```
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
```

705 710 715

<210> 26
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 26

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr

```
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350
```

```
Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Ser Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Cys Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
```

```
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 27
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 27

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                  10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190
```

```
Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
```

```
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Ser Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590
```

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
595 600 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
610 615 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 28
<211> 725
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 28

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
```

```
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Ser Val Glu Cys Pro
                485                 490                 495

Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro
            500                 505                 510

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
        515                 520                 525

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
    530                 535                 540

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
545                 550                 555                 560

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
                565                 570                 575

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
            580                 585                 590

Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys
        595                 600                 605

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
    610                 615                 620

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
```

625 630 635 640

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
645 650 655

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
660 665 670

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
675 680 685

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
690 695 700

Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp Asp
725

<210> 29
<211> 726
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 29

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro

```
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255
```

```
Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
```

```
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Ser Ser Val Glu Cys
                485                 490                 495

Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe
            500                 505                 510

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
        515                 520                 525

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
    530                 535                 540

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
545                 550                 555                 560

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
                565                 570                 575

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
            580                 585                 590

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
        595                 600                 605

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
    610                 615                 620

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
625                 630                 635                 640

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
                645                 650                 655
```

```
Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
            660                 665                 670

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
        675                 680                 685

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
    690                 695                 700

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp Asp Asp
                725
```

<210> 30
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 30

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80
```

```
Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
```

```
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480
```

```
Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
```

675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 31
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 31

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu

```
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320
```

```
Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
```

```
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 32
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 32

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Gln Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145 150 155 160

```
Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
```

```
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560
```

```
Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 33
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 33

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160


Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175


Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
```

```
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Gln Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380
```

```
Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
```

580 585 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 34
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 34

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala

```
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205
```

```
Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
```

```
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Gln Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605
```

```
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 35
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 35

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30
```

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Ala Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
```

```
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
```

625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 36
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 36

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro

```
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255
```

```
Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
```

```
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Gln Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655
```

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 37
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 37

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

```
Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Ala Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
```

```
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480
```

```
Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
```

675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 38
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 38

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu

```
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300
```

```
Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320


Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335


Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350


Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365


Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380


Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400


Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415


Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Arg Glu Glu Thr His
            420                 425                 430


Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445


Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460


Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480


Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495


Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
```

```
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700
```

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 39
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 39

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

```
Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
```

```
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540
```

```
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560


Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575


Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590


Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605


Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620


Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 40
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 40

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1   5   10   15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20   25   30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35   40   45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50   55   60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65   70   75   80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85   90   95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100   105   110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115   120   125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130   135   140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145   150   155   160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165   170   175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser

```
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380
```

```
Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Arg His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
```

```
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 41
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 41

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
```

```
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220
```

```
Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240


His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255


Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270


Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285


Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300


Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320


Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335


Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350


Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365


Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380


Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400


Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415


Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
```

```
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620
```

```
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  42
<211>  719
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  42

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60
```

```
Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
```

```
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460
```

```
Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
```

660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 43
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 43

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu

```
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300
```

```
Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
```

```
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700
```

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 44
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 44

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

```
Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
```

```
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540
```

```
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560


Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575


Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590


Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605


Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620


Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 45
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 45

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1   5   10   15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20   25   30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35   40   45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50   55   60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65   70   75   80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85   90   95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100   105   110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115   120   125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130   135   140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145   150   155   160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165   170   175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser

```
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380
```

```
Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
```

580 585 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
595 600 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
610 615 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 46
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 46

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val

```
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220
```

```
Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240


His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255


Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270


Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285


Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300


Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320


Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335


Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350


Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365


Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380


Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400


Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415


Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
```

```
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620
```

```
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  47
<211>  719
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  47

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60
```

```
Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
```

```
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460
```

```
Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
```

660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 48
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 48

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu

```
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300
```

```
Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
```

```
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700
```

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 49
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 49

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

```
Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
```

```
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540
```

```
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560


Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575


Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590


Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605


Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620


Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  50
<211>  719
<212>  PRT
<213>  Secuencia artificial
```

<220>
<223> Constructo sintético

<400> 50

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1   5   10   15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20   25   30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35   40   45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50   55   60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65   70   75   80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85   90   95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100   105   110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115   120   125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130   135   140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145   150   155   160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165   170   175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser

```
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380
```

```
Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Arg Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
```

580 585 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
595 600 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
610 615 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 51
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 51

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val

```
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220
```

```
Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Arg Glu Glu Thr His
```

```
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620
```

```
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  52
<211>  719
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  52

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60
```

```
Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
```

```
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Arg Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460
```

```
Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
```

660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 53
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 53

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu

```
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300
```

```
Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320


Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335


Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350


Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365


Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380


Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400


Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415


Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Arg Glu Glu Thr His
            420                 425                 430


Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445


Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460


Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480


Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495


Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
```

```
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700
```

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 54
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 54

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

```
Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
```

```
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540
```

```
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560


Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575


Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590


Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605


Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620


Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 55
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 55

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1   5   10   15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20   25   30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35   40   45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50   55   60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65   70   75   80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85   90   95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100   105   110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115   120   125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130   135   140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145   150   155   160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165   170   175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser

```
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380
```

```
Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
```

580 585 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
595 600 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
610 615 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 56
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 56

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val

```
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220
```

```
Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
```

```
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620
```

```
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  57
<211>  719
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  57

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60
```

```
Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
```

```
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460
```

```
Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
```

660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 58
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 58

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu

```
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300
```

```
Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
```

```
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700
```

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 59
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 59

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

```
Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
```

```
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540
```

```
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560


Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575


Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590


Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605


Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620


Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 60
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 60

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1   5   10   15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20   25   30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35   40   45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50   55   60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65   70   75   80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85   90   95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100   105   110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115   120   125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130   135   140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145   150   155   160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165   170   175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser

```
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380
```

```
Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
```

580 585 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
595 600 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
610 615 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 61
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 61

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val

```
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220
```

```
Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240


His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255


Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270


Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285


Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300


Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320


Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335


Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350


Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365


Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380


Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400


Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415


Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
```

```
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620
```

```
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  62
<211>  719
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  62

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60
```

```
Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
```

```
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460
```

```
Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
```

660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 63
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 63

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Arg Gly Thr Val Gly

```
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300
```

```
Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
```

```
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700
```

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 64
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 64

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Asn Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

```
Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
```

```
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525
```

```
Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 65
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 65

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Asp Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
```

```
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350
```

```
Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
```

545 550 555 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
565 570 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
580 585 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 66
<211> 724
<212> PRT

<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 66

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Gln Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160


Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175
```

```
Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
```

```
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575
```

```
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 67
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 67

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Gly Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
```

```
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400
```

```
Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
```

595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 68
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 68

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn

```
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn His Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220
```

```
Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
```

```
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620
```

```
Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670


Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700


Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720


Asp Asp Asp Asp
```

<210> 69
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 69

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45
```

```
Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Ile Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
```

```
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445
```

```
Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
```

645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 70
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 70

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu

```
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Leu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270
```

```
Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
```

```
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670
```

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 71
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 71

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

```
Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Lys Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
```

```
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495
```

```
Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
```

690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 72
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 72

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn

```
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320
```

```
His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
               325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
               405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
               485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
```

```
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720
```

Asp Asp Asp Asp

<210> 73
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 73

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

```
Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
```

```
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540
```

```
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 74

<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 74

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Pro Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145 150 155 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro

```
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365
```

```
Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
```

565 570 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
580 585 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 75
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 75

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Ser Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190
```

```
His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
```

```
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590
```

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 76
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 76

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

```
Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Thr Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
```

```
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415
```

```
Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
```

610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 77
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 77

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser

```
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Trp Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240
```

```
Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
```

```
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640
```

```
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 78
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 78

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60
```

```
Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Tyr Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160


Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175


Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190


His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205


Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220


Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240


Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255


Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
```

```
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460
```

```
His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480


Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495


Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510


Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525


Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540


Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560


Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575


His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590


Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605


Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620


Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
```

660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 79
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 79

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr

```
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Val Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285
```

```
Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
```

```
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685
```

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 80
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 80

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

```
Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
```

```
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Ala
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510
```

```
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
```

705 710 715 720

Asp Asp Asp Asp

<210> 81
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 81

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val

```
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335
```

```
Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Arg
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
```

```
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 82
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 82

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145 150 155 160

```
Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
```

```
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Asn
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560
```

```
Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 83
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 83

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160


Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175


Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
```

```
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Asp
    370                 375                 380
```

```
Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
```

```
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 84
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 84

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
```

```
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205
```

```
Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Gln
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
```

```
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605
```

```
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 85
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 85

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30
```

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
```

```
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Glu
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
```

625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 86
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 86

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro

```
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255
```

```
Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Gly
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
```

```
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655
```

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 87
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 87

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

```
Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
```

```
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro His
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480
```

```
Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
```

675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 88
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 88

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly

```
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300
```

```
Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Ile
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
```

```
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700
```

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 89
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 89

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

```
Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
```

```
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Leu
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525
```

```
Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 90
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 90

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala

```
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350
```

```
Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Lys
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
```

```
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 91
<211> 724
<212> PRT

<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 91

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145 150 155 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
165 170 175

```
Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Phe
```

```
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575
```

```
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 92
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 92

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
```

```
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Ser
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400
```

```
Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
```

595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 93
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 93

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn

```
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220
```

```
Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Thr
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
```

```
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620
```

```
Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670


Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700


Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720


Asp Asp Asp Asp
```

<210> 94
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 94

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45
```

```
Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
```

```
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Tyr
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445
```

```
Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
```

645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 95
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 95

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu

```
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270
```

```
Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Val
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
```

```
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670
```

```
Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700


Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720


Asp Asp Asp Asp
```

<210> 96
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 96

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95
```

```
Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
```

```
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Val Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495
```

```
Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
```

690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 97
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 97

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn

```
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320
```

```
His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
               325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Lys Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
               405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
               485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
```

```
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720
```

Asp Asp Asp Asp

<210> 98
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 98

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

```
Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
```

```
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Ala Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540
```

```
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 99

<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 99

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145 150 155 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro

```
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365
```

```
Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Asn Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
```

565 570 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
580 585 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 100
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 100

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190
```

```
His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

His Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
```

```
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590
```

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 101
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 101

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

```
Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
```

```
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Gln Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415
```

```
Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
```

610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 102
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 102

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser

```
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240
```

```
Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Ser Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
```

```
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640
```

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 103
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 103

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

```
Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
```

```
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Thr Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460
```

```
His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480


Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495


Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510


Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525


Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540


Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560


Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575


His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590


Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605


Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620


Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
```

660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 104
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 104

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala

```
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285
```

```
Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ala His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
```

```
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685
```

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 105
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 105

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

```
Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
```

```
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asn His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525
```

```
Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 106

<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 106

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145 150 155 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala

```
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365
```

```
Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asp His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
```

565 570 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
580 585 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
595 600 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
610 615 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 107
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 107

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala

```
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205
```

```
Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
```

```
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Gln His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605
```

```
Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 108
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 108

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45
```

```
Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
```

```
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Gly His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445
```

```
Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
```

645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 109
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 109

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala

```
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285
```

```
Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu His His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
```

```
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685
```

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 110
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 110

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

```
Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
```

```
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ile His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525
```

```
Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 111

<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 111

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145 150 155 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala

```
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365
```

```
Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Leu His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
```

```
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 112
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 112

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
```

```
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205
```

```
Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
```

```
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Lys His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605
```

```
Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 113
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 113

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45
```

```
Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
```

```
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Met His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445
```

```
Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
```

645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 114
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 114

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala

```
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285
```

```
Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Phe His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
```

```
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685
```

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 115
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 115

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

```
Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
```

```
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Thr His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525
```

```
Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 116

<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 116

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145 150 155 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala

```
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365
```

```
Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Tyr His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
```

```
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 117
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 117

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
```

```
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205
```

```
Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
```

```
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Val His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605
```

```
Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 118
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 118

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45
```

```
Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
```

```
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asp Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445
```

```
Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
```

645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 119
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 119

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala

```
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285
```

```
Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Glu Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
```

```
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685
```

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 120
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 120

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

```
Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
```

```
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Thr Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525
```

```
Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 121

<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 121

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145 150 155 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala

```
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365
```

```
Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Val Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
```

```
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  122
<211>  724
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  122

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
```

```
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Gln Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205
```

```
Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
```

```
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605
```

```
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 123
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 123

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30
```

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
```

```
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
```

625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 124
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 124

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro

```
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Leu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255
```

```
Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
```

```
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655
```

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660   665   670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675   680   685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690   695   700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705   710   715   720

Asp Asp Asp Asp

<210> 125
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 125

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1   5   10   15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20   25   30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35   40   45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50   55   60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65   70   75   80

```
Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Lys Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
```

```
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480
```

```
Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
```

675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp Asp

<210> 126
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 126

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Ser Gly Thr Val Gly

```
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300
```

```
Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
```

```
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700
```

```
Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720


Asp Asp Asp Asp
```

<210> 127
<211> 724
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 127

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Thr Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125
```

```
Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
```

```
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525
```

```
Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp
```

<210> 128
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 128

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                  10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60


Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80


Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95


Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110


Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125


Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140


Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
```

```
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350
```

```
Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
```

```
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 129
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 129

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60


Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80


Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95


Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110


Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125


Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140


Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160


Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175


Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190
```

```
Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
```

```
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590
```

```
Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 130
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 130

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30
```

```
Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
```

```
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430
```

```
Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
```

625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 131
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 131

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser

```
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270
```

```
Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
```

```
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670
```

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 132
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 132

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

```
Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
```

```
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510
```

```
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
```

705 710 715

<210> 133
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 133

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr

```
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350
```

```
Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
```

```
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 134
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 134

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60


Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80


Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95


Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110


Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125


Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140


Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160


Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175


Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190
```

```
Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
```

```
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590
```

```
Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605


Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620


Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  135
<211>  719
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  135

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30
```

```
Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
```

```
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asp His Glu Thr His
            420                 425                 430
```

```
Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
```

625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 136
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 136

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser

```
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270
```

```
Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asp His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
```

```
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670
```

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 137
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 137

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

```
Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
```

```
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asp His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510
```

```
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
```

705 710 715

<210> 138
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 138

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr

```
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350
```

```
Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asp His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
```

```
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 139
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 139

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60


Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80


Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95


Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110


Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125


Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140


Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160


Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175


Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190
```

```
Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
```

```
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asp His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590
```

```
Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605


Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620


Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  140
<211>  719
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  140

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30
```

```
Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
```

```
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asp His Glu Thr His
            420                 425                 430
```

```
Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
```

625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 141
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 141

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser

```
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270
```

```
Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Asp His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
```

```
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670
```

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 142
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 142

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

```
Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
```

```
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Gln His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510
```

```
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
```

705 710 715

<210> 143
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 143

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr

```
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350
```

```
Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Gln His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
```

```
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 144
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 144

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60


Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80


Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95


Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110


Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125


Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140


Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160


Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175


Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190
```

```
Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
```

```
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Gln His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590
```

```
Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605


Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620


Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715


<210>  145
<211>  719
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  145

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30
```

```
Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
```

```
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Gln His Glu Thr His
            420                 425                 430
```

```
Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
```

625 630 635 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
645 650 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
660 665 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 146
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 146

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser

```
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270
```

```
Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Gln His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
```

```
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670
```

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 147
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 147

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

```
Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
```

```
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Gln His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510
```

```
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
```

705 710 715

<210> 148
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 148

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr

```
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350
```

```
Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Gln Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Gln His Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
```

```
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 149
<211> 715
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 149

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190
```

```
His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
```

```
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590
```

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp
705 710 715

<210> 150
<211> 716
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 150

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
```

```
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
```

625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp
705 710 715

<210> 151
<211> 717
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 151

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu

```
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270
```

```
Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
```

```
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670
```

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp
705 710 715

<210> 152
<211> 718
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 152

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
100 105 110

```
Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160


Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175


Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190


His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205


Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220


Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240


Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255


Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270


Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285


Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300


Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
```

```
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510
```

```
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp
```

705 710 715

<210> 153
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 153

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala

```
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350
```

```
Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
```

```
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp
705                 710                 715
```

<210> 154
<211> 720
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 154

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190
```

```
His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
```

```
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590
```

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

<210> 155
<211> 721
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 155

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
```

```
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
```

625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp

<210> 156
<211> 722
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 156

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro

```
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255
```

```
Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
```

```
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655
```

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp

<210> 157
<211> 723
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 157

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

```
Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
```

```
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480
```

```
Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
```

675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp

<210> 158
<211> 715
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 158

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly

```
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300
```

```
Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
```

```
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700
```

```
Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Glu
705                 710                 715


<210>  159
<211>  719
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  159

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140
```

```
Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
```

```
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540
```

```
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560


Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575


His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590


Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605


Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620


Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670


Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700


Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Glu Glu Glu Glu Glu
705                 710                 715


<210>  160
<211>  724
<212>  PRT
<213>  Secuencia artificial
```

<220>
<223> Constructo sintético

<400> 160

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1   5   10   15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20   25   30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35   40   45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50   55   60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65   70   75   80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85   90   95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100   105   110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115   120   125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130   135   140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145   150   155   160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165   170   175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met

```
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380
```

```
Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
```

580 585 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Glu Glu Glu Glu Glu Glu
705 710 715 720

Glu Glu Glu Glu

<210> 161
<211> 729
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 161

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala

```
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205
```

```
Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
```

```
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605
```

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Glu Glu Glu Glu Glu Glu
705 710 715 720

Glu Glu Glu Glu Glu Glu Glu Glu Glu
725

<210> 162
<211> 734
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 162

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
```

```
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
```

625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Glu Glu Glu Glu Glu Glu
705 710 715 720

Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu
725 730

<210> 163
<211> 717
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 163

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro

```
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255
```

```
Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
```

```
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655
```

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Ser
705 710 715

<210> 164
<211> 720
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 164

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

```
Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
```

```
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495
```

```
Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
```

690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Ser Asp Asp Ser
705 710 715 720

<210> 165
<211> 723
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 165

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val

```
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335
```

```
Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
```

```
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Ser Asp Asp Ser
705                 710                 715                 720

Asp Asp Ser
```

<210> 166
<211> 717
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 166

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145 150 155 160

```
Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
```

```
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560
```

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
565 570 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
580 585 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Glu Glu Ser
705 710 715

<210> 167
<211> 720
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 167

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
```

```
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400
```

```
Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
```

595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Glu Glu Ser Glu Glu Ser
705 710 715 720

<210> 168
<211> 723
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 168

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser

```
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240
```

```
Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
```

```
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640
```

```
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Glu Glu Ser Glu Glu Ser
705                 710                 715                 720

Glu Glu Ser
```

<210> 169
<211> 717
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 169

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60
```

```
Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
```

```
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460
```

```
His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480


Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495


Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510


Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525


Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540


Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560


Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575


His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590


Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605


Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620


Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
```

660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Ala Asp
705 710 715

<210> 170
<211> 720
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 170

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly

```
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300
```

```
Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
```

```
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700
```

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Ala Asp Asp Ala Asp
705 710 715 720

<210> 171
<211> 723
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 171

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

```
Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
```

```
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540
```

```
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Ala Asp Asp Ala Asp
705                 710                 715                 720

Asp Ala Asp
```

<210> 172

<400> 172
000

<210> 173

<400> 173
000

<210> 174

<400> 174
000

<210> 175
<211> 723
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 175

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
100 105 110

```
Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300
```

```
Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510
```

```
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700
```

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705 710 715 720

Asp Asp Asp

<210> 176
<211> 722
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 176

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

```
Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335
```

```
Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525
```

```
Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp Asp
```

<210> 177
<211> 721
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 177

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160
```

```
Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350
```

```
Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560
```

```
Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp
705                 710                 715                 720

Asp
```

<210> 178
<211> 734
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 178

```
Asp Ser Ser Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg Phe Gly Gly
1               5                  10                  15


Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp
            20                  25                  30


Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys
        35                  40                  45


Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly
    50                  55                  60


Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu
65                  70                  75                  80


His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro
                85                  90                  95


Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp
            100                 105                 110


Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu
        115                 120                 125


Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr
    130                 135                 140


Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala
145                 150                 155                 160


Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr
                165                 170                 175
```

```
Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp
            180                 185                 190

Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala
        195                 200                 205

Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly
    210                 215                 220

Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu
225                 230                 235                 240

Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val
                245                 250                 255

Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile
            260                 265                 270

Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr
        275                 280                 285

Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg
    290                 295                 300

Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile
305                 310                 315                 320

Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly
                325                 330                 335

Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu
            340                 345                 350

His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu
        355                 360                 365

Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His
    370                 375                 380
```

```
Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly
385                 390                 395                 400

Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile
                405                 410                 415

Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu
            420                 425                 430

Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser
        435                 440                 445

Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val
    450                 455                 460

Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln
465                 470                 475                 480

Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn
                485                 490                 495

Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val
            500                 505                 510

Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe
        515                 520                 525

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
    530                 535                 540

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
545                 550                 555                 560

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
                565                 570                 575
```

```
Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
            580                 585                 590

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
        595                 600                 605

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
    610                 615                 620

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
625                 630                 635                 640

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
                645                 650                 655

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
            660                 665                 670

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
        675                 680                 685

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
    690                 695                 700

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
705                 710                 715                 720

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
                725                 730
```

<210> 179
<211> 734
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 179

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205
```

```
Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400
```

```
Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605
```

```
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asp
705                 710                 715                 720

Asp Asp Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg Phe Gly
                725                 730
```

<210> 180
<211> 734
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 180

```
Asp Asp Asp Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg Phe Gly Gly
1               5                   10                  15

Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp
            20                  25                  30
```

```
Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys
        35                  40                  45

Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly
    50                  55                  60

Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu
65                  70                  75                  80

His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro
                85                  90                  95

Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp
            100                 105                 110

Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu
        115                 120                 125

Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr
    130                 135                 140

Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala
145                 150                 155                 160

Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr
                165                 170                 175

Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp
            180                 185                 190

Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala
        195                 200                 205

Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly
    210                 215                 220
```

```
Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu
225                 230                 235                 240

Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val
                245                 250                 255

Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile
            260                 265                 270

Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr
        275                 280                 285

Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg
    290                 295                 300

Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile
305                 310                 315                 320

Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly
                325                 330                 335

Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu
            340                 345                 350

His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu
        355                 360                 365

Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His
    370                 375                 380

Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly
385                 390                 395                 400

Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile
                405                 410                 415

Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu
            420                 425                 430
```

```
Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser
        435                 440                 445

Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val
    450                 455                 460

Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln
465                 470                 475                 480

Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn
                485                 490                 495

Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val
            500                 505                 510

Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe
        515                 520                 525

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
    530                 535                 540

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
545                 550                 555                 560

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
                565                 570                 575

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
            580                 585                 590

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
        595                 600                 605

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
    610                 615                 620
```

```
Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
625                 630                 635                 640


Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
                645                 650                 655


Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
            660                 665                 670


Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
        675                 680                 685


Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
    690                 695                 700


Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
705                 710                 715                 720


Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
                725                 730


<210>  181
<211>  737
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  181

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45
```

```
Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255
```

```
Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445
```

```
Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655
```

```
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asp
705                 710                 715                 720

Asp Asp Asp Asp Asp Asp Asp Lys Phe Leu Arg Arg Ile Gly Arg Phe
                725                 730                 735

Gly
```

<210> 182
<211> 737
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 182

```
Asp Asp Asp Asp Asp Asp Asp Asp Lys Phe Leu Arg Arg Ile Gly Arg
1               5                   10                  15

Phe Gly Gly Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro
            20                  25                  30

Lys Tyr Trp Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu
        35                  40                  45

Leu Gln Lys Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu
    50                  55                  60
```

```
Gly Asp Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys
65                  70                  75                  80

Gly Gln Leu His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp
                85                  90                  95

Lys Phe Pro Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln
            100                 105                 110

Val Pro Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys
        115                 120                 125

Ala Asn Glu Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg
    130                 135                 140

Cys Asn Thr Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala
145                 150                 155                 160

Lys Asp Ala Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn
                165                 170                 175

His Ala Thr Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp
            180                 185                 190

Tyr Ser Asp Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys
        195                 200                 205

Asp Ile Ala Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile
    210                 215                 220

Met Gly Gly Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val
225                 230                 235                 240

Glu Tyr Glu Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu
                245                 250                 255
```

```
Asp Leu Val Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser
            260                 265                 270

His Phe Ile Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn
        275                 280                 285

Val Asp Tyr Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu
    290                 295                 300

Leu Asn Arg Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val
305                 310                 315                 320

Val Ala Ile Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu
                325                 330                 335

Val Glu Gly Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys
            340                 345                 350

Gln Ala Leu His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala
        355                 360                 365

Gly Ser Leu Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp
    370                 375                 380

His Ser His Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser
385                 390                 395                 400

Ile Phe Gly Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe
                405                 410                 415

Thr Ala Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly
            420                 425                 430

Glu Arg Glu Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln
        435                 440                 445

Ala Gln Ser Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp
    450                 455                 460
```

```
Val Ala Val Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val
465                 470                 475                 480


His Glu Gln Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile
                485                 490                 495


Gly Ala Asn Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu
            500                 505                 510


Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro
        515                 520                 525


Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
    530                 535                 540


Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp
545                 550                 555                 560


Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
                565                 570                 575


Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val
            580                 585                 590


Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
        595                 600                 605


Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys
    610                 615                 620


Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
625                 630                 635                 640


Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
                645                 650                 655
```

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
660 665 670

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
675 680 685

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys
690 695 700

Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu
705 710 715 720

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly
725 730 735

Lys

<210> 183
<211> 739
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 183

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

```
Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270
```

```
Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460
```

```
His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480


Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495


Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510


Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525


Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540


Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560


Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575


His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590


Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605


Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620


Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670
```

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asp
705 710 715 720

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Phe Leu Arg Arg Ile Gly
725 730 735

Arg Phe Gly

<210> 184
<211> 739
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 184

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Phe Leu Arg Arg Ile
1 5 10 15

Gly Arg Phe Gly Gly Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys
20 25 30

Asp Pro Lys Tyr Trp Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala
35 40 45

Leu Glu Leu Gln Lys Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met
50 55 60

Phe Leu Gly Asp Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile
65 70 75 80

```
Leu Lys Gly Gln Leu His His Asn Pro Gly Glu Glu Thr Arg Leu Glu
                85                  90                  95

Met Asp Lys Phe Pro Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn
            100                 105                 110

Ala Gln Val Pro Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly
        115                 120                 125

Val Lys Ala Asn Glu Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg
    130                 135                 140

Ser Arg Cys Asn Thr Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg
145                 150                 155                 160

Trp Ala Lys Asp Ala Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg
                165                 170                 175

Val Asn His Ala Thr Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg
            180                 185                 190

Asp Trp Tyr Ser Asp Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly
        195                 200                 205

Cys Lys Asp Ile Ala Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp
    210                 215                 220

Val Ile Met Gly Gly Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr
225                 230                 235                 240

Asp Val Glu Tyr Glu Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp
                245                 250                 255

Gly Leu Asp Leu Val Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys
            260                 265                 270
```

```
His Ser His Phe Ile Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro
        275                 280                 285

His Asn Val Asp Tyr Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln
    290                 295                 300

Tyr Glu Leu Asn Arg Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met
305                 310                 315                 320

Val Val Val Ala Ile Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe
                325                 330                 335

Leu Leu Val Glu Gly Gly Arg Ile Asp His Gly His His Glu Gly Lys
            340                 345                 350

Ala Lys Gln Ala Leu His Glu Ala Val Glu Met Asp Arg Ala Ile Gly
        355                 360                 365

Gln Ala Gly Ser Leu Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr
    370                 375                 380

Ala Asp His Ser His Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly
385                 390                 395                 400

Asn Ser Ile Phe Gly Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys
                405                 410                 415

Pro Phe Thr Ala Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val
            420                 425                 430

Gly Gly Glu Arg Glu Asn Val Ser Met Val Asp Tyr Ala His Asn Asn
        435                 440                 445

Tyr Gln Ala Gln Ser Ala Val Pro Leu Arg His Glu Thr His Gly Gly
    450                 455                 460

Glu Asp Val Ala Val Phe Ser Lys Gly Pro Met Ala His Leu Leu His
465                 470                 475                 480
```

```
Gly Val His Glu Gln Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala
                485                 490                 495

Cys Ile Gly Ala Asn Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly
            500                 505                 510

Ser Leu Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala
        515                 520                 525

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
    530                 535                 540

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln
545                 550                 555                 560

Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val
                565                 570                 575

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr
            580                 585                 590

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
        595                 600                 605

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile
    610                 615                 620

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
625                 630                 635                 640

Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser
                645                 650                 655

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
            660                 665                 670
```

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
675 680 685

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val
690 695 700

Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met
705 710 715 720

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
725 730 735

Leu Gly Lys

<210> 185
<211> 737
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 185

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

```
Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285
```

```
Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480
```

```
Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685
```

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Glu
705 710 715 720

Glu Glu Glu Glu Glu Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg Phe
725 730 735

Gly

<210> 186
<211> 737
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 186

Glu Glu Glu Glu Glu Glu Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg
1 5 10 15

Phe Gly Gly Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro
20 25 30

Lys Tyr Trp Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu
35 40 45

Leu Gln Lys Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu
50 55 60

Gly Asp Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys
65 70 75 80

Gly Gln Leu His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp
85 90 95

```
Lys Phe Pro Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln
            100                 105                 110

Val Pro Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys
        115                 120                 125

Ala Asn Glu Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg
    130                 135                 140

Cys Asn Thr Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala
145                 150                 155                 160

Lys Asp Ala Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn
                165                 170                 175

His Ala Thr Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp
            180                 185                 190

Tyr Ser Asp Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys
        195                 200                 205

Asp Ile Ala Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile
    210                 215                 220

Met Gly Gly Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val
225                 230                 235                 240

Glu Tyr Glu Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu
                245                 250                 255

Asp Leu Val Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser
            260                 265                 270

His Phe Ile Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn
        275                 280                 285
```

```
Val Asp Tyr Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu
    290                 295                 300

Leu Asn Arg Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val
305                 310                 315                 320

Val Ala Ile Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu
                325                 330                 335

Val Glu Gly Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys
            340                 345                 350

Gln Ala Leu His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala
        355                 360                 365

Gly Ser Leu Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp
    370                 375                 380

His Ser His Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser
385                 390                 395                 400

Ile Phe Gly Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe
                405                 410                 415

Thr Ala Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly
            420                 425                 430

Glu Arg Glu Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln
        435                 440                 445

Ala Gln Ser Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp
    450                 455                 460

Val Ala Val Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val
465                 470                 475                 480

His Glu Gln Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile
                485                 490                 495
```

```
Gly Ala Asn Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu
            500                 505                 510

Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro
        515                 520                 525

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
    530                 535                 540

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp
545                 550                 555                 560

Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
                565                 570                 575

Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val
            580                 585                 590

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
        595                 600                 605

Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys
    610                 615                 620

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
625                 630                 635                 640

Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
                645                 650                 655

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
            660                 665                 670

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
        675                 680                 685
```

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys
690 695 700

Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu
705 710 715 720

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly
725 730 735

Lys

<210> 187
<211> 736
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 187

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

```
Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300
```

```
Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495
```

```
Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700
```

```
Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asp
705                 710                 715                 720


Asp Asp Glu Glu Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg Phe Gly
                725                 730                 735


<210>  188
<211>  736
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  188

Asp Asp Asp Glu Glu Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg Phe
1               5                   10                  15


Gly Gly Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys
            20                  25                  30


Tyr Trp Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu
        35                  40                  45


Gln Lys Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly
    50                  55                  60


Asp Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly
65                  70                  75                  80


Gln Leu His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys
                85                  90                  95


Phe Pro Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val
            100                 105                 110


Pro Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala
        115                 120                 125
```

```
Asn Glu Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys
    130                 135                 140

Asn Thr Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys
145                 150                 155                 160

Asp Ala Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His
                165                 170                 175

Ala Thr Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr
            180                 185                 190

Ser Asp Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp
        195                 200                 205

Ile Ala Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met
    210                 215                 220

Gly Gly Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu
225                 230                 235                 240

Tyr Glu Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp
                245                 250                 255

Leu Val Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His
            260                 265                 270

Phe Ile Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val
        275                 280                 285

Asp Tyr Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu
    290                 295                 300

Asn Arg Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val
305                 310                 315                 320
```

```
Ala Ile Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val
                325                 330                 335

Glu Gly Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln
            340                 345                 350

Ala Leu His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly
        355                 360                 365

Ser Leu Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His
    370                 375                 380

Ser His Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile
385                 390                 395                 400

Phe Gly Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr
                405                 410                 415

Ala Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu
            420                 425                 430

Arg Glu Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala
        435                 440                 445

Gln Ser Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val
    450                 455                 460

Ala Val Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val His
465                 470                 475                 480

Glu Gln Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly
                485                 490                 495

Ala Asn Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala
            500                 505                 510

Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser
        515                 520                 525
```

```
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
    530                 535                 540

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro
545                 550                 555                 560

Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
                565                 570                 575

Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val
            580                 585                 590

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
        595                 600                 605

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr
    610                 615                 620

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
625                 630                 635                 640

Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
                645                 650                 655

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
            660                 665                 670

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
        675                 680                 685

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser
    690                 695                 700

Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
705                 710                 715                 720
```

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
725 730 735

<210> 189
<211> 734
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 189

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

```
Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350
```

```
Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540
```

```
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560


Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575


His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590


Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605


Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620


Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670


Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700


Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asp
705                 710                 715                 720


Asp Asp Glu Glu Lys Phe Phe Arg Arg Phe Gly Arg Phe Gly
                725                 730


<210>  190
<211>  734
```

<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 190

```
Asp Asp Asp Glu Glu Lys Phe Phe Arg Arg Phe Gly Arg Phe Gly Gly
1               5                   10                  15


Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp
            20                  25                  30


Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys
        35                  40                  45


Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly
    50                  55                  60


Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu
65                  70                  75                  80


His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro
                85                  90                  95


Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp
            100                 105                 110


Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu
        115                 120                 125


Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr
    130                 135                 140


Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala
145                 150                 155                 160


Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr
                165                 170                 175
```

```
Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp
            180                 185                 190

Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala
        195                 200                 205

Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly
    210                 215                 220

Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu
225                 230                 235                 240

Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val
                245                 250                 255

Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile
            260                 265                 270

Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr
        275                 280                 285

Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg
    290                 295                 300

Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile
305                 310                 315                 320

Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly
                325                 330                 335

Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu
            340                 345                 350

His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu
        355                 360                 365
```

```
Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His
    370                 375                 380

Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly
385                 390                 395                 400

Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile
                405                 410                 415

Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu
            420                 425                 430

Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser
        435                 440                 445

Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val
    450                 455                 460

Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln
465                 470                 475                 480

Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn
                485                 490                 495

Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val
            500                 505                 510

Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe
        515                 520                 525

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
    530                 535                 540

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
545                 550                 555                 560

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
                565                 570                 575
```

```
Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
            580                 585                 590

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
        595                 600                 605

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
    610                 615                 620

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
625                 630                 635                 640

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
                645                 650                 655

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
            660                 665                 670

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
        675                 680                 685

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
    690                 695                 700

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
705                 710                 715                 720

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
                725                 730
```

<210> 191
<211> 738
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 191

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190
```

```
His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400
```

```
Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590
```

```
Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asp
705                 710                 715                 720

Asp Asp Glu Glu Lys Phe Leu Arg Arg Ile Arg Arg Phe Asp Gly Arg
                725                 730                 735

Phe Gly
```

<210> 192
<211> 738
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 192

```
Asp Asp Asp Glu Glu Lys Phe Leu Arg Arg Ile Arg Arg Phe Asp Gly
1               5                   10                  15

Arg Phe Gly Gly Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp
            20                  25                  30

Pro Lys Tyr Trp Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu
        35                  40                  45

Glu Leu Gln Lys Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe
    50                  55                  60

Leu Gly Asp Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu
65                  70                  75                  80

Lys Gly Gln Leu His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met
                85                  90                  95

Asp Lys Phe Pro Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala
            100                 105                 110

Gln Val Pro Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val
        115                 120                 125

Lys Ala Asn Glu Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser
    130                 135                 140

Arg Cys Asn Thr Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp
145                 150                 155                 160

Ala Lys Asp Ala Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val
                165                 170                 175

Asn His Ala Thr Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp
            180                 185                 190

Trp Tyr Ser Asp Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys
        195                 200                 205
```

```
Lys Asp Ile Ala Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val
    210                 215                 220

Ile Met Gly Gly Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp
225                 230                 235                 240

Val Glu Tyr Glu Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly
                245                 250                 255

Leu Asp Leu Val Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His
            260                 265                 270

Ser His Phe Ile Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His
        275                 280                 285

Asn Val Asp Tyr Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr
    290                 295                 300

Glu Leu Asn Arg Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val
305                 310                 315                 320

Val Val Ala Ile Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu
                325                 330                 335

Leu Val Glu Gly Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala
            340                 345                 350

Lys Gln Ala Leu His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln
        355                 360                 365

Ala Gly Ser Leu Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala
    370                 375                 380

Asp His Ser His Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn
385                 390                 395                 400
```

```
Ser Ile Phe Gly Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro
                405                 410                 415

Phe Thr Ala Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly
            420                 425                 430

Gly Glu Arg Glu Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr
        435                 440                 445

Gln Ala Gln Ser Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu
    450                 455                 460

Asp Val Ala Val Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly
465                 470                 475                 480

Val His Glu Gln Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys
                485                 490                 495

Ile Gly Ala Asn Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser
            500                 505                 510

Leu Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
        515                 520                 525

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
    530                 535                 540

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
545                 550                 555                 560

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
                565                 570                 575

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
            580                 585                 590

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
        595                 600                 605
```

```
Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
    610                 615                 620

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
625                 630                 635                 640

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
                645                 650                 655

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
            660                 665                 670

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
        675                 680                 685

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
    690                 695                 700

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
705                 710                 715                 720

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
                725                 730                 735

Gly Lys
```

<210> 193
<211> 738
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 193

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15
```

```
Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205
```

```
Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415
```

```
Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605
```

```
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asp
705                 710                 715                 720

Asp Asp Glu Glu Lys Phe Leu Arg Arg Leu Arg Arg Phe Asp Gly Arg
                725                 730                 735

Tyr Gly
```

<210> 194
<211> 738
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 194

```
Asp Asp Asp Glu Glu Lys Phe Leu Arg Arg Leu Arg Arg Phe Asp Gly
1               5                   10                  15
```

```
Arg Tyr Gly Gly Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp
            20                  25                  30

Pro Lys Tyr Trp Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu
        35                  40                  45

Glu Leu Gln Lys Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe
    50                  55                  60

Leu Gly Asp Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu
65                  70                  75                  80

Lys Gly Gln Leu His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met
                85                  90                  95

Asp Lys Phe Pro Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala
            100                 105                 110

Gln Val Pro Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val
        115                 120                 125

Lys Ala Asn Glu Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser
    130                 135                 140

Arg Cys Asn Thr Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp
145                 150                 155                 160

Ala Lys Asp Ala Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val
                165                 170                 175

Asn His Ala Thr Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp
            180                 185                 190

Trp Tyr Ser Asp Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys
        195                 200                 205

Lys Asp Ile Ala Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val
    210                 215                 220
```

```
Ile Met Gly Gly Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp
225                 230                 235                 240

Val Glu Tyr Glu Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly
                245                 250                 255

Leu Asp Leu Val Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His
            260                 265                 270

Ser His Phe Ile Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His
        275                 280                 285

Asn Val Asp Tyr Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr
    290                 295                 300

Glu Leu Asn Arg Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val
305                 310                 315                 320

Val Val Ala Ile Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu
                325                 330                 335

Leu Val Glu Gly Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala
            340                 345                 350

Lys Gln Ala Leu His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln
        355                 360                 365

Ala Gly Ser Leu Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala
    370                 375                 380

Asp His Ser His Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn
385                 390                 395                 400

Ser Ile Phe Gly Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro
                405                 410                 415
```

```
Phe Thr Ala Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly
            420                 425                 430

Gly Glu Arg Glu Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr
        435                 440                 445

Gln Ala Gln Ser Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu
    450                 455                 460

Asp Val Ala Val Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly
465                 470                 475                 480

Val His Glu Gln Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys
                485                 490                 495

Ile Gly Ala Asn Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser
            500                 505                 510

Leu Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
        515                 520                 525

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
    530                 535                 540

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
545                 550                 555                 560

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
                565                 570                 575

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
            580                 585                 590

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
        595                 600                 605

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
    610                 615                 620
```

```
Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
625                 630                 635                 640


Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
                645                 650                 655


Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
            660                 665                 670


Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
        675                 680                 685


Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
    690                 695                 700


Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
705                 710                 715                 720


Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
                725                 730                 735


Gly Lys
```

<210> 195
<211> 739
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 195

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30
```

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220
```

```
Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620
```

```
Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670


Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700


Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asp
705                 710                 715                 720


Asp Asp Glu Glu Lys Phe Leu Arg Arg Leu Arg Arg Phe Asp Glu Gly
                725                 730                 735


Arg Tyr Gly
```

<210> 196
<211> 739
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 196

```
Asp Asp Asp Glu Glu Lys Phe Leu Arg Arg Leu Arg Arg Phe Asp Glu
1               5                   10                  15


Gly Arg Tyr Gly Gly Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys
            20                  25                  30
```

```
Asp Pro Lys Tyr Trp Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala
        35                  40                  45

Leu Glu Leu Gln Lys Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met
    50                  55                  60

Phe Leu Gly Asp Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile
65                  70                  75                  80

Leu Lys Gly Gln Leu His His Asn Pro Gly Glu Glu Thr Arg Leu Glu
                85                  90                  95

Met Asp Lys Phe Pro Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn
            100                 105                 110

Ala Gln Val Pro Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly
        115                 120                 125

Val Lys Ala Asn Glu Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg
    130                 135                 140

Ser Arg Cys Asn Thr Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg
145                 150                 155                 160

Trp Ala Lys Asp Ala Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg
                165                 170                 175

Val Asn His Ala Thr Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg
            180                 185                 190

Asp Trp Tyr Ser Asp Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly
        195                 200                 205

Cys Lys Asp Ile Ala Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp
    210                 215                 220

Val Ile Met Gly Gly Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr
225                 230                 235                 240
```

```
Asp Val Glu Tyr Glu Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp
                245                 250                 255

Gly Leu Asp Leu Val Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys
            260                 265                 270

His Ser His Phe Ile Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro
        275                 280                 285

His Asn Val Asp Tyr Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln
    290                 295                 300

Tyr Glu Leu Asn Arg Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met
305                 310                 315                 320

Val Val Val Ala Ile Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe
                325                 330                 335

Leu Leu Val Glu Gly Gly Arg Ile Asp His Gly His His Glu Gly Lys
            340                 345                 350

Ala Lys Gln Ala Leu His Glu Ala Val Glu Met Asp Arg Ala Ile Gly
        355                 360                 365

Gln Ala Gly Ser Leu Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr
    370                 375                 380

Ala Asp His Ser His Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly
385                 390                 395                 400

Asn Ser Ile Phe Gly Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys
                405                 410                 415

Pro Phe Thr Ala Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val
            420                 425                 430
```

```
Gly Gly Glu Arg Glu Asn Val Ser Met Val Asp Tyr Ala His Asn Asn
        435                 440                 445

Tyr Gln Ala Gln Ser Ala Val Pro Leu Arg His Glu Thr His Gly Gly
    450                 455                 460

Glu Asp Val Ala Val Phe Ser Lys Gly Pro Met Ala His Leu Leu His
465                 470                 475                 480

Gly Val His Glu Gln Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala
                485                 490                 495

Cys Ile Gly Ala Asn Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly
            500                 505                 510

Ser Leu Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala
        515                 520                 525

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
    530                 535                 540

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln
545                 550                 555                 560

Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val
                565                 570                 575

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr
            580                 585                 590

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
        595                 600                 605

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile
    610                 615                 620

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
625                 630                 635                 640
```

Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser
645 650 655

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
660 665 670

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
675 680 685

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val
690 695 700

Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met
705 710 715 720

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
725 730 735

Leu Gly Lys

<210> 197
<211> 732
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 197

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

```
Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240
```

```
Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445
```

```
Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640
```

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Lys
705 710 715 720

Ser Asp Gly Gly Tyr Tyr Tyr Thr Gln Ser Asp Tyr
725 730

<210> 198
<211> 732
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 198

Lys Ser Asp Gly Gly Tyr Tyr Tyr Thr Gln Ser Asp Tyr Gly Gly Gly
1 5 10 15

Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp
20 25 30

Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn
35 40 45

Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly
50 55 60

```
Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His
65                  70                  75                  80

Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val
                85                  90                  95

Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala
            100                 105                 110

Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr
        115                 120                 125

Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln
    130                 135                 140

Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys
145                 150                 155                 160

Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser
                165                 170                 175

Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu
            180                 185                 190

Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln
        195                 200                 205

Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg
    210                 215                 220

Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp
225                 230                 235                 240

Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr
                245                 250                 255

Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn
            260                 265                 270
```

```
Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu
        275                 280                 285

Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln
    290                 295                 300

Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile
305                 310                 315                 320

Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg
                325                 330                 335

Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu
            340                 345                 350

Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser
        355                 360                 365

Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe
    370                 375                 380

Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala
385                 390                 395                 400

Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr
                405                 410                 415

Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val
            420                 425                 430

Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val
        435                 440                 445

Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser
    450                 455                 460
```

```
Lys Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr
465                 470                 475                 480

Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly
                485                 490                 495

His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys
            500                 505                 510

Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe
        515                 520                 525

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
    530                 535                 540

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
545                 550                 555                 560

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
                565                 570                 575

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
            580                 585                 590

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
        595                 600                 605

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
    610                 615                 620

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
625                 630                 635                 640

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
                645                 650                 655

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
            660                 665                 670
```

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
675 680 685

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
690 695 700

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
705 710 715 720

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
725 730

<210> 199
<211> 733
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 199

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

```
Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285
```

```
Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495
```

```
Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685
```

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Thr
705 710 715 720

Arg Tyr Ser Tyr Ser Thr Thr Pro Glu Glu Tyr Asp Leu
725 730

<210> 200
<211> 733
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 200

Thr Arg Tyr Ser Tyr Ser Thr Thr Pro Glu Glu Tyr Asp Leu Gly Gly
1 5 10 15

Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg
20 25 30

Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu
35 40 45

Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met
50 55 60

Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His
65 70 75 80

His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe
85 90 95

Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser
100 105 110

```
Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly
        115                 120                 125

Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr
    130                 135                 140

Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly
145                 150                 155                 160

Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro
                165                 170                 175

Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn
            180                 185                 190

Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr
        195                 200                 205

Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly
    210                 215                 220

Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser
225                 230                 235                 240

Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp
                245                 250                 255

Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp
            260                 265                 270

Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu
        275                 280                 285

Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn
    290                 295                 300

Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln
305                 310                 315                 320
```

```
Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly
                325                 330                 335

Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His
            340                 345                 350

Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr
        355                 360                 365

Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val
    370                 375                 380

Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu
385                 390                 395                 400

Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu
                405                 410                 415

Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn
            420                 425                 430

Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala
        435                 440                 445

Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe
    450                 455                 460

Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn
465                 470                 475                 480

Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu
                485                 490                 495

Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu
            500                 505                 510
```

```
Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
        515                 520                 525

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
    530                 535                 540

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
545                 550                 555                 560

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
                565                 570                 575

Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu
            580                 585                 590

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
        595                 600                 605

Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys
    610                 615                 620

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
625                 630                 635                 640

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
                645                 650                 655

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
            660                 665                 670

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
        675                 680                 685

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
    690                 695                 700

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
705                 710                 715                 720
```

```
His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
                725                 730


<210>  201
<211>  735
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  201

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140
```

```
Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335
```

```
Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540
```

```
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Thr
705                 710                 715                 720

Gly Gly Ser Ser Pro Phe Gly Gly Val Ala Gly Val Lys Asp Tyr
                725                 730                 735
```

<210> 202
<211> 735
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 202

```
Thr Gly Gly Ser Ser Pro Phe Gly Gly Val Ala Gly Val Lys Asp Tyr
1               5                   10                  15


Gly Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr
            20                  25                  30


Trp Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln
        35                  40                  45


Lys Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp
    50                  55                  60


Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln
65                  70                  75                  80


Leu His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe
                85                  90                  95


Pro Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro
            100                 105                 110


Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn
        115                 120                 125


Glu Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn
    130                 135                 140


Thr Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp
145                 150                 155                 160
```

```
Ala Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala
                165                 170                 175

Thr Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser
            180                 185                 190

Asp Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile
        195                 200                 205

Ala Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly
    210                 215                 220

Gly Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr
225                 230                 235                 240

Glu Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu
                245                 250                 255

Val Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe
            260                 265                 270

Ile Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp
        275                 280                 285

Tyr Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn
    290                 295                 300

Arg Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala
305                 310                 315                 320

Ile Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu
                325                 330                 335

Gly Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala
            340                 345                 350

Leu His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser
        355                 360                 365
```

```
Leu Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser
    370                 375                 380

His Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe
385                 390                 395                 400

Gly Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala
                405                 410                 415

Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg
            420                 425                 430

Glu Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln
        435                 440                 445

Ser Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala
    450                 455                 460

Val Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val His Glu
465                 470                 475                 480

Gln Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala
                485                 490                 495

Asn Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala
            500                 505                 510

Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val
        515                 520                 525

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
    530                 535                 540

Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu
545                 550                 555                 560
```

```
Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
                565                 570                 575

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser
            580                 585                 590

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
        595                 600                 605

Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile
    610                 615                 620

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
625                 630                 635                 640

Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
                645                 650                 655

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
            660                 665                 670

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
        675                 680                 685

Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg
    690                 695                 700

Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
705                 710                 715                 720

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
                725                 730                 735
```

<210> 203
<211> 731
<212> PRT
<213> Secuencia artificial

<220>

<223> Constructo sintético

<400> 203

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160


Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175


Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190
```

```
His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380
```

```
Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590
```

```
Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Val
705                 710                 715                 720

Thr Lys His Leu Asn Gln Ile Ser Gln Ser Tyr
                725                 730
```

<210> 204
<211> 726
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 204

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15
```

```
Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205
```

```
Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415
```

```
Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605
```

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Val Thr Lys His Leu Asn
705 710 715 720

Gln Ile Ser Gln Ser Tyr
725

<210> 205
<211> 726
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 205

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

```
Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240
```

```
Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430
```

```
Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640
```

```
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670


Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700


Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Lys
705                 710                 715                 720


Pro Arg Ser Val Ser Gly
                725


<210>  206
<211>  721
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  206

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60
```

```
Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255
```

```
Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460
```

```
His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480


Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495


Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510


Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525


Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540


Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560


Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575


His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590


Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605


Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620


Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655
```

```
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Lys Pro Arg Ser Val Ser
705                 710                 715                 720

Gly
```

<210> 207
<211> 731
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 207

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80
```

```
Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285
```

```
Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480
```

```
Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685
```

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asn
705 710 715 720

Pro Tyr His Pro Thr Ile Pro Gln Ser Val His
725 730

<210> 208
<211> 726
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 208

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

```
Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300
```

```
Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510
```

```
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700
```

```
Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asn Pro Tyr His Pro Thr
705                 710                 715                 720


Ile Pro Gln Ser Val His
                725
```

<210> 209
<211> 731
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 209

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125
```

```
Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335
```

```
Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525
```

```
Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Ser
705                 710                 715                 720

Val Ser Val Gly Met Lys Pro Ser Pro Arg Pro
                725                 730
```

<210> 210
<211> 726
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 210

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160
```

```
Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350
```

```
Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560
```

```
Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
        675                 680                 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Ser Val Ser Val Gly Met
705                 710                 715                 720

Lys Pro Ser Pro Arg Pro
                725
```

<210> 211
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 211

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                  10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125


Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140


Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160


Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175
```

```
Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380
```

```
Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575
```

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
580 585 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser
705 710 715

<210> 212
<211> 714
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 212

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

```
Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220
```

```
Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415
```

```
Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu Cys Pro Pro
                485                 490                 495

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
    530                 535                 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
    610                 615                 620
```

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
705 710

<210> 213
<211> 730
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 213

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

```
Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255
```

```
Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460
```

```
Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655
```

```
Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Val Thr
705                 710                 715                 720


Lys His Leu Asn Gln Ile Ser Gln Ser Tyr
                725                 730
```

<210> 214
<211> 725
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 214

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45


Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60


Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80
```

```
Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285
```

```
Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480
```

```
Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685
```

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Ser Leu Ser Leu Gly Lys Val Thr Lys His Leu Asn Gln
705 710 715 720

Ile Ser Gln Ser Tyr
725

<210> 215
<211> 725
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 215

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

```
Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300
```

```
Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320


Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335


Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350


Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365


Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380


Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400


Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415


Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430


Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445


Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460


Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480


Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495


Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510
```

```
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700
```

Leu Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Lys Pro
705 710 715 720

Arg Ser Val Ser Gly
725

<210> 216
<211> 720
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 216

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

```
Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335
```

```
Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525
```

```
Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Ser Leu Ser Leu Gly Lys Lys Pro Arg Ser Val Ser Gly
705                 710                 715                 720
```

<210> 217
<211> 730

<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 217

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145 150 155 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
165 170 175

```
Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365
```

```
Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575
```

```
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asn Pro
705                 710                 715                 720

Tyr His Pro Thr Ile Pro Gln Ser Val His
                725                 730
```

<210> 218
<211> 725
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 218

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                  10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190
```

```
Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400
```

```
Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590
```

```
Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Ser Leu Ser Leu Gly Lys Asn Pro Tyr His Pro Thr Ile
705                 710                 715                 720

Pro Gln Ser Val His
                725
```

<210> 219
<211> 730
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 219

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15
```

```
Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220
```

```
Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415
```

```
Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620
```

```
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700


Leu Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Ser Val
705                 710                 715                 720


Ser Val Gly Met Lys Pro Ser Pro Arg Pro
                725                 730
```

<210> 220
<211> 725
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 220

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15


Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30


Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45
```

```
Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240
```

```
His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445
```

```
Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640
```

```
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Ser Leu Ser Leu Gly Lys Ser Val Ser Val Gly Met Lys
705                 710                 715                 720

Pro Ser Pro Arg Pro
                725
```

<210> 221
<211> 718
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 221

```
Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1               5                   10                  15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
            20                  25                  30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
        35                  40                  45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
    50                  55                  60
```

```
Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65                  70                  75                  80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270
```

```
Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460
```

```
Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670
```

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
675 680 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser
705 710 715

<210> 222
<211> 713
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 222

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

```
Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300
```

```
Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320


Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335


Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350


Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365


Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380


Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400


Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415


Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430


Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445


Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460


Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480


Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495


Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510
```

```
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700
```

Leu Ser Leu Ser Leu Ser Leu Gly Lys
705 710

<210> 223
<211> 728
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 223

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala
85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
100 105 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu
115 120 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
130 135 140

```
Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285

Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350
```

```
Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540
```

```
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    690                 695                 700

Leu Ser Leu Ser Leu Ser Leu Gly Lys Gly Gly Gly Gly Ser Asp Asp
705                 710                 715                 720

Asp Asp Asp Asp Asp Asp Asp Asp
                725
```

<210> 224
<211> 489

<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 224

```
Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Gly Gly Gly Gly Ser Asp
1               5                   10                  15


Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
            20                  25                  30


Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
        35                  40                  45


Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
    50                  55                  60


Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
65                  70                  75                  80


Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
                85                  90                  95


Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
            100                 105                 110


Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
        115                 120                 125


Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
    130                 135                 140


Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
145                 150                 155                 160


Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
                165                 170                 175
```

```
Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
            180                 185                 190

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
        195                 200                 205

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
    210                 215                 220

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
225                 230                 235                 240

Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu Ile Thr
                245                 250                 255

Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn Asp His
            260                 265                 270

His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr
        275                 280                 285

Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala
    290                 295                 300

Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile
305                 310                 315                 320

Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu
                325                 330                 335

Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu
            340                 345                 350

Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn
        355                 360                 365
```

```
Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val Met Gln
    370                 375                 380

Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala
385                 390                 395                 400

Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu Val Gly
                405                 410                 415

Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys
            420                 425                 430

Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp Arg Arg
        435                 440                 445

Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu Gln His
    450                 455                 460

Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu Gly His
465                 470                 475                 480

Ser Gly Ser His His His His His His
                485
```

<210> 225
<211> 479
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 225

```
Gly Gly Gly Gly Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
1               5                   10                  15

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
            20                  25                  30
```

```
Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
        35                  40                  45

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
    50                  55                  60

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
65                  70                  75                  80

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
                85                  90                  95

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
            100                 105                 110

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
        115                 120                 125

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
    130                 135                 140

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
145                 150                 155                 160

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
                165                 170                 175

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
            180                 185                 190

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
        195                 200                 205

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
    210                 215                 220

Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu
225                 230                 235                 240
```

```
Asp Ser Val Leu Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu
                245                 250                 255

Gly Thr Val Asn Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly
            260                 265                 270

Lys Pro Tyr Glu Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly
        275                 280                 285

Gly Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr
    290                 295                 300

Gly Ser Lys Thr Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe
305                 310                 315                 320

Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr
                325                 330                 335

Glu Asp Gly Gly Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn
            340                 345                 350

Gly Cys Leu Ile Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser
        355                 360                 365

Asn Gly Pro Val Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr
    370                 375                 380

Glu Met Leu Tyr Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met
385                 390                 395                 400

Ala Leu Lys Leu Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr
                405                 410                 415

Thr Tyr Arg Ser Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe
            420                 425                 430
```

Tyr Phe Val Asp Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu
        435   440   445

Thr Tyr Val Glu Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu
    450   455   460

Pro Ser Lys Leu Gly His Ser Gly Ser His His His His His His
465   470   475

<210> 226
<211> 489
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 226

Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Gly Gly Gly Gly Ser Asp
1   5   10   15

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
            20   25   30

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
        35   40   45

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
    50   55   60

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
65   70   75   80

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
                85   90   95

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
            100   105   110

```
Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
        115                 120                 125

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
    130                 135                 140

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
145                 150                 155                 160

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
                165                 170                 175

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
            180                 185                 190

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
        195                 200                 205

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
    210                 215                 220

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
225                 230                 235                 240

Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu Ile Thr
                245                 250                 255

Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn Asp His
            260                 265                 270

His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr
        275                 280                 285

Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala
    290                 295                 300

Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile
305                 310                 315                 320
```

```
Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu
                325                 330                 335

Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu
            340                 345                 350

Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn
        355                 360                 365

Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val Met Gln
    370                 375                 380

Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala
385                 390                 395                 400

Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu Val Gly
                405                 410                 415

Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys
            420                 425                 430

Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp Arg Arg
        435                 440                 445

Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu Gln His
    450                 455                 460

Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu Gly His
465                 470                 475                 480

Ser Gly Ser His His His His His His
                485
```

<210> 227
<211> 491
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 227

```
Cys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Cys Gly Gly Gly Gly
1               5                  10                  15


Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
            20                  25                  30


Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
        35                  40                  45


Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
    50                  55                  60


His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
65                  70                  75                  80


Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
                85                  90                  95


Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
            100                 105                 110


Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
        115                 120                 125


Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
    130                 135                 140


Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
145                 150                 155                 160


Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                165                 170                 175
```

```
Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
            180                 185                 190

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
        195                 200                 205

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
    210                 215                 220

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
225                 230                 235                 240

Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu
                245                 250                 255

Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn
            260                 265                 270

Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu
        275                 280                 285

Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro
    290                 295                 300

Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr
305                 310                 315                 320

Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe
                325                 330                 335

Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly
            340                 345                 350

Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile
        355                 360                 365

Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val
    370                 375                 380
```

```
Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr
385                 390                 395                 400


Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu
                405                 410                 415


Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser
            420                 425                 430


Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp
        435                 440                 445


Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu
    450                 455                 460


Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu
465                 470                 475                 480


Gly His Ser Gly Ser His His His His His His
                485                 490
```

<210> 228
<211> 491
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 228

```
Val Thr Lys His Leu Asn Gln Ile Ser Gln Ser Tyr Gly Gly Gly Gly
1               5                   10                  15


Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
            20                  25                  30


Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
        35                  40                  45
```

```
Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
    50                  55                  60

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
65                  70                  75                  80

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
                85                  90                  95

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
            100                 105                 110

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
        115                 120                 125

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
    130                 135                 140

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
145                 150                 155                 160

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                165                 170                 175

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
            180                 185                 190

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
        195                 200                 205

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
    210                 215                 220

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
225                 230                 235                 240
```

```
Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu
                245                 250                 255

Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn
            260                 265                 270

Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu
        275                 280                 285

Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro
    290                 295                 300

Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr
305                 310                 315                 320

Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe
                325                 330                 335

Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly
            340                 345                 350

Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile
        355                 360                 365

Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val
    370                 375                 380

Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr
385                 390                 395                 400

Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu
                405                 410                 415

Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser
            420                 425                 430

Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp
        435                 440                 445
```

Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu
    450   455   460

Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu
465   470   475   480

Gly His Ser Gly Ser His His His His His His
                485   490

<210> 229
<211> 491
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 229

Asn Pro Tyr His Pro Thr Ile Pro Gln Ser Val His Gly Gly Gly Gly
1   5   10   15

Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
            20   25   30

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
        35   40   45

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
    50   55   60

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
65   70   75   80

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
                85   90   95

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
            100   105   110

```
Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
        115                 120                 125

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
    130                 135                 140

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
145                 150                 155                 160

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                165                 170                 175

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
            180                 185                 190

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
        195                 200                 205

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
    210                 215                 220

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
225                 230                 235                 240

Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu
                245                 250                 255

Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn
            260                 265                 270

Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu
        275                 280                 285

Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro
    290                 295                 300
```

```
Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr
305                 310                 315                 320

Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe
                325                 330                 335

Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly
            340                 345                 350

Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile
        355                 360                 365

Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val
    370                 375                 380

Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr
385                 390                 395                 400

Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu
                405                 410                 415

Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser
            420                 425                 430

Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp
        435                 440                 445

Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu
    450                 455                 460

Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu
465                 470                 475                 480

Gly His Ser Gly Ser His His His His His His
                485                 490
```

<210> 230
<211> 488

<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 230

```
Cys Asn Tyr Pro Thr Leu Lys Ser Cys Gly Gly Gly Gly Ser Asp Lys
1               5                   10                  15


Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
            20                  25                  30


Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
        35                  40                  45


Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
    50                  55                  60


Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
65                  70                  75                  80


Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
                85                  90                  95


Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
            100                 105                 110


Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
        115                 120                 125


Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
    130                 135                 140


Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
145                 150                 155                 160


Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
                165                 170                 175
```

```
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
            180                 185                 190

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
        195                 200                 205

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
    210                 215                 220

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
225                 230                 235                 240

Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu Ile Thr Glu
                245                 250                 255

Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn Asp His His
            260                 265                 270

Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr Gln
        275                 280                 285

Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe
    290                 295                 300

Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile Asn
305                 310                 315                 320

His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu Gly
                325                 330                 335

Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu Thr
            340                 345                 350

Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn Val
        355                 360                 365
```

```
Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val Met Gln Lys
    370                 375                 380

Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala Asp
385                 390                 395                 400

Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu Val Gly Gly
                405                 410                 415

Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys Pro
            420                 425                 430

Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp Arg Arg Leu
        435                 440                 445

Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu Gln His Glu
    450                 455                 460

Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu Gly His Ser
465                 470                 475                 480

Gly Ser His His His His His His
                485
```

<210> 231
<211> 488
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 231

```
Cys Met Leu Pro His His Gly Ala Cys Gly Gly Gly Gly Ser Asp Lys
1               5                   10                  15

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
            20                  25                  30
```

```
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
        35                  40                  45

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
    50                  55                  60

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
65                  70                  75                  80

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
                85                  90                  95

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
            100                 105                 110

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
        115                 120                 125

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
    130                 135                 140

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
145                 150                 155                 160

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
                165                 170                 175

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
            180                 185                 190

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
        195                 200                 205

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
    210                 215                 220

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
225                 230                 235                 240
```

```
Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu Ile Thr Glu
               245                 250                 255

Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn Asp His His
            260                 265                 270

Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr Gln
        275                 280                 285

Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe
    290                 295                 300

Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile Asn
305                 310                 315                 320

His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu Gly
               325                 330                 335

Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu Thr
            340                 345                 350

Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn Val
        355                 360                 365

Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val Met Gln Lys
    370                 375                 380

Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala Asp
385                 390                 395                 400

Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu Val Gly Gly
               405                 410                 415

Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys Pro
            420                 425                 430
```

```
Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp Arg Arg Leu
        435                 440                 445


Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu Gln His Glu
    450                 455                 460


Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu Gly His Ser
465                 470                 475                 480


Gly Ser His His His His His His
                485
```

<210> 232
<211> 491
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 232

```
Ser Val Ser Val Gly Met Lys Pro Ser Pro Arg Pro Gly Gly Gly Gly
1               5                   10                  15


Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
            20                  25                  30


Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
        35                  40                  45


Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
    50                  55                  60


His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
65                  70                  75                  80


Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
                85                  90                  95
```

```
Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
            100                 105                 110

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
        115                 120                 125

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
    130                 135                 140

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
145                 150                 155                 160

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                165                 170                 175

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
            180                 185                 190

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
        195                 200                 205

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
    210                 215                 220

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
225                 230                 235                 240

Ser Pro Gly Lys Gly Gly Gly Gly Ala Val Gly Glu Asp Ser Val Leu
                245                 250                 255

Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn
            260                 265                 270

Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu
        275                 280                 285

Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro
    290                 295                 300
```

```
Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr
305                 310                 315                 320

Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe
                325                 330                 335

Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly
            340                 345                 350

Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile
        355                 360                 365

Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val
    370                 375                 380

Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr
385                 390                 395                 400

Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu
                405                 410                 415

Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser
            420                 425                 430

Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp
        435                 440                 445

Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu
    450                 455                 460

Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu
465                 470                 475                 480

Gly His Ser Gly Ser His His His His His His
                485                 490
```

<210> 233
<211> 486
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 233

```
Lys Pro Arg Ser Val Ser Gly Gly Gly Gly Gly Ser Asp Lys Thr His
1               5                   10                  15


Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
            20                  25                  30


Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
        35                  40                  45


Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
    50                  55                  60


Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
65                  70                  75                  80


Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
                85                  90                  95


Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
            100                 105                 110


Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
        115                 120                 125


Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
    130                 135                 140


Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
145                 150                 155                 160
```

```
Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
                165                 170                 175

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
            180                 185                 190

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
        195                 200                 205

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
    210                 215                 220

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly
225                 230                 235                 240

Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu Ile Thr Glu Asn Met
                245                 250                 255

His Met Lys Leu Tyr Met Glu Gly Thr Val Asn Asp His His Phe Lys
            260                 265                 270

Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr Gln Thr Met
        275                 280                 285

Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe Asp Ile
    290                 295                 300

Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile Asn His Thr
305                 310                 315                 320

Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu Gly Phe Thr
                325                 330                 335

Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu Thr Ala Thr
            340                 345                 350

Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn Val Lys Ile
        355                 360                 365
```

Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val Met Gln Lys Lys Thr
370 375 380

Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala Asp Ser Gly
385 390 395 400

Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu Val Gly Gly Gly Tyr
405 410 415

Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys Pro Ala Lys
420 425 430

Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp Arg Arg Leu Glu Arg
435 440 445

Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu Gln His Glu Met Ala
450 455 460

Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu Gly His Ser Gly Ser
465 470 475 480

His His His His His His
485

<210> 234
<211> 497
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 234

Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu
1 5 10 15

Gly Ala Gly Gly Gly Gly Ser Asp Lys Thr His Thr Cys Pro Pro Cys
20 25 30

```
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
        35                  40                  45

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    50                  55                  60

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
65                  70                  75                  80

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                85                  90                  95

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            100                 105                 110

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        115                 120                 125

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    130                 135                 140

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
145                 150                 155                 160

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                165                 170                 175

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
            180                 185                 190

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
        195                 200                 205

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
    210                 215                 220
```

```
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
225                 230                 235                 240

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Val
                245                 250                 255

Gly Glu Asp Ser Val Leu Ile Thr Glu Asn Met His Met Lys Leu Tyr
            260                 265                 270

Met Glu Gly Thr Val Asn Asp His His Phe Lys Cys Thr Ser Glu Gly
        275                 280                 285

Glu Gly Lys Pro Tyr Glu Gly Thr Gln Thr Met Lys Ile Lys Val Val
    290                 295                 300

Glu Gly Gly Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe
305                 310                 315                 320

Met Tyr Gly Ser Lys Thr Phe Ile Asn His Thr Gln Gly Ile Pro Asp
                325                 330                 335

Phe Phe Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr
            340                 345                 350

Thr Tyr Glu Asp Gly Gly Val Leu Thr Ala Thr Gln Asp Thr Ser Leu
        355                 360                 365

Gln Asn Gly Cys Leu Ile Tyr Asn Val Lys Ile Asn Gly Val Asn Phe
    370                 375                 380

Pro Ser Asn Gly Pro Val Met Gln Lys Lys Thr Leu Gly Trp Glu Ala
385                 390                 395                 400

Ser Thr Glu Met Leu Tyr Pro Ala Asp Ser Gly Leu Arg Gly His Ala
                405                 410                 415

Gln Met Ala Leu Lys Leu Val Gly Gly Gly Tyr Leu His Cys Ser Leu
            420                 425                 430
```

Lys Thr Thr Tyr Arg Ser Lys Lys Pro Ala Lys Asn Leu Lys Met Pro
435 440 445

Gly Phe Tyr Phe Val Asp Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp
450 455 460

Lys Glu Thr Tyr Val Glu Gln His Glu Met Ala Val Ala Arg Tyr Cys
465 470 475 480

Asp Leu Pro Ser Lys Leu Gly His Ser Gly Ser His His His His His
485 490 495

His

<210> 235
<211> 491
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 235

Lys Asp Val Val Val Gly Val Pro Gly Gly Gln Asp Gly Gly Gly Gly
1 5 10 15

Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
20 25 30

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
35 40 45

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
50 55 60

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
65 70 75 80

```
Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
                85                  90                  95

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
            100                 105                 110

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
        115                 120                 125

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
    130                 135                 140

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
145                 150                 155                 160

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                165                 170                 175

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
            180                 185                 190

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
        195                 200                 205

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
    210                 215                 220

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
225                 230                 235                 240

Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu
                245                 250                 255

Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn
            260                 265                 270
```

```
Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu
        275                 280                 285

Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro
    290                 295                 300

Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr
305                 310                 315                 320

Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe
                325                 330                 335

Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly
            340                 345                 350

Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile
        355                 360                 365

Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val
    370                 375                 380

Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr
385                 390                 395                 400

Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu
                405                 410                 415

Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser
            420                 425                 430

Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp
        435                 440                 445

Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu
    450                 455                 460

Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu
465                 470                 475                 480
```

Gly His Ser Gly Ser His His His His His His
485 490

<210> 236
<211> 488
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 236

Glu Pro Arg Arg Glu Val Ala Glu Leu Gly Gly Gly Gly Ser Asp Lys
1 5 10 15

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
20 25 30

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
35 40 45

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
50 55 60

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
65 70 75 80

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
85 90 95

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
100 105 110

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
115 120 125

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
130 135 140

```
Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
145                 150                 155                 160

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
                165                 170                 175

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
            180                 185                 190

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
        195                 200                 205

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
    210                 215                 220

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
225                 230                 235                 240

Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu Ile Thr Glu
                245                 250                 255

Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn Asp His His
            260                 265                 270

Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr Gln
        275                 280                 285

Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe
    290                 295                 300

Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile Asn
305                 310                 315                 320

His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu Gly
                325                 330                 335
```

```
Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu Thr
            340                 345                 350

Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn Val
        355                 360                 365

Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val Met Gln Lys
    370                 375                 380

Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala Asp
385                 390                 395                 400

Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu Val Gly Gly
                405                 410                 415

Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys Pro
            420                 425                 430

Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp Arg Arg Leu
        435                 440                 445

Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu Gln His Glu
    450                 455                 460

Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu Gly His Ser
465                 470                 475                 480

Gly Ser His His His His His His
                485
```

<210> 237
<211> 495
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 237

```
Asn Pro Pro Thr Arg Gln Thr Lys Pro Lys Arg Val Ala Asn Thr Asn
1               5                   10                  15

Gly Gly Gly Gly Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
            20                  25                  30

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
        35                  40                  45

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
    50                  55                  60

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
65                  70                  75                  80

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
                85                  90                  95

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
            100                 105                 110

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
        115                 120                 125

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
    130                 135                 140

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
145                 150                 155                 160

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
                165                 170                 175

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
            180                 185                 190

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
        195                 200                 205
```

```
Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
    210                 215                 220

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
225                 230                 235                 240

Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu
                245                 250                 255

Asp Ser Val Leu Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu
            260                 265                 270

Gly Thr Val Asn Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly
        275                 280                 285

Lys Pro Tyr Glu Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly
    290                 295                 300

Gly Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr
305                 310                 315                 320

Gly Ser Lys Thr Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe
                325                 330                 335

Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr
            340                 345                 350

Glu Asp Gly Gly Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn
        355                 360                 365

Gly Cys Leu Ile Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser
    370                 375                 380

Asn Gly Pro Val Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr
385                 390                 395                 400
```

Glu Met Leu Tyr Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met
405 410 415

Ala Leu Lys Leu Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr
420 425 430

Thr Tyr Arg Ser Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe
435 440 445

Tyr Phe Val Asp Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu
450 455 460

Thr Tyr Val Glu Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu
465 470 475 480

Pro Ser Lys Leu Gly His Ser Gly Ser His His His His His His
485 490 495

<210> 238
<211> 494
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 238

Asp Ser Ser Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg Phe Gly Gly
1 5 10 15

Gly Gly Gly Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
20 25 30

Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
35 40 45

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
50 55 60

```
Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
65                  70                  75                  80


Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
                85                  90                  95


Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            100                 105                 110


Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
        115                 120                 125


Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
    130                 135                 140


Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
145                 150                 155                 160


Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
                165                 170                 175


Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
            180                 185                 190


Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
        195                 200                 205


Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
    210                 215                 220


Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
225                 230                 235                 240


Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp
                245                 250                 255


Ser Val Leu Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu Gly
            260                 265                 270
```

```
Thr Val Asn Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys
        275                 280                 285

Pro Tyr Glu Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly
    290                 295                 300

Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly
305                 310                 315                 320

Ser Lys Thr Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys
                325                 330                 335

Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu
            340                 345                 350

Asp Gly Gly Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly
        355                 360                 365

Cys Leu Ile Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn
    370                 375                 380

Gly Pro Val Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu
385                 390                 395                 400

Met Leu Tyr Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala
                405                 410                 415

Leu Lys Leu Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr
            420                 425                 430

Tyr Arg Ser Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr
        435                 440                 445

Phe Val Asp Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr
    450                 455                 460
```

```
Tyr Val Glu Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro
465                 470                 475                 480


Ser Lys Leu Gly His Ser Gly Ser His His His His His His
                485                 490


<210>  239
<211>  499
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  239

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Phe Leu Arg Arg Ile
1               5                   10                  15


Gly Arg Phe Gly Gly Gly Gly Gly Ser Asp Lys Thr His Thr Cys Pro
            20                  25                  30


Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
        35                  40                  45


Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
    50                  55                  60


Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65                  70                  75                  80


Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
                85                  90                  95


Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
            100                 105                 110


Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
        115                 120                 125
```

```
Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
    130                 135                 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145                 150                 155                 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
                165                 170                 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
            180                 185                 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
        195                 200                 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
    210                 215                 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225                 230                 235                 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
                245                 250                 255

Ser Val Gly Glu Asp Ser Val Leu Ile Thr Glu Asn Met His Met Lys
            260                 265                 270

Leu Tyr Met Glu Gly Thr Val Asn Asp His His Phe Lys Cys Thr Ser
        275                 280                 285

Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr Gln Thr Met Lys Ile Lys
    290                 295                 300

Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Thr
305                 310                 315                 320

Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile Asn His Thr Gln Gly Ile
                325                 330                 335
```

```
Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg
            340                 345                 350

Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu Thr Ala Thr Gln Asp Thr
        355                 360                 365

Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn Val Lys Ile Asn Gly Val
    370                 375                 380

Asn Phe Pro Ser Asn Gly Pro Val Met Gln Lys Lys Thr Leu Gly Trp
385                 390                 395                 400

Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala Asp Ser Gly Leu Arg Gly
                405                 410                 415

His Ala Gln Met Ala Leu Lys Leu Val Gly Gly Gly Tyr Leu His Cys
            420                 425                 430

Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys Pro Ala Lys Asn Leu Lys
        435                 440                 445

Met Pro Gly Phe Tyr Phe Val Asp Arg Arg Leu Glu Arg Ile Lys Glu
    450                 455                 460

Ala Asp Lys Glu Thr Tyr Val Glu Gln His Glu Met Ala Val Ala Arg
465                 470                 475                 480

Tyr Cys Asp Leu Pro Ser Lys Leu Gly His Ser Gly Ser His His His
                485                 490                 495

His His His
```

<210> 240
<211> 492
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 240

Lys Ser Asp Gly Gly Tyr Tyr Tyr Thr Gln Ser Asp Tyr Gly Gly Gly
1   5   10   15

Gly Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
            20   25   30

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
        35   40   45

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
    50   55   60

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
65   70   75   80

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
                85   90   95

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
            100   105   110

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
        115   120   125

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
    130   135   140

Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln
145   150   155   160

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
                165   170   175

```
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
            180                 185                 190

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
        195                 200                 205

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
    210                 215                 220

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
225                 230                 235                 240

Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val
                245                 250                 255

Leu Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val
            260                 265                 270

Asn Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr
        275                 280                 285

Glu Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu
    290                 295                 300

Pro Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys
305                 310                 315                 320

Thr Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser
                325                 330                 335

Phe Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly
            340                 345                 350

Gly Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu
        355                 360                 365

Ile Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro
    370                 375                 380
```

```
Val Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu
385                 390                 395                 400


Tyr Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys
                405                 410                 415


Leu Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg
            420                 425                 430


Ser Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val
        435                 440                 445


Asp Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val
    450                 455                 460


Glu Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys
465                 470                 475                 480


Leu Gly His Ser Gly Ser His His His His His His
                485                 490


<210>  241
<211>  597
<212>  PRT
<213>  Secuencia artificial

<220>
<223>  Constructo sintético

<400>  241

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1               5                   10                  15


Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Arg Val Met Gly
            20                  25                  30


Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala Ala Ile
        35                  40                  45
```

```
Gly Arg Ser Gly Thr Thr Arg Tyr Ala Asp Ser Val Lys Gly Arg Phe
    50                  55                  60

Thr Ile Ser Arg Asp Asn Gly Lys Asn Thr Val Tyr Leu Gln Met Asn
65                  70                  75                  80

Asn Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ala Lys Ser
                85                  90                  95

Asp Gly Gly Tyr Tyr Tyr Thr Gln Ser Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Gln Val Thr Val Ser Ser Gly Gly Gly Gly Ser Asp Lys Thr His Thr
        115                 120                 125

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
    130                 135                 140

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
145                 150                 155                 160

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
                165                 170                 175

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
            180                 185                 190

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
        195                 200                 205

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
    210                 215                 220

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
225                 230                 235                 240
```

```
Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
                245                 250                 255

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
            260                 265                 270

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
        275                 280                 285

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
    290                 295                 300

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
305                 310                 315                 320

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
                325                 330                 335

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly
            340                 345                 350

Gly Gly Ser Val Gly Glu Asp Ser Val Leu Ile Thr Glu Asn Met His
        355                 360                 365

Met Lys Leu Tyr Met Glu Gly Thr Val Asn Asp His His Phe Lys Cys
    370                 375                 380

Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr Gln Thr Met Lys
385                 390                 395                 400

Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe Asp Ile Leu
                405                 410                 415

Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile Asn His Thr Gln
            420                 425                 430

Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp
        435                 440                 445
```

```
Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu Thr Ala Thr Gln
    450                 455                 460

Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn Val Lys Ile Asn
465                 470                 475                 480

Gly Val Asn Phe Pro Ser Asn Gly Pro Val Met Gln Lys Lys Thr Leu
                485                 490                 495

Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala Asp Ser Gly Leu
            500                 505                 510

Arg Gly His Ala Gln Met Ala Leu Lys Leu Val Gly Gly Gly Tyr Leu
        515                 520                 525

His Cys Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys Pro Ala Lys Asn
    530                 535                 540

Leu Lys Met Pro Gly Phe Tyr Phe Val Asp Arg Arg Leu Glu Arg Ile
545                 550                 555                 560

Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu Gln His Glu Met Ala Val
                565                 570                 575

Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu Gly His Ser Gly Ser His
            580                 585                 590

His His His His His
        595
```

<210> 242
<211> 601
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 242

```
Gln Val Lys Leu Glu Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Phe Ser Thr Tyr
            20                  25                  30

Ser Met Gly Trp Phe Arg Arg Ala Pro Gly Lys Glu Arg Glu Phe Val
        35                  40                  45

Ala Ala Ile Ser Trp Ser Gly Gly Thr Thr Arg Tyr Thr Asn Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Lys Asp Asn Phe Gly Asn Thr Val Tyr
65                  70                  75                  80

Leu Gln Met Asn Asn Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Thr Arg Tyr Ser Tyr Ser Thr Thr Pro Glu Glu Tyr Asp Leu Trp
            100                 105                 110

Gly Gln Gly Asn Gln Val Thr Val Ser Ser Gly Gly Gly Gly Ser Asp
        115                 120                 125

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
    130                 135                 140

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
145                 150                 155                 160

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
                165                 170                 175

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
            180                 185                 190
```

```
Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
        195                 200                 205

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
    210                 215                 220

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
225                 230                 235                 240

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
                245                 250                 255

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
            260                 265                 270

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
        275                 280                 285

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
    290                 295                 300

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
305                 310                 315                 320

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
                325                 330                 335

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
            340                 345                 350

Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu Ile Thr
        355                 360                 365

Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn Asp His
    370                 375                 380

His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr
385                 390                 395                 400
```

```
Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala
                405                 410                 415

Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile
            420                 425                 430

Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu
        435                 440                 445

Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu
    450                 455                 460

Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn
465                 470                 475                 480

Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val Met Gln
                485                 490                 495

Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala
            500                 505                 510

Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu Val Gly
        515                 520                 525

Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys
    530                 535                 540

Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp Arg Arg
545                 550                 555                 560

Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu Gln His
                565                 570                 575

Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu Gly His
            580                 585                 590
```

Ser Gly Ser His His His His His His
595 600

<210> 243
<211> 603
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 243

Gln Val Gln Leu Gln Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Ser Leu Asp Ile Tyr
20 25 30

Ala Ile Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Gly Val
35 40 45

Ser Cys Ile Asn Ser Ser Gly Ser Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Ile Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Thr Gly Gly Cys Ser Pro Phe Gly Gly Val Ala Gly Val Lys Asp
100 105 110

Tyr Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser Gly Gly Gly Gly
115 120 125

Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
130 135 140

```
Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
145                 150                 155                 160


Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
                165                 170                 175


His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
            180                 185                 190


Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
        195                 200                 205


Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
    210                 215                 220


Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
225                 230                 235                 240


Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
                245                 250                 255


Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
            260                 265                 270


Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
        275                 280                 285


Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
    290                 295                 300


Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
305                 310                 315                 320


Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
                325                 330                 335


Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
            340                 345                 350
```

```
Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu
        355                 360                 365

Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn
    370                 375                 380

Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu
385                 390                 395                 400

Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro
                405                 410                 415

Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr
            420                 425                 430

Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe
        435                 440                 445

Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly
    450                 455                 460

Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile
465                 470                 475                 480

Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val
                485                 490                 495

Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr
            500                 505                 510

Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu
        515                 520                 525

Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser
    530                 535                 540
```

```
Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp
545                 550                 555                 560


Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu
                565                 570                 575


Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu
            580                 585                 590


Gly His Ser Gly Ser His His His His His His
        595                 600
```

<210> 244
<211> 603
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 244

```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1               5                   10                  15


Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Arg Val Met Gly
            20                  25                  30


Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala Ala Ile
        35                  40                  45


Gly Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Thr Arg Tyr Ala Asp
    50                  55                  60


Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Gly Lys Asn Thr
65                  70                  75                  80


Val Tyr Leu Gln Met Asn Asn Leu Lys Pro Glu Asp Thr Ala Val Tyr
                85                  90                  95
```

```
Tyr Cys Ala Ala Lys Ser Asp Gly Gly Tyr Tyr Tyr Thr Gln Ser Asp
            100                 105                 110

Tyr Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125

Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
    130                 135                 140

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
145                 150                 155                 160

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
                165                 170                 175

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
            180                 185                 190

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
        195                 200                 205

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
    210                 215                 220

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
225                 230                 235                 240

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
                245                 250                 255

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
            260                 265                 270

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
        275                 280                 285

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
    290                 295                 300
```

```
Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
305                 310                 315                 320

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
                325                 330                 335

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
            340                 345                 350

Ser Pro Gly Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu
        355                 360                 365

Ile Thr Glu Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn
    370                 375                 380

Asp His His Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu
385                 390                 395                 400

Gly Thr Gln Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro
                405                 410                 415

Phe Ala Phe Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr
            420                 425                 430

Phe Ile Asn His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe
        435                 440                 445

Pro Glu Gly Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly
    450                 455                 460

Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile
465                 470                 475                 480

Tyr Asn Val Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val
                485                 490                 495
```

```
Met Gln Lys Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr
            500                 505                 510

Pro Ala Asp Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu
        515                 520                 525

Val Gly Gly Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser
    530                 535                 540

Lys Lys Pro Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp
545                 550                 555                 560

Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu
                565                 570                 575

Gln His Glu Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu
            580                 585                 590

Gly His Ser Gly Ser His His His His His His
        595                 600
```

<210> 245
<211> 632
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 245

```
Met Asp Trp Thr Trp Arg Val Phe Cys Leu Leu Ala Val Ala Pro Gly
1               5                   10                  15

Ala His Ser Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Gln Val Gln
            20                  25                  30

Leu Gln Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg
        35                  40                  45
```

```
Leu Ser Cys Ser Ala Ser Gly Phe Ser Leu Asp Ile Tyr Ala Ile Gly
    50                  55                  60

Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Gly Val Ser Cys Ile
65                  70                  75                  80

Asn Ser Ser Gly Ser Ser Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg
                85                  90                  95

Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Ile Tyr Leu Gln Met
            100                 105                 110

Asn Ser Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala Thr Gly
        115                 120                 125

Gly Cys Ser Pro Phe Gly Gly Val Ala Gly Val Lys Asp Tyr Trp Gly
    130                 135                 140

Gln Gly Thr Gln Val Thr Val Ser Ser Gly Gly Gly Gly Ser Asp Lys
145                 150                 155                 160

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
                165                 170                 175

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
            180                 185                 190

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
        195                 200                 205

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
    210                 215                 220

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
225                 230                 235                 240

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
                245                 250                 255
```

```
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
            260                 265                 270

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
        275                 280                 285

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
    290                 295                 300

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
305                 310                 315                 320

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
                325                 330                 335

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
            340                 345                 350

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
        355                 360                 365

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
    370                 375                 380

Lys Gly Gly Gly Gly Ser Val Gly Glu Asp Ser Val Leu Ile Thr Glu
385                 390                 395                 400

Asn Met His Met Lys Leu Tyr Met Glu Gly Thr Val Asn Asp His His
                405                 410                 415

Phe Lys Cys Thr Ser Glu Gly Glu Gly Lys Pro Tyr Glu Gly Thr Gln
            420                 425                 430

Thr Met Lys Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe
        435                 440                 445
```

```
Asp Ile Leu Ala Thr Ser Phe Met Tyr Gly Ser Lys Thr Phe Ile Asn
    450                 455                 460

His Thr Gln Gly Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu Gly
465                 470                 475                 480

Phe Thr Trp Glu Arg Ile Thr Thr Tyr Glu Asp Gly Gly Val Leu Thr
                485                 490                 495

Ala Thr Gln Asp Thr Ser Leu Gln Asn Gly Cys Leu Ile Tyr Asn Val
            500                 505                 510

Lys Ile Asn Gly Val Asn Phe Pro Ser Asn Gly Pro Val Met Gln Lys
        515                 520                 525

Lys Thr Leu Gly Trp Glu Ala Ser Thr Glu Met Leu Tyr Pro Ala Asp
    530                 535                 540

Ser Gly Leu Arg Gly His Ala Gln Met Ala Leu Lys Leu Val Gly Gly
545                 550                 555                 560

Gly Tyr Leu His Cys Ser Leu Lys Thr Thr Tyr Arg Ser Lys Lys Pro
                565                 570                 575

Ala Lys Asn Leu Lys Met Pro Gly Phe Tyr Phe Val Asp Arg Arg Leu
            580                 585                 590

Glu Arg Ile Lys Glu Ala Asp Lys Glu Thr Tyr Val Glu Gln His Glu
        595                 600                 605

Met Ala Val Ala Arg Tyr Cys Asp Leu Pro Ser Lys Leu Gly His Ser
    610                 615                 620

Gly Ser His His His His His His
625                 630
```

<210> 246
<211> 248

<212> PRT
<213> Mesorhizobium loti

<400> 246

```
Met Thr Glu Arg Leu Ala Gly Lys Thr Ala Leu Val Thr Gly Ala Ala
1               5                  10                  15


Gln Gly Ile Gly Lys Ala Ile Ala Ala Arg Leu Ala Ala Asp Gly Ala
            20                  25                  30


Thr Val Ile Val Ser Asp Ile Asn Ala Glu Gly Ala Lys Ala Ala Ala
        35                  40                  45


Ala Ser Ile Gly Lys Lys Ala Arg Ala Ile Ala Ala Asp Ile Ser Asp
    50                  55                  60


Pro Gly Ser Val Lys Ala Leu Phe Ala Glu Ile Gln Ala Leu Thr Gly
65                  70                  75                  80


Gly Ile Asp Ile Leu Val Asn Asn Ala Ser Ile Val Pro Phe Val Ala
                85                  90                  95


Trp Asp Asp Val Asp Leu Asp His Trp Arg Lys Ile Ile Asp Val Asn
            100                 105                 110


Leu Thr Gly Thr Phe Ile Val Thr Arg Ala Gly Thr Asp Gln Met Arg
        115                 120                 125


Ala Ala Gly Lys Ala Gly Arg Val Ile Ser Ile Ala Ser Asn Thr Phe
    130                 135                 140


Phe Ala Gly Thr Pro Asn Met Ala Ala Tyr Val Ala Ala Lys Gly Gly
145                 150                 155                 160


Val Ile Gly Phe Thr Arg Ala Leu Ala Thr Glu Leu Gly Lys Tyr Asn
                165                 170                 175


Ile Thr Ala Asn Ala Val Thr Pro Gly Leu Ile Glu Ser Asp Gly Val
```

180 185 190

Lys Ala Ser Pro His Asn Glu Ala Phe Gly Phe Val Glu Met Leu Gln
195 200 205

Ala Met Lys Gly Lys Gly Gln Pro Glu His Ile Ala Asp Val Val Ser
210 215 220

Phe Leu Ala Ser Asp Asp Ala Arg Trp Ile Thr Gly Gln Thr Leu Asn
225 230 235 240

Val Asp Ala Gly Met Val Arg His
245

<210> 247
<211> 719
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 247

Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn Arg Gln Ala
1 5 10 15

Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile Gln Lys Val
20 25 30

Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly Val Pro Thr
35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly Lys Leu Gly
50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu Ala Leu Ser
65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Ala Thr Ala

```
                85                  90                  95

Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr Ile Gly Leu
            100                 105                 110

Ser Ala Ala Ala Arg Phe Asn Gln Cys Gln Thr Thr Arg Gly Asn Glu
        115                 120                 125

Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys Ser Val Gly
    130                 135                 140

Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr
145                 150                 155                 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Met Pro Ala
                165                 170                 175

Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser
            180                 185                 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe
        195                 200                 205

Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala Ser Gln Asn
    210                 215                 220

Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys
225                 230                 235                 240

His Gln Gly Ala Arg Tyr Val Trp Gln Arg Thr Glu Leu Met Gln Ala
                245                 250                 255

Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Gly
            260                 265                 270

Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp Pro Ser Leu
        275                 280                 285
```

```
Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg
    290                 295                 300

Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His
305                 310                 315                 320

Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met Phe Asp Asp
                325                 330                 335

Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Thr
            340                 345                 350

Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr
        355                 360                 365

Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys Ala Gln Asp
    370                 375                 380

Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Val
385                 390                 395                 400

Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu Ser Gly Ser
                405                 410                 415

Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Glu Glu Thr His
            420                 425                 430

Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu
        435                 440                 445

Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val Met Ala Phe
    450                 455                 460

Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala
465                 470                 475                 480

Gly Thr Thr Asp Ala Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
```

```
                485                 490                 495

Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            500                 505                 510

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        515                 520                 525

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    530                 535                 540

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
545                 550                 555                 560

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                565                 570                 575

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            580                 585                 590

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        595                 600                 605

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    610                 615                 620

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
625                 630                 635                 640

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                645                 650                 655

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            660                 665                 670

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        675                 680                 685
```

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
690 695 700

Leu Ser Leu Gly Lys Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp
705 710 715

<210> 248
<211> 126
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 248

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Arg Val Met Gly
20 25 30

Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala Ala Ile
35 40 45

Gly Arg Ser Gly Thr Thr Arg Tyr Ala Asp Ser Val Lys Gly Arg Phe
50 55 60

Thr Ile Ser Arg Asp Asn Gly Lys Asn Thr Val Tyr Leu Gln Met Asn
65 70 75 80

Asn Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ala Lys Ser
85 90 95

Asp Gly Gly Tyr Tyr Tyr Thr Gln Ser Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Gln Val Thr Val Ser Ser Gly Ser His His His His His His
115 120 125

<210> 249
<211> 129
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 249

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Arg Val Met Gly
20 25 30

Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala Ala Ile
35 40 45

Gly Asp Asp Asp Asp Asp Asp Asp Thr Arg Tyr Ala Asp Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Gly Lys Asn Thr Val Tyr Leu
65 70 75 80

Gln Met Asn Asn Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Ala Lys Ser Asp Gly Gly Tyr Tyr Tyr Thr Gln Ser Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Gln Val Thr Val Ser Ser Gly Ser His His His His His
115 120 125

His

<210> 250
<211> 129
<212> PRT

<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 250

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Arg Val Met Gly
20 25 30

Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala Ala Ile
35 40 45

Gly Asp Asp Asp Asp Asp Asp Asp Thr Arg Tyr Ala Asp Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Gly Lys Asn Thr Val Tyr Leu
65 70 75 80

Gln Met Asn Asn Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Ala Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Gln Val Thr Val Ser Ser Gly Ser His His His His His
115 120 125

His

<210> 251
<211> 17
<212> PRT
<213> Homo sapiens

<400> 251

```
Met Ile Ser Pro Phe Leu Val Leu Ala Ile Gly Thr Cys Leu Thr Asn
1               5                   10                  15


Ser
```

<210> 252
<211> 15
<212> PRT
<213> Homo sapiens

<400> 252

```
Asp Asp Ser Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg Phe Gly
1               5                   10                  15
```

<210> 253
<211> 223
<212> PRT
<213> Homo sapiens

<400> 253

```
Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val
1               5                   10                  15


Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
            20                  25                  30


Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu
        35                  40                  45


Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
    50                  55                  60


Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser
65                  70                  75                  80


Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
                85                  90                  95
```

```
Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile
            100                 105                 110


Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
        115                 120                 125


Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
    130                 135                 140


Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
145                 150                 155                 160


Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
                165                 170                 175


Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg
            180                 185                 190


Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
        195                 200                 205


His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
    210                 215                 220
```

<210> 254
<211> 5
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 254

```
Gly Gly Gly Gly Ser
1               5
```

<210> 255
<211> 15
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 255

Gly Gly Gly Gly Ala Gly Gly Gly Gly Ala Gly Gly Gly Gly Ser
1   5   10   15

<210> 256
<211> 15
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 256

Gly Gly Gly Gly Gln Gly Gly Gly Gly Gln Gly Gly Gly Gly Ser
1   5   10   15

<210> 257
<211> 15
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 257

Gly Gly Gly Pro Ser Gly Gly Gly Pro Ser Gly Gly Gly Gly Ser
1   5   10   15

<210> 258
<211> 15
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 258

Gly Gly Gly Gly Ser Pro Gly Gly Gly Ser Pro Gly Gly Gly Ser
1   5   10   15

<210> 259
<211> 227
<212> PRT
<213> Homo sapiens

<400> 259

```
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1               5                  10                  15


Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
            20                  25                  30


Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
        35                  40                  45


Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    50                  55                  60


His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65                  70                  75                  80


Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                85                  90                  95


Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            100                 105                 110


Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125


Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
    130                 135                 140


Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160


Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
```

```
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Gly Lys
225
```

<210> 260
<211> 742
<212> PRT
<213> Homo sapiens

<400> 260

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95
```

```
Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln
            260                 265                 270

Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr
        275                 280                 285

Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val
    290                 295                 300
```

```
Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn
305                 310                 315                 320

Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala
                325                 330                 335

Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
            340                 345                 350

Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val
        355                 360                 365

Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly
    370                 375                 380

Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser
385                 390                 395                 400

Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
                405                 410                 415

Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met
            420                 425                 430

Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu
        435                 440                 445

Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys
    450                 455                 460

Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu
465                 470                 475                 480

Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp
                485                 490                 495
```

```
Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg
            500                 505                 510

Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly
        515                 520                 525

Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val
    530                 535                 540

Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu
545                 550                 555                 560

Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile
                565                 570                 575

Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala
            580                 585                 590

Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser
        595                 600                 605

Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr
    610                 615                 620

Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro
625                 630                 635                 640

Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly
                645                 650                 655

Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser
            660                 665                 670

Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro
        675                 680                 685

Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys
    690                 695                 700
```

```
Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val
705                 710                 715                 720


Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His
                725                 730                 735


Cys Ala Pro Ala Ser Ser
            740
```

<210> 261
<211> 491
<212> PRT
<213> Homo sapiens

<400> 261

```
Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1               5                   10                  15


Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
            20                  25                  30


Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
        35                  40                  45


Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
    50                  55                  60


Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80


Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95


Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly Thr Val Gly
            100                 105                 110


Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
```

```
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Gln Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320
```

```
His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
               325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
               405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460

His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480

Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala
               485                 490
```

<210> 262
<211> 736
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 262

```
Glu Glu Glu Glu Glu Glu Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg
1               5                   10                  15


Phe Gly Gly Gly Gly Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys
            20                  25                  30


Tyr Trp Arg Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu
        35                  40                  45


Gln Lys Leu Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly
    50                  55                  60


Asp Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly
65                  70                  75                  80


Gln Leu His His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys
                85                  90                  95


Phe Pro Phe Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val
            100                 105                 110


Pro Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala
        115                 120                 125


Asn Glu Gly Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys
    130                 135                 140


Asn Thr Thr Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys
145                 150                 155                 160


Asp Ala Gly Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His
                165                 170                 175


Ala Thr Pro Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr
```

```
            180                 185                 190

Ser Asp Asn Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp
        195                 200                 205

Ile Ala Tyr Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met
    210                 215                 220

Gly Gly Gly Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu
225                 230                 235                 240

Tyr Glu Ser Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp
                245                 250                 255

Leu Val Asp Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His
            260                 265                 270

Phe Ile Trp Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val
        275                 280                 285

Asp Tyr Leu Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu
    290                 295                 300

Asn Arg Asn Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val
305                 310                 315                 320

Ala Ile Gln Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val
                325                 330                 335

Glu Gly Gly Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln
            340                 345                 350

Ala Leu His Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly
        355                 360                 365

Ser Leu Thr Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His
    370                 375                 380
```

```
Ser His Val Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile
385                 390                 395                 400

Phe Gly Leu Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr
                405                 410                 415

Ala Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu
            420                 425                 430

Arg Glu Asn Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala
        435                 440                 445

Gln Ser Ala Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val
    450                 455                 460

Ala Val Phe Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val His
465                 470                 475                 480

Glu Gln Asn Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly
                485                 490                 495

Ala Asn Leu Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala
            500                 505                 510

Ala Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser
        515                 520                 525

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
    530                 535                 540

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro
545                 550                 555                 560

Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
                565                 570                 575

Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val
```

```
            580                 585                 590

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
        595                 600                 605

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr
    610                 615                 620

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
625                 630                 635                 640

Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
                645                 650                 655

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
            660                 665                 670

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
        675                 680                 685

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser
    690                 695                 700

Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
705                 710                 715                 720

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
                725                 730                 735
```

<210> 263
<211> 743
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 263

```
Met Asp Trp Thr Trp Arg Val Phe Cys Leu Leu Ala Val Ala Pro Gly
```

```
1               5                   10                  15

Ala His Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg
            20                  25                  30

Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu
        35                  40                  45

Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met
    50                  55                  60

Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His
65                  70                  75                  80

His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe
                85                  90                  95

Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser
            100                 105                 110

Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly
        115                 120                 125

Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr
    130                 135                 140

Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly
145                 150                 155                 160

Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro
                165                 170                 175

Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn
            180                 185                 190

Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr
        195                 200                 205
```

```
Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly
    210                 215                 220

Arg Lys Tyr Met Tyr Pro Lys Gln Lys Thr Asp Val Glu Tyr Glu Ser
225                 230                 235                 240

Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp
                245                 250                 255

Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp
            260                 265                 270

Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu
        275                 280                 285

Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn
    290                 295                 300

Gln Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln
305                 310                 315                 320

Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly
                325                 330                 335

Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His
            340                 345                 350

Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr
        355                 360                 365

Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val
    370                 375                 380

Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu
385                 390                 395                 400

Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu
```

```
                405                 410                 415

Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn
            420                 425                 430

Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala
        435                 440                 445

Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe
    450                 455                 460

Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn
465                 470                 475                 480

Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu
                485                 490                 495

Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu
            500                 505                 510

Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
        515                 520                 525

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
    530                 535                 540

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
545                 550                 555                 560

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
                565                 570                 575

Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu
            580                 585                 590

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
        595                 600                 605
```

```
Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys
    610                 615                 620

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
625                 630                 635                 640

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
                645                 650                 655

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
            660                 665                 670

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
        675                 680                 685

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
    690                 695                 700

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
705                 710                 715                 720

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp
                725                 730                 735

Asp Asp Asp Asp Asp Asp Asp
            740
```

<210> 264
<211> 740
<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 264

```
Met Asp Trp Thr Trp Arg Val Phe Cys Leu Leu Ala Val Ala Pro Gly
1               5                   10                  15
```

```
Ala His Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg
            20                  25                  30

Asp Gln Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu
        35                  40                  45

Asn Thr Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met
    50                  55                  60

Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His
65                  70                  75                  80

His Asn Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe
                85                  90                  95

Val Ala Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser
            100                 105                 110

Ala Gly Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Met Gly
        115                 120                 125

Thr Val Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr
    130                 135                 140

Gln Gly Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly
145                 150                 155                 160

Lys Ser Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro
                165                 170                 175

Ser Ala Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn
            180                 185                 190

Glu Met Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr
        195                 200                 205

Gln Leu Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly
```

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    210                 215                 220

Arg Lys Tyr Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser
225                 230                 235                 240

Asp Glu Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp
                245                 250                 255

Thr Trp Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp
            260                 265                 270

Asn Arg Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu
        275                 280                 285

Leu Gly Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn
    290                 295                 300

Asn Val Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln
305                 310                 315                 320

Ile Leu Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly
                325                 330                 335

Arg Ile Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His
            340                 345                 350

Glu Ala Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr
        355                 360                 365

Ser Ser Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val
    370                 375                 380

Phe Thr Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu
385                 390                 395                 400

Ala Pro Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu
                405                 410                 415
```

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Tyr Gly Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn
            420                 425                 430

Val Ser Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala
        435                 440                 445

Val Pro Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe
    450                 455                 460

Ser Lys Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn
465                 470                 475                 480

Tyr Val Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu
                485                 490                 495

Gly His Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Val Glu
            500                 505                 510

Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
        515                 520                 525

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
    530                 535                 540

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
545                 550                 555                 560

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
                565                 570                 575

Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu
            580                 585                 590

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
        595                 600                 605

Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys
```

610 615 620

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
625 630 635 640

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
645 650 655

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
660 665 670

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
675 680 685

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
690 695 700

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
705 710 715 720

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Asp Asp Asp
725 730 735

Asp Asp Asp Asp
740

<210> 265
<211> 2238
<212> ADN
<213> Secuencia artificial

<220>
<223> Constructo sintético

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tacgccttgg agctgcagaa gttgaacacc aacgtggcta agaacgtgat catgttcctg 180

ggcgacggga tgggagtctc cactgtgacg gccgctcgga tcctgaaggg gcagctccac 240

cataatcccg gagaagaaac tcggctggag atggacaagt tcccatttgt ggcgctgtcc 300

aagacctaca acactaatgc acaggtgccc gactccgcgg ggaccgccac cgcttacctc 360

tgcggagtga aggccaacat gggcaccgtg ggcgtcagcg cggccaccga aagatcacgg 420

tgcaatacca cccagggaaa cgaagtgacc agcatcctta ggtgggccaa ggatgccggg 480

aagtccgtgg gaatcgtgac cacgacccgg gtgaaccacg ccaccccaag cgccgcctac 540

gcccacagcg ccgacaggga ctggtactcc gacaacgaga tgcccccaga agccctgagc 600

cagggttgca aggacatcgc gtaccaactg atgcacaaca tccgcgatat cgatgtgatc 660

atgggaggag gtcgcaagta catgtatccg aagcagaaga ccgatgtgga gtacgagtcc 720

gacgaaaagg cccgcggaac tagactggat ggactcgacc ttgtggacac ctggaagtcg 780

tttaagccgc gctacaagca ctcacacttc atctggaatc gcactgaact cctgaccctg 840

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attttgcgga agaacccaaa gggctttttc ctgttggtgg aaggggggacg aatcgaccac 1020

ggacaccacg aaggaaaggc taagcaggcc ctgcacgagg ccgtcgaaat ggatagagcg 1080

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ccgggctaca aggtcgtcgg tggagaaaga gagaacgtgt ccatggtgga ttacgcgcac 1320

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accatctcca aggccaaggg gcagcctaga gaaccacagg tctacacact gcctccatcg 1920

caagaagaaa tgaccaagaa ccaagtgtcc ctgacttgcc tcgtgaaagg gttctatccg 1980

tcggacatcg ccgtcgaatg ggaatcaaac ggtcaaccag agaacaacta caagaccacc 2040

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tcccggtggc aggagggaaa cgtgttctca tgttcagtga tgcatgaggc gctgcataac 2160

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gacgatgatt gatagtaa 2238

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<213> Homo sapiens

<400> 266
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ccttggagct gcagaagttg aacaccaacg tggctaagaa cgtgatcatg ttcctgggcg 180

acgggatggg agtctccact gtgacggccg ctcggatcct gaaggggcag ctccaccata 240

atcccggaga agaaactcgg ctggagatgg acaagttccc atttgtggcg ctgtccaaga 300

cctacaacac taatgcacag gtgcccgact ccgcggggac cgccaccgct tacctctgcg 360

gagtgaaggc caacgaaggc accgtgggcg tcagcgcggc caccgaaaga tcacggtgca 420

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acagcgccga cagggactgg tactccgaca acgagatgcc cccagaagcc ctgagccagg 600

gttgcaagga catcgcgtac caactgatgc acaacatccg cgatatcgat gtgatcatgg 660

gaggaggtcg caagtacatg tatccgaaga acaagaccga tgtggagtac gagtccgacg 720

aaaaggcccg cggaactaga ctggatggac tcgaccttgt ggacacctgg aagtcgttta 780

agccgcgcta caagcactca cacttcatct ggaatcgcac tgaactcctg accctggacc 840

cccacaacgt ggattacctg ttgggacttt tcgagcccgg cgacatgcag tacgagctga 900

acagaaacaa cgtgaccgac ccttcactgt ccgaaatggt ggtggtcgca atccagattt 960

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ggtggcagga gggaaacgtg ttctcatgtt cagtgatgca tgaggcgctg cataaccact 2160

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<220>
<223> Constructo sintético

<400> 267
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tggatgcggc gaagaagttg cagcccatcc agaaagtggc taagaacctg attcttttcc 180

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tctgcggagt gaaggctaac ttccaaacca tcggcctgag cgcggccgcc cggttcaacc 420

agtgcaatac cacccgcgga aacgaagtga tctccgtgat gaacagggcc aagcaggccg 480

ggaagtccgt gggagtcgtg accacgaccc gggtgcagca cgccagccct gccggaacct 540

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aggaaggttg ccaggacatc gcgacccaac tgatttccaa catggatatc gatgtgatcc 660

tgggaggagg tcgcaagtac atgtttccga tgggtacccc cgatcccgag taccccgccg 720

acgccagcca gaacggtatc agactggatg gaaagaacct tgtgcaggaa tggctcgcca 780

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acgaaggggt cgcttaccaa gccctgactg aagctgtgat gttcgacgat gcgattgagc 1080

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acgtgttttc tttcggtggt tacaccctgc gcggctcgtc aatcttcgga ctcgctccct 1200

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gatagtaag 2229

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<211> 2166
<212> ADN
<213> Secuencia artificial

<220>
<223> Constructo sintético

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caccataatc ctggcgaaga gacacggctg gaaatggaca agttcccctt cgtggccctg 240

tccaagacct acaacacaaa cgcccaggtg ccagattctg ccggcacagc cacagcttat 300

ctgtgcggcg tgaaggccaa tatgggcaca gtgggagtgt ctgccgccac cgagagaagc 360

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ggcaagagcg tgggcatcgt gaccaccaca agagtgaatc acgccacacc tagcgccgcc 480

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gccattggac aggccggcag cctgacaagc tctgaggata cactgaccgt ggtcaccgcc 1080

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agccaagagg aaatgaccaa gaatcaggtg tccctgacct gcctggtcaa gggcttctac 1920

ccttccgata tcgccgtgga atgggagagc aatggccagc ctgagaacaa ctacaagacc 1980

acacctcctg tgctggacag cgacggcagc ttttttctgt actcccggct gacagtggac 2040

aagagcagat ggcaagaggg caacgtgttc agctgcagcg tgatgcacga agccctgcac 2100

aaccactaca cccagaagtc tctgagcctg tctctgggca aagacgacga tgacgacgac 2160

gattga 2166

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<212> PRT
<213> Secuencia artificial

<220>
<223> Constructo sintético

<400> 269

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Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

```
Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65                  70                  75                  80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
                85                  90                  95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
            100                 105                 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
        115                 120                 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
    130                 135                 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145                 150                 155                 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
                165                 170                 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
            180                 185                 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
        195                 200                 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
    210                 215                 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225                 230                 235                 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
                245                 250                 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
            260                 265                 270
```

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Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
        275                 280                 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
    290                 295                 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305                 310                 315                 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
                325                 330                 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
            340                 345                 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
        355                 360                 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
    370                 375                 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385                 390                 395                 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
                405                 410                 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
            420                 425                 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
        435                 440                 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
    450                 455                 460
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His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
465                 470                 475                 480


Ala Pro Ala Ser Ser Leu Lys Asp Lys Thr His Thr Cys Pro Pro Cys
                485                 490                 495


Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
            500                 505                 510


Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
        515                 520                 525


Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
    530                 535                 540


Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545                 550                 555                 560


Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
                565                 570                 575


His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
            580                 585                 590


Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
        595                 600                 605


Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
    610                 615                 620


Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625                 630                 635                 640


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
                645                 650                 655


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
            660                 665                 670
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Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
        675                 680                 685


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
    690                 695                 700


Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Asp Ile Asp Asp Asp Asp
705                 710                 715                 720


Asp Asp Asp Asp Asp Asp
                725
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