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<110> Regeneron Pharmaceuticals, Inc.

<120> Anticuerpos humanos para PD-1

<130> A0028W001

<140> A asignar

<141> Presentada con la presente

<150> 61/930,576

<151> 2014-01-23

<150> 62/014,181

<151> 2014-06-19

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Ser Val Ile Tyr Ser Gly Gly Phe Thr Tyr Tyr Thr Asp Ser Val Lys
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Gly Arg Phe Thr Ile Ser Arg His Asn Ser Lys Asn Thr Leu Tyr Leu
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 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
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Ser Val Ile Tyr Ser Gly Gly Phe Thr Tyr Tyr Thr Asp Ser Val Lys
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Gly Arg Phe Thr Ile Ser Arg His Asn Ser Lys Asn Thr Leu Tyr Leu
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Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
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Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
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 Lys Gly Arg Phe Thr Ile Ser Arg Ala Asn Ser Lys Asn Thr Leu Tyr
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 acaagagata tccattgtag tagtaccagg tgctacggta tggacgto 48

<210> 72
 <211> 16
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 72
 Thr Arg Asp Ile His Cys Ser Ser Thr Arg Cys Tyr Gly Met Asp Val
 1 5 10 15

<210> 73
 <211> 324
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 73
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattagc aactatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300
caagggacac gactggagat taaa 324

<210> 74
<211> 108
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 74
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asn Tyr
20 25 30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro
85 90 95
Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

<210> 75
<211> 18
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 75
cagagcatta gcaactat 18

<210> 76
<211> 6
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 76
Gln Ser Ile Ser Asn Tyr
1 5

<210> 77
<211> 9

<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 77
gctgcatcc

9

<210> 78
<211> 3
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 78
Ala Ala Ser
1

<210> 79
<211> 30
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 79
caacagagtt acagtacccc tccgatcacc

30

<210> 80
<211> 10
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 80
Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr
1 5 10

<210> 81
<211> 390
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 81
gaggtgcagc tgggtggagtc tggggggaggc ttggtaaagc ctgggggggtc ccttcgactc 60
tcctgtgcag cctctggatt caaattcagt aatgaatgga tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggttggccgt attaaaagca aaactgatgg tgggacaaca 180
gactacgctg caccctgtaa aggcagattc accatctcaa gagatgattc aaaaaatacg 240


```

ctgtatctgc aaatgaacag cctgaaaacc gaggacacag ccgtgtatta ctgtaccaca 300
gatcaagatt ttggagtggt ttattatacc ggggctgact actacggtat ggacgtctgg 360
ggccaaggga ccatggtcac cgtctectca                                     390

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<210> 82
<211> 130
<212> PRT
<213> Secuencia artificial

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<220>
<223> Sintético

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<400> 82
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1      5      10      15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Glu
20      25      30
Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35      40      45
Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
50      55      60
Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Ser Lys Asn Thr
65      70      75      80
Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85      90      95
Tyr Cys Thr Thr Asp Gln Asp Phe Trp Ser Gly Tyr Tyr Thr Gly Ala
100     105     110
Asp Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Met Val Thr Val
115     120     125
Ser Ser
130

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<210> 83
<211> 24
<212> ADN
<213> Secuencia artificial

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<220>
<223> Sintético

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<400> 83
ggattcaaat tcagtaatga atgg                                     24

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<210> 84
<211> 8
<212> PRT
<213> Secuencia artificial

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<220>
<223> Sintético

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```

<400> 84
Gly Phe Lys Phe Ser Asn Glu Trp
1      5

```

```

<210> 85
<211> 30

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<212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 85
 attaaaagca aaactgatgg tgggacaaca 30

 <210> 86
 <211> 10
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 86
 Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr
 1 5 10

 <210> 87
 <211> 63
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 87
 accacagatc aagatttttg gagtggttat tataccgggg ctgactacta cggtatggac 60
 gtc 63

 <210> 88
 <211> 21
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 88
 Thr Thr Asp Gln Asp Phe Trp Ser Gly Tyr Tyr Thr Gly Ala Asp Tyr
 1 5 10 15
 Tyr Gly Met Asp Val
 20

 <210> 89
 <211> 324
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 89
 gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60

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atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
agggtcagtg gcagtggatc tgggacagat ttactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300
caagggacac gactggagat taaa                                     324

```

```

<210> 90
<211> 108
<212> PRT
<213> Secuencia artificial

```

```

<220>
<223> Sintético

```

```

<400> 90
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1             5             10             15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
          20          25          30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
          35          40          45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
          50          55          60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65          70          75          80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro
          85          90          95
Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
          100          105

```

```

<210> 91
<211> 18
<212> ADN
<213> Secuencia artificial

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<220>
<223> Sintético

```

```

<400> 91
cagagcatta gcagctat                                     18

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```

<210> 92
<211> 6
<212> PRT
<213> Secuencia artificial

```

```

<220>
<223> Sintético

```

```

<400> 92
Gln Ser Ile Ser Ser Tyr
 1             5

```

```

<210> 93
<211> 9
<212> ADN
<213> Secuencia artificial

```

<220>
<223> Sintético

<400> 93
gctgcatcc

9

<210> 94
<211> 3
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 94
Ala Ala Ser
1

<210> 95
<211> 30
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 95
caacagagtt acagtacccc tccgatcacc

30

<210> 96
<211> 10
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 96
Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr
1 5 10

<210> 97
<211> 348
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 97
cagatgcagc tccaacagtg gggcgcagga ctattgaagc ctteggagac cctgtccctc 60
acctgcgttg tctatgggtg gtccctcaat ggatactatt ggagctggat ccgccagtcc 120
cccgggaagg ggctggagtg gattggggaa atcgatcata gtggaagcac caactacaac 180
cgtccctca agaatcgagt caccatgtca gtagacacgt ctaagattca gttctccctg 240
aaactgacct ctgtgacct cgcggacacg gctgtgtatt actgtgcgag agaaggatta 300
ttaccctttg actattgggg ccagggaacc ctggtcaccg tctctca 348

<210> 98
 <211> 116
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 98
 Gln Met Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
 1 5 10 15
 Thr Leu Ser Leu Thr Cys Val Val Tyr Gly Gly Ser Leu Asn Gly Tyr
 20 25 30
 Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45
 Gly Glu Ile Asp His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
 50 55 60
 Asn Arg Val Thr Met Ser Val Asp Thr Ser Lys Ile Gln Phe Ser Leu
 65 70 75 80
 Lys Leu Thr Ser Val Thr Val Ala Asp Thr Ala Val Tyr Tyr Cys Ala
 85 90 95
 Arg Glu Gly Leu Leu Pro Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val
 100 105 110
 Thr Val Ser Ser
 115

<210> 99
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 99
 ggtgggtccc tcaatggata ctat

24

<210> 100
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 100
 Gly Gly Ser Leu Asn Gly Tyr Tyr
 1 5

<210> 101
 <211> 21
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 101
 atcgatcata gtggaagcac c 21

<210> 102
 <211> 7
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 102
 Ile Asp His Ser Gly Ser Thr
 1 5

<210> 103
 <211> 30
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 103
 gcgagagaag gattattacc ctttgactat 30

<210> 104
 <211> 10
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 104
 Ala Arg Glu Gly Leu Leu Pro Phe Asp Tyr
 1 5 10

<210> 105
 <211> 324
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 105
 gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagtcacc 60
 ctctccctgca gggccagtca gagtgtttac agcaactact tagcctggta ccagcagaat 120
 cctggccagg ctcccaggt cctcatctat gctgcatcca acagggccac tggcatccca 180
 gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
 cctgaagatt ttgcggtgta ttactgtcat cagtatgcta cctcaccttg gacgttcggc 300
 caagggacca aggtggaat caaa 324

<210> 106
 <211> 108

<212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 106
 Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15
 Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Tyr Ser Asn
 20 25 30
 Tyr Leu Ala Trp Tyr Gln Gln Asn Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45
 Ile Tyr Ala Ala Ser Asn Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
 50 55 60
 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
 65 70 75 80
 Pro Glu Asp Phe Ala Val Tyr Tyr Cys His Gln Tyr Ala Thr Ser Pro
 85 90 95
 Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 107
 <211> 21
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 107
 cagagtgttt acagcaacta c

21

<210> 108
 <211> 7
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 108
 Gln Ser Val Tyr Ser Asn Tyr
 1 5

<210> 109
 <211> 9
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 109
 gctgcatcc

9

<210> 110

<211> 3
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 110
Ala Ala Ser
1

<210> 111
<211> 27
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 111
catcagtatg ctacctcacc ttggacg

27

<210> 112
<211> 9
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 112
His Gln Tyr Ala Thr Ser Pro Trp Thr
1 5

<210> 113
<211> 369
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 113
cagctgcagc tgcaggagtc gggcccagat ctggtgaagc ctteggatac cctgtccctc 60
acctgcactg tctctgatga ctccatcagc agtactactt actactgggc ctggatccgc 120
cagcccccag ggaaggggct ggaatggatt ggcagtatgt cttataatgg gaacaactac 180
tacaacccgt cctcaagag tcgagtcgcc atatccgcag gcacgtccca gaaacagttc 240
tccctgaaac tgacctctgt gactgccgca gacacggctg tttatcactg tgcgagacat 300
cttggatata acggcaactg gtaccctttt gacttctggg gccagggaat tctggtcacc 360
gtctcctct 369

<210> 114
<211> 123
<212> PRT
<213> Secuencia artificial

<220>

<223> Sintético

<400> 114

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Gln Leu Gln Leu Gln Glu Ser Gly Pro Asp Leu Val Lys Pro Ser Asp
 1              5              10              15
Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Asp Ser Ile Ser Ser Thr
      20      25      30
Thr Tyr Tyr Trp Ala Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
      35      40      45
Trp Ile Gly Ser Met Ser Tyr Asn Gly Asn Asn Tyr Tyr Asn Pro Ser
      50      55      60
Leu Lys Ser Arg Val Ala Ile Ser Ala Gly Thr Ser Gln Lys Gln Phe
      65      70      75      80
Ser Leu Lys Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr His
      85      90      95
Cys Ala Arg His Leu Gly Tyr Asn Gly Asn Trp Tyr Pro Phe Asp Phe
      100      105      110
Trp Gly Gln Gly Ile Leu Val Thr Val Ser Ser
      115      120
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<210> 115

<211> 30

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 115

gatgactcca tcagcagtac tacttactac

30

<210> 116

<211> 10

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 116

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Asp Asp Ser Ile Ser Ser Thr Thr Tyr Tyr
 1              5              10
```

<210> 117

<211> 21

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 117

atgtcttata atgggaacaa c

21

<210> 118

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 118
Met Ser Tyr Asn Gly Asn Asn
1 5

<210> 119
<211> 45
<212> ADN
<213> Secuencia artificial

<220>

<223> Sintético

<400> 119
gcgagacatc ttggatataa cggcaactgg taccoccttg acttc 45

<210> 120
<211> 15
<212> PRT
<213> Secuencia artificial

<220>

<223> Sintético

<400> 120
Ala Arg His Leu Gly Tyr Asn Gly Asn Trp Tyr Pro Phe Asp Phe
1 5 10 15

<210> 121
<211> 324
<212> ADN
<213> Secuencia artificial

<220>

<223> Sintético

<400> 121
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccaggaga aagagccacc 60
ctctccctgca gggccagtca gagtgttagt agtagttatt tagcctggta ccagcagaaa 120
cctggccagg ctcccagget cctcatctat ggtgcatcca gcaggaccac tggcatccca 180
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
cctgaagatt ttgcagtgtg ttactgtcag cagtatggta gtcaccttg gacgttcggc 300
caagggacca aggtggaat caaa 324

<210> 122
<211> 108
<212> PRT
<213> Secuencia artificial

<220>

<223> Sintético

<400> 122

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15
 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30
 Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45
 Ile Tyr Gly Ala Ser Ser Arg Thr Thr Gly Ile Pro Asp Arg Phe Ser
 50 55 60
 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
 65 70 75 80
 Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Tyr Gly Ser Ser Pro
 85 90 95
 Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 123
 <211> 21
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 123
 cagagtgtta gtagtagtta t

21

<210> 124
 <211> 7
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 124
 Gln Ser Val Ser Ser Ser Tyr
 1 5

<210> 125
 <211> 9
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 125
 ggtgcatcc

9

<210> 126
 <211> 3
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 126
Gly Ala Ser
1

<210> 127
<211> 27
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 127
cagcagtatg gtagctcacc ttggacg

27

<210> 128
<211> 9
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 128
Gln Gln Tyr Gly Ser Ser Pro Trp Thr
1 5

<210> 129
<211> 366
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 129
gaagtgcagg tggtagagtc tgggggcggc ttggtcgagc ctggcaggtc cctgagactc 60
tcctgtaaaag cctctggatt cacctttgat gattatgcc a tgcactgggt ccgacaaaact 120
ccagggaagg ccctggagtg ggtctcgggt attaatgga gtggtaataa cataggctat 180
gcggactctg tgaaggccg attcaccatc tccaaggacg acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag acctgaggac acggccttat attactgtac aaaagatata 300
agtataactg gaacctcga tgcttttgat gtctggggcc aagggaacaat ggtcaccgtc 360
tcttca 366

<210> 130
<211> 122
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 130
Glu Val Gln Val Val Glu Ser Gly Gly Gly Leu Val Glu Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30

Ala	Met	His	Trp	Val	Arg	Gln	Thr	Pro	Gly	Lys	Ala	Leu	Glu	Trp	Val
		35					40					45			
Ser	Gly	Ile	Asn	Trp	Ser	Gly	Asn	Asn	Ile	Gly	Tyr	Ala	Asp	Ser	Val
	50					55				60					
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Lys	Asp	Asp	Ala	Lys	Asn	Ser	Leu	Tyr
65					70					75					80
Leu	Gln	Met	Asn	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys
			85						90					95	
Thr	Lys	Asp	Ile	Ser	Ile	Thr	Gly	Thr	Leu	Asp	Ala	Phe	Asp	Val	Trp
			100					105					110		
Gly	Gln	Gly	Thr	Met	Val	Thr	Val	Ser	Ser						
		115					120								

<210> 131
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 131
 ggattcacct ttgatgatta tgcc

24

<210> 132
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 132
 Gly Phe Thr Phe Asp Asp Tyr Ala
 1 5

<210> 133
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 133
 attaatgga gtggtataaa cata

24

<210> 134
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 134
 Ile Asn Trp Ser Gly Asn Asn Ile

1

5

<210> 135
 <211> 45
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 135
 acaaaagata taagtataac tggaaccctc gatgcttttg atgtc 45

<210> 136
 <211> 15
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 136
 Thr Lys Asp Ile Ser Ile Thr Gly Thr Leu Asp Ala Phe Asp Val
 1 5 10 15

<210> 137
 <211> 321
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 137
 gacatccaga tgacccagtc tccaatttcc gtgtctgcat ctgtaggaga cagagtcacc 60
 atcacttgtc gggcgagtc ggtattagc aactgggttag cctgggtatca gcagaaacca 120
 gggatagccc ctaaactcct gatctattct gcatccagtt tacaaagtgg ggtcccatca 180
 aggttcagag gcagtggatc tgggacagac ttcactctca ccatcggcag cctgcagcct 240
 gaagattttg caacttacta ttgtcaacag gctcacagtt tcccgtcac tttcggcgga 300
 gggaccaagg tgagatcaa a 321

<210> 138
 <211> 107
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 138
 Asp Ile Gln Met Thr Gln Ser Pro Ile Ser Val Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Trp
 20 25 30
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Ile Ala Pro Lys Leu Leu Ile
 35 40 45
 Tyr Ser Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Arg Gly

50						55						60					
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Gly	Ser	Leu	Gln	Pro		
65					70					75				80			
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Ala	His	Ser	Phe	Pro	Leu		
			85					90						95			
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys							
			100					105									

<210> 139
 <211> 18
 <212> ADN
 <213> Secuencia artificial

<220>
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<400> 139
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<210> 140
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<400> 140
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 1 5

<210> 141
 <211> 9
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<220>
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<400> 141
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<210> 142
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<400> 142
 Ser Ala Ser
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<210> 143
 <211> 27

<212> ADN
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<220>
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<400> 143
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27

<210> 144
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 <212> PRT
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<220>
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<400> 144
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 1 5

<210> 145
 <211> 348
 <212> ADN
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<220>
 <223> Sintético

<400> 145
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 tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
 ccaggcaagg ggctggagtg ggtggcaatt atatggctctg atggagatag tgaatataat 180
 ctagactccg taaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagtctgag agtcgaagac tcggctgtat attactgtgc gagagatcga 300
 gaccttgagg atatctgggg ccaagggaca atggtcaccg tctottca 348

<210> 146
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 <212> PRT
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<220>
 <223> Sintético

<400> 146
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30
 Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ala Ile Ile Trp Ser Asp Gly Asp Ser Glu Tyr Asn Leu Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Val Glu Asp Ser Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Asp Arg Asp Leu Glu Asp Ile Trp Gly Gln Gly Thr Met Val
100 105 110
Thr Val Ser Ser
115

<210> 147
<211> 24
<212> ADN
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<220>
<223> Sintético

<400> 147
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24

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<220>
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<400> 148
Gly Phe Thr Phe Ser Ser Tyr Gly
1 5

<210> 149
<211> 24
<212> ADN
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<220>
<223> Sintético

<400> 149
atatggtctg atggagatag tgaa

24

<210> 150
<211> 8
<212> PRT
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<220>
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<400> 150
Ile Trp Ser Asp Gly Asp Ser Glu
1 5

<210> 151
<211> 27
<212> ADN
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<220>
<223> Sintético

<400> 151
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27

<210> 152
<211> 9
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<220>
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<400> 152
Ala Arg Asp Arg Asp Leu Glu Asp Ile
1 5

<210> 153
<211> 321
<212> ADN
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<220>
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<400> 153
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atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccaatt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagag ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatagtt atccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 154
<211> 107
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 154
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45
Tyr Ala Ala Ser Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Leu
85 90 95
Thr Phe Gly Gly Thr Lys Val Glu Ile Lys
100 105

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<400> 155
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18

<210> 156
<211> 6
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<220>
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<400> 156
Gln Gly Ile Arg Asn Asp
1 5

<210> 157
<211> 9
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<400> 157
gctgcatcc

9

<210> 158
<211> 3
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<220>
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<400> 158
Ala Ala Ser
1

<210> 159
<211> 27
<212> ADN
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<220>
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<400> 159
ctacagcata atagttatcc gctcact

27

<210> 160
 <211> 9
 <212> PRT
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<220>
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<400> 160
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 1 5

<210> 161
 <211> 351
 <212> ADN
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<220>
 <223> Sintético

<400> 161
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 tcctgtgcag cctctggatt cacctttagt aattttggca tgacgtgggt ccgccaggct 120
 ccagggaagg gactggagt ggtctcaggt attagtgggt gcggtcgtga cacatacttc 180
 gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa tacgttgtat 240
 ctacagatga acagcctgaa aggcgaggac acggccgtat attactgtgt gaagtgggga 300
 aatatttact ttgactactg gggccaggga accctggtea ccgtctcacc a 351

<210> 162
 <211> 117
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 162
 Glu Val Gln Leu Leu Glu Ser Gly Gly Val Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
 20 25 30
 Gly Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Gly Ile Ser Gly Gly Gly Arg Asp Thr Tyr Phe Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Lys Gly Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Val Lys Trp Gly Asn Ile Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu
 100 105 110
 Val Thr Val Ser Ser
 115

<210> 163
 <211> 24

<212> ADN
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<220>
<223> Sintético

<400> 163
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24

<210> 164
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<212> PRT
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<220>
<223> Sintético

<400> 164
Gly Phe Thr Phe Ser Asn Phe Gly
1 5

<210> 165
<211> 24
<212> ADN
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<220>
<223> Sintético

<400> 165
attagtgggtg gcggtcgtga caca

24

<210> 166
<211> 8
<212> PRT
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<220>
<223> Sintético

<400> 166
Ile Ser Gly Gly Gly Arg Asp Thr
1 5

<210> 167
<211> 30
<212> ADN
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<220>
<223> Sintético

<400> 167
gtgaagtggg gaaatattta ctttgactac

30

<210> 168
<211> 10

<212> PRT
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<220>
 <223> Sintético

<400> 168
 Val Lys Trp Gly Asn Ile Tyr Phe Asp Tyr
 1 5 10

<210> 169
 <211> 321
 <212> ADN
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<220>
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<400> 169
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 gggaaagccc ctaacctcct gatctatgct gcgtccagtt tacatgggtg ggtcccatca 180
 aggttcagtg gcagcggctc tgggacagat ttactctca ccatcagaac tcttcaacct 240
 gaagattttg caacttacta ctgtcaacag agttccaata ccccatteac tttcggccct 300
 gggaccgtag tggatttcag a 321

<210> 170
 <211> 107
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 170
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Ser Ile Thr Ile Thr Cys Arg Ala Ser Leu Ser Ile Asn Thr Phe
 20 25 30
 Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
 35 40 45
 Tyr Ala Ala Ser Ser Leu His Gly Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Thr Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Ser Asn Thr Pro Phe
 85 90 95
 Thr Phe Gly Pro Gly Thr Val Val Asp Phe Arg
 100 105

<210> 171
 <211> 18
 <212> ADN
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<220>
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 <210> 173 <211> 9 <212> ADN <213> Secuencia artificial <220> <223> Sintético <400> 173 gctgcggtcc	9
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 <210> 175 <211> 27 <212> ADN <213> Secuencia artificial <220> <223> Sintético <400> 175 caacagagtt ccaataccccc attcact	27
 <210> 176 <211> 9 <212> PRT <213> Secuencia artificial <220> <223> Sintético	

<400> 176
 Gln Gln Ser Ser Asn Thr Pro Phe Thr
 1 5

<210> 177
 <211> 363
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 177
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 tctgtgcag cctctggatt cacttttgat gactatggca tgagttgggt cgcgcaagtt 120
 ccagggaagg ggcctggagt ggtctcaggt attagtggga atgatggtaa gacagtttat 180
 gcagagtctg tgaagggccg attcatcacc tcagagaca acgccaagaa ctccctgtat 240
 ctggaaatga atagtctgag agccgaggac acggccttat attactgtgc gagagattgg 300
 cagtacttga tagagcggta ctttgactac tggggccagg gaaccctggt caccgtctcc 360
 tca 363

<210> 178
 <211> 121
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 178
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Arg Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
 20 25 30
 Gly Met Ser Trp Val Arg Gln Val Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Gly Ile Ser Trp Asn Asp Gly Lys Thr Val Tyr Ala Glu Ser Val
 50 55 60
 Lys Gly Arg Phe Ile Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Glu Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Trp Gln Tyr Leu Ile Glu Arg Tyr Phe Asp Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 179
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 179

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<210> 180
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 180
 Gly Phe Thr Phe Asp Asp Tyr Gly
 1 5

<210> 181
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 181
 attagttgga atgatggtaa gaca 24

<210> 182
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 182
 Ile Ser Trp Asn Asp Gly Lys Thr
 1 5

<210> 183
 <211> 42
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 183
 gcgagagatt ggcagtactt gatagagcgg tactttgact ac 42

<210> 184
 <211> 14
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 184

Ala Arg Asp Trp Gln Tyr Leu Ile Glu Arg Tyr Phe Asp Tyr
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<210> 185
 <211> 324
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 185
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 ttgtcatgta gagcaagtca gtcagtctct agctcttacc tcgectggta ccagcagaag 120
 ccgggacagg cccctagact gctgatctac ggggcaagtt ccagggccac cggaatcccc 180
 gaccggttca gtggaagcgg aagcggaaac gattttactt tgacgatttc tagactggag 240
 ccagaggatt tcgcccgtta ctattgtcaa cagtacggaa gcagcccggtg gacgtttggc 300
 cagggcacga aggtagaaat caag 324

<210> 186
 <211> 108
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 186
 Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15
 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30
 Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45
 Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
 50 55 60
 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
 65 70 75 80
 Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
 85 90 95
 Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 187
 <211> 21
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 187
 cagtcagtct ctagctotta t 21

<210> 188
 <211> 7
 <212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 188

Gln Ser Val Ser Ser Ser Tyr
1 5

<210> 189

<211> 9

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 189

ggggcaagt

9

<210> 190

<211> 3

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 190

Gly Ala Ser

1

<210> 191

<211> 27

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 191

caacagtacg gaagcagccc gtggacg

27

<210> 192

<211> 9

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 192

Gln Gln Tyr Gly Ser Ser Pro Trp Thr

1

5

<210> 193

<211> 363
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 193
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 ccagggaagg ggctggagtg gatctctggt attggttgga ctggtggtcg gtcaagttat 180
 gcagactctg tgagggggccg attcaccatc tccagagaca acgccaagaa ttccctgtat 240
 ctgcaaatga acagtctggg agccgaggac acggccttgt attattgtgc aagagatcgg 300
 cagtggctgg tgcagtggta ctttgactac tggggccagg gaaccctggt caccgtctcc 360
 tca 363

<210> 194
 <211> 121
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 194
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Arg Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Asp Asp Tyr
 20 25 30
 Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45
 Ser Gly Ile Gly Trp Thr Gly Gly Arg Ser Ser Tyr Ala Asp Ser Val
 50 55 60
 Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Gly Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Arg Gln Trp Leu Val Gln Trp Tyr Phe Asp Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 195
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 195
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<210> 196
 <211> 8
 <212> PRT
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<220>
 <223> Sintético
 <400> 196
 Gly Phe Thr Phe Asp Asp Tyr Gly
 1 5

<210> 197
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 197
 attggttgga ctggtggtcg gtca

24

<210> 198
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 198
 Ile Gly Trp Thr Gly Gly Arg Ser
 1 5

<210> 199
 <211> 42
 <212> ADN
 <213> Secuencia artificial

<220>
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<400> 199
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42

<210> 200
 <211> 14
 <212> PRT
 <213> Secuencia artificial

<220>
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<400> 200
 Ala Arg Asp Arg Gln Trp Leu Val Gln Trp Tyr Phe Asp Tyr
 1 5 10

<210> 201
 <211> 324
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<213> Secuencia artificial

<220>

<223> Sintético

<400> 201

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atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccgtca 180
aggttcagtg gcagtggatc tgggacagat ttactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300
caagggacac gactggagat taaa                                     324
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<210> 202

<211> 108

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 202

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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
          20          25          30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
          35          40          45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
          50          55          60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65          70          75          80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro
          85          90          95
Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
          100          105
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<210> 203

<211> 18

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 203

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18

<210> 204

<211> 6

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 204

Gln Ser Ile Ser Ser Tyr

1 5

<210> 205
<211> 9
<212> ADN
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<220>
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<400> 205
gctgcatcc

9

<210> 206
<211> 3
<212> PRT
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<220>
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<400> 206
Ala Ala Ser
1

<210> 207
<211> 30
<212> ADN
<213> Secuencia artificial

<220>
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<400> 207
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30

<210> 208
<211> 10
<212> PRT
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<220>
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<400> 208
Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr
1 5 10

<210> 209
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<212> ADN
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<220>
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<400> 209
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ccagggaagg gcctggagtg ggtcgcaggt attagttgga atgatggtaa gacagtttat 180
gcagagtcctg tgaagggccg attcatcacc tcagagaca acgccaagaa ctccctgcat 240
ctggagatga acagtcctgag agccgaggac acggccttat attactgtgc gcgagattgg 300
caatacttaa tagatcgta ctttgacttc tggggtcagg gaaccctggt caccgtctcc 360
tca 363

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<210> 210
<211> 121
<212> PRT
<213> Secuencia artificial

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<220>
<223> Sintético

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<400> 210
Glu Val Gln Leu Val Glu Ser Gly Gly Arg Val Val Arg Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30
Gly Met Ser Trp Val Arg Gln Leu Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Gly Ile Ser Trp Asn Asp Gly Lys Thr Val Tyr Ala Glu Ser Val
50 55 60
Lys Gly Arg Phe Ile Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu His
65 70 75 80
Leu Glu Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
85 90 95
Ala Arg Asp Trp Gln Tyr Leu Ile Asp Arg Tyr Phe Asp Phe Trp Gly
100 105 110
Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

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<210> 211
<211> 24
<212> ADN
<213> Secuencia artificial

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<220>
<223> Sintético

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<400> 211
ggattcactt ttgatgacta tggc 24

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

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<220>
<223> Sintético

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<400> 212
Gly Phe Thr Phe Asp Asp Tyr Gly
1 5

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<210> 213
 <211> 24
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 213
 attagttgga atgatggtaa gaca 24

 <210> 214
 <211> 8
 <212> PRT
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 <220>
 <223> Sintético

 <400> 214
 Ile Ser Trp Asn Asp Gly Lys Thr
 1 5

 <210> 215
 <211> 42
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 215
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 <210> 216
 <211> 14
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 <220>
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 <400> 216
 Ala Arg Asp Trp Gln Tyr Leu Ile Asp Arg Tyr Phe Asp Phe
 1 5 10

 <210> 217
 <211> 363
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 217
 gaagtgcagc tgggtggagtc tgggggaggc ttggtgcagc ctggcggggtc cctgagactc 60

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tccctgtgcag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120
ccaggggaagg gcctggagtg ggtctcaggt attggttgga gtagtggtag cataggctat 180
ggcgactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccttgat 240
ctgcaaatgg acagtctgag acctgaggac tcagccttat attactgtgc aaaagcctat 300
acatttatga ttaccctcta ctttgactac tggggccagg gaaccttggt caccgtctcc 360
tca

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<210> 218
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 <213> Secuencia artificial

<220>
 <223> Sintético

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<400> 218
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1          5          10          15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
 20          25          30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35          40          45
Ser Gly Ile Gly Trp Ser Ser Gly Ser Ile Gly Tyr Ala Asp Ser Val
 50          55          60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65          70          75          80
Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Ser Ala Leu Tyr Tyr Cys
 85          90          95
Ala Lys Ala Tyr Thr Phe Met Ile Thr Leu Tyr Phe Asp Tyr Trp Gly
 100         105         110
Gln Gly Thr Leu Val Thr Val Ser Ser
 115         120

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<210> 219
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

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<400> 219
ggattcacct ttgatgatta tgcc

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24

<210> 220
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

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<400> 220
Gly Phe Thr Phe Asp Asp Tyr Ala
 1          5

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<210> 221

<211> 24
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 221
 attggttgga gtagtggtag cata 24

 <210> 222
 <211> 8
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 222
 Ile Gly Trp Ser Ser Gly Ser Ile
 1 5

 <210> 223
 <211> 42
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 223
 gcaaaagcct atacatttat gattaccctc tactttgact ac 42

 <210> 224
 <211> 14
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 224
 Ala Lys Ala Tyr Thr Phe Met Ile Thr Leu Tyr Phe Asp Tyr
 1 5 10

 <210> 225
 <211> 363
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 225
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 ccaggaaggg gcctggagtg ggtgtcaggg agtggttgga ataggggtag tttaggctat 180

gaggattctg tgaagggccg attcaccatc tccagagaca acgccaagaa gtccctgtat 240
 ctgcaaatga acagtgtgag agttgaggac acggccttgt attactgtgc aaaaggcttt 300
 gtagtggtat cagctgetta ctttgactac tggggccagg gaaccctggt caccgtctcc 360
 tca 363

<210> 226
 <211> 121
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 226
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
 20 25 30
 Asp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Gly Ser Gly Trp Asn Arg Gly Ser Leu Gly Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Lys Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Val Arg Val Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Ala Lys Gly Phe Val Val Val Ser Ala Ala Tyr Phe Asp Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 227
 <211> 24
 <212> ADN
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<220>
 <223> Sintético

<400> 227
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<210> 228
 <211> 8
 <212> PRT
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<220>
 <223> Sintético

<400> 228
 Gly Phe Thr Phe Asp Asp Tyr Asp
 1 5

<210> 229
 <211> 24
 <212> ADN

<213> Secuencia artificial
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 <223> Sintético
 <400> 229
 agtgggttga ataggggtag tttta 24
 <210> 230
 <211> 8
 <212> PRT
 <213> Secuencia artificial
 <220>
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 <400> 230
 Ser Gly Trp Asn Arg Gly Ser Leu
 1 5
 <210> 231
 <211> 42
 <212> ADN
 <213> Secuencia artificial
 <220>
 <223> Sintético
 <400> 231
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 <210> 232
 <211> 14
 <212> PRT
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 <220>
 <223> Sintético
 <400> 232
 Ala Lys Gly Phe Val Val Val Ser Ala Ala Tyr Phe Asp Tyr
 1 5 10
 <210> 233
 <211> 363
 <212> ADN
 <213> Secuencia artificial
 <220>
 <223> Sintético
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 tectgcaagg tatctggagt caccttcagg aattttgeta tcatctgggt ggcacaggcc 120
 cctggacaag ggcttgagtg gatggggagga atcatccctt tctttagtgc agcaaattac 180
 gcacagagct tccagggcag agtcacgatt accccggacg aatccacgag cacagccttc 240
 atggagctgg ccagtctgag atctgaggac acggccggtt attattgtgc gagagagggg 300

gaacgtggac acacctatgg gtttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 234
<211> 121
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 234
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Arg Pro Gly Ser
1 5 10 15
Ser Val Lys Val Ser Cys Lys Val Ser Gly Val Thr Phe Arg Asn Phe
20 25 30
Ala Ile Ile Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Gly Ile Ile Pro Phe Phe Ser Ala Ala Asn Tyr Ala Gln Ser Phe
50 55 60
Gln Gly Arg Val Thr Ile Thr Pro Asp Glu Ser Thr Ser Thr Ala Phe
65 70 75 80
Met Glu Leu Ala Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Glu Gly Glu Arg Gly His Thr Tyr Gly Phe Asp Tyr Trp Gly
100 105 110
Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 235
<211> 24
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 235
ggagtcacct tcaggaattt tgct 24

<210> 236
<211> 8
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 236
Gly Val Thr Phe Arg Asn Phe Ala
1 5

<210> 237
<211> 24
<212> ADN
<213> Secuencia artificial

<220>
 <223> Synthetic

 <400> 237
 atcatccctt tcttttagtgc agca 24

 <210> 238
 <211> 8
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 238
 Ile Ile Pro Phe Phe Ser Ala Ala
 1 5

 <210> 239
 <211> 42
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 239
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 <210> 240
 <211> 14
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 240
 Ala Arg Glu Gly Glu Arg Gly His Thr Tyr Gly Phe Asp Tyr
 1 5 10

 <210> 241
 <211> 363
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 241
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 tctgtgtcag cctctggatt cacctttgat gattatgcc a tgcactgggt ccgacaacct 120
 ccagggaagg gcctggaatg ggtctcagggt attaaactgga atagaggtag gacaggctat 180
 gcggaactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
 ctgcaaatga acgatctgag agttgaggat acggccttgt attactgtgc aaaagccgaa 300
 cagtggcttg acgagggata ctttgactac tggggccagg gaaccctggt caccgtctcc 360
 tca 363

<210> 242
 <211> 121
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 242
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ser Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
 20 25 30
 Ala Met His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Gly Ile Asn Trp Asn Arg Gly Arg Thr Gly Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Asp Leu Arg Val Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Ala Lys Ala Glu Gln Trp Leu Asp Glu Gly Tyr Phe Asp Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 243
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 243
 ggattcacct ttgatgatta tgcc

24

<210> 244
 <211> 8
 <212> PRT
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<220>
 <223> Sintético

<400> 244
 Gly Phe Thr Phe Asp Asp Tyr Ala
 1 5

<210> 245
 <211> 24
 <212> ADN
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<220>
 <223> Sintético

<400> 245
 attaactgga atagaggtag gaca 24

 <210> 246
 <211> 8
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 246
 Ile Asn Trp Asn Arg Gly Arg Thr
 1 5

 <210> 247
 <211> 42
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 247
 gcaaaagccg aacagtggct ggacgagga tactttgact ac 42

 <210> 248
 <211> 14
 <212> PRT
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 <220>
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 <400> 248
 Ala Lys Ala Glu Gln Trp Leu Asp Glu Gly Tyr Phe Asp Tyr
 1 5 10

 <210> 249
 <211> 363
 <212> ADN
 <213> Secuencia artificial

 <220>
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 <400> 249
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 tctgtgcag cctctggatt cagcttttagc agctatgcc tgaactgggt ccgccaggct 120
 ccagggaagg ggcctggagt ggtctcaact attagtata gtggtggtag tacatactac 180
 gcagactccg tgaaggccg gttcaccatt tccagagaca attccaagaa cagcgtgtct 240
 ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcag 300
 ggtgggagtt acccctacta ctttactac tggggccagg gaaccctggt caccgtctcc 360
 tca 363

 <210> 250

<211> 121
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 250
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Arg Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Ser Ser Tyr
 20 25 30
 Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Thr Ile Ser Asp Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Ser
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Lys Asp Gln Gly Gly Ser Tyr Pro Tyr Tyr Phe His Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 251
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
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<400> 251
 ggattcagct ttagcagcta tgcc 24

<210> 252
 <211> 8
 <212> PRT
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<220>
 <223> Sintético

<400> 252
 Gly Phe Ser Phe Ser Ser Tyr Ala
 1 5

<210> 253
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 253

attagtgata gtggtggtag taca 24

<210> 254
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 254
 Ile Ser Asp Ser Gly Gly Ser Thr
 1 5

<210> 255
 <211> 42
 <212> ADN
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<220>
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<400> 255
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<210> 256
 <211> 14
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 256
 Ala Lys Asp Gln Gly Gly Ser Tyr Pro Tyr Tyr Phe His Tyr
 1 5 10

<210> 257
 <211> 363
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 257
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 tcctgtgcag cctctggatt cacctttgag gattatgcca tgcactgggt ccggcaagct 120
 ccagggaagg gcctggagtg ggtctcaggt attggttga gtaatgtaaa gataggctat 180
 ggggactctg tgaagggccg attcaccatc tccagagaca atgtcaggaa ctccctatat 240
 ctgcaaatga acagtctgag aactgaggac acggccttct attactgtgt aaaagcctat 300
 acatctatgc ttaccctcta ctttgactat tggggccagg gaaccctggt caccgtctcc 360
 tca 363

<210> 258
 <211> 121
 <212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 258

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Glu Asp Tyr
20 25 30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Gly Ile Gly Trp Ser Asn Val Lys Ile Gly Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Val Arg Asn Ser Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Phe Tyr Tyr Cys
85 90 95
Val Lys Ala Tyr Thr Ser Met Leu Thr Leu Tyr Phe Asp Tyr Trp Gly
100 105 110
Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 259

<211> 24

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 259

ggattcacct ttgaggatta tgcc

24

<210> 260

<211> 8

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 260

Gly Phe Thr Phe Glu Asp Tyr Ala
1 5

<210> 261

<211> 24

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 261

attggttgga gtaatgtaaa gata

24

<210> 262
 <211> 8
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 262
 Ile Gly Trp Ser Asn Val Lys Ile
 1 5

<210> 263
 <211> 42
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

<400> 263
 gtaaaagcct atacatctat gcttaccctc tactttgact at 42

<210> 264
 <211> 14
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

<400> 264
 Val Lys Ala Tyr Thr Ser Met Leu Thr Leu Tyr Phe Asp Tyr
 1 5 10

<210> 265
 <211> 354
 <212> ADN
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 <220>
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<400> 265
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 tcctgcaagg catctggata caccttcacc agcttctata tgtactgggt ggcacaggcc 120
 cctggacaag ggcttgagtg gatgggaata atcaacccta gtgatggtag cacaagcaac 180
 gcacagaagt tccagggcag agtcaccatg accagggaca cgtccacgag tacagtctac 240
 atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagacgggtg 300
 gctggggata tttttgatat ctggggccaa gggacaatgg tcaccgtctc ttca 354

<210> 266
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 <212> PRT
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 <220>

<223> Sintético

<400> 266

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Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Arg Pro Gly Ala
 1              5              10              15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe
      20              25              30
Tyr Met Tyr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
      35              40              45
Gly Ile Ile Asn Pro Ser Asp Gly Ser Thr Ser Asn Ala Gln Lys Phe
      50              55              60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
      65              70              75              80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
      85              90              95
Ala Arg Arg Val Ala Gly Asp Ile Phe Asp Ile Trp Gly Gln Gly Thr
      100              105              110
Met Val Thr Val Ser Ser
      115
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<210> 267

<211> 24

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 267

ggatacacct tcaccagctt ctat

24

<210> 268

<211> 8

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 268

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Gly Tyr Thr Phe Thr Ser Phe Tyr
 1              5
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<210> 269

<211> 24

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 269

atcaacccta gtgatggtag caca

24

<210> 270

<211> 8

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 270

Ile Asn Pro Ser Asp Gly Ser Thr
1 5

<210> 271

<211> 33

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 271

gcgagacggg tggctgggga tatttttgat atc

33

<210> 272

<211> 11

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 272

Ala Arg Arg Val Ala Gly Asp Ile Phe Asp Ile
1 5 10

<210> 273

<211> 357

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 273

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aactgcactg tctctgggtg ctccatcagt agttaccact ggaactggat ccggcagagt 120
ccagggaag gactggaatg gattggatat atctattata ttggggagcac cgactataat 180
ccctccctcg agagtcgagt caccatatca gtagacacgt ccaagaacca gttctccctg 240
aagctgagtt ctgtgaccgc tgcggacacg gccgtgtatt actgtgcgag agtccccgtg 300
ggagctacag gggcttctga tgtctggggc caagggacaa tggtcaccgt ctcttca 357

<210> 274

<211> 119

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 274

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1 5 10 15
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
 20 25 30
 His Trp Asn Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45
 Gly Tyr Ile Tyr Tyr Ile Gly Ser Thr Asp Tyr Asn Pro Ser Leu Glu
 50 55 60
 Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65 70 75 80
 Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
 85 90 95
 Arg Val Pro Val Gly Ala Thr Gly Ala Ser Asp Val Trp Gly Gln Gly
 100 105 110
 Thr Met Val Thr Val Ser Ser
 115

<210> 275
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 275
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24

<210> 276
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 276
 Gly Gly Ser Ile Ser Ser Tyr His
 1 5

<210> 277
 <211> 21
 <212> ADN
 <213> Secuencia artificial

<220>
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<400> 277
 atctattata ttgggagcac c

21

<210> 278
 <211> 7
 <212> PRT
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<220>

<223> Sintético

<400> 278

Ile Tyr Tyr Ile Gly Ser Thr
1 5

<210> 279

<211> 39

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 279

gcgagagtcc ccgtgggagc tacagggggt tctgatgtc 39

<210> 280

<211> 13

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 280

Ala Arg Val Pro Val Gly Ala Thr Gly Ala Ser Asp Val
1 5 10

<210> 281

<211> 363

<212> ADN

<213> Secuencia artificial

<220>

<223> Sintético

<400> 281

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tcctgtgtag tctctggatt cacccttgag gattatggtt tgagctgggt ccgccaaatt 120
ccagggaag gactggagtg ggtctctggt attagttgga ctgggtggtaa cacaggttat 180
gcagactctg tgaagggcog cttcaccatc tcagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag agccgaagac acggccctgt atcactgtac gagagatcga 300
cagtggctga tgcagtggta ttttgactat tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 282

<211> 121

<212> PRT

<213> Secuencia artificial

<220>

<223> Sintético

<400> 282

Glu Val Gln Leu Val Glu Ser Gly Gly Ser Val Val Arg Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Val Val Ser Gly Phe Thr Phe Glu Asp Tyr
 20 25 30
 Gly Leu Ser Trp Val Arg Gln Ile Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Gly Ile Ser Trp Thr Gly Gly Asn Thr Gly Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr His Cys
 85 90 95
 Thr Arg Asp Arg Gln Trp Leu Met Gln Trp Tyr Phe Asp Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 283
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
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<400> 283
 ggattcacct ttgaggatta tggt

24

<210> 284
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 284
 Gly Phe Thr Phe Glu Asp Tyr Gly
 1 5

<210> 285
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 285
 attagttgga ctggtggtaa caca

24

<210> 286
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 286
 Ile Ser Trp Thr Gly Gly Asn Thr
 1 5

<210> 287
 <211> 42
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 287
 acgagagatc gacagtggct gatgcagtgg tattttgact at 42

<210> 288
 <211> 14
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 288
 Thr Arg Asp Arg Gln Trp Leu Met Gln Trp Tyr Phe Asp Tyr
 1 5 10

<210> 289
 <211> 357
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 289
 caggtgcagc tgggtggagtc tgggggaggc gtgggtccagc ctggggaggtc cctgagactc 60
 tectgttcag cctctggatt caccttcagt gcctatgccca tgcactgggt ccgccaggct 120
 ccaggcaagg ggctggaatg ggtggcagct atctcatatg gtggaagtga taaatactat 180
 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctatat 240
 ctgcaaatga acagcctgag aactgacgac acggctgtgt attactgtgc gaaatccgct 300
 cactggaact tcttctttga ctactggggc cagggaacct tggtcactgt ctctca 357

<210> 290
 <211> 119
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 290
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Ser Ala Tyr
 20 25 30
 Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

<210> 295
 <211> 36
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 295
 gcgaaatccg ctccactggaa cttcttcttt gactac 36

 <210> 296
 <211> 12
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 296
 Ala Lys Ser Ala His Trp Asn Phe Phe Phe Asp Tyr
 1 5 10

 <210> 297
 <211> 363
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 297
 gaagtgcagc tgggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60
 tcctgtgtag cctctggatt cgcccttcat gattatgcc tgcactgggt ccggcaagtt 120
 ccagggaagg gcctggagtg ggtctcaagt attagtggga atagtgggtg cataggctat 180
 gcggactctc tgaagggccg cttcaccatc tccagagaca acgccaagaa ctccctgtat 240
 ctgcaaatga acagtctgag agcagaggac acggccttat actactgtgc aaaaggtagt 300
 gggagctact acgtcagttg gttcgacccc tggggccagg gaaccctggt caccgtctcc 360
 tca 363

 <210> 298
 <211> 121
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 298
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Ala Leu His Asp Tyr
 20 25 30
 Ala Met His Trp Val Arg Gln Val Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Trp Asn Ser Gly Val Ile Gly Tyr Ala Asp Ser Leu

50		55		60
Lys Gly Arg Phe Thr	Ile Ser Arg Asp Asn	Ala Lys Asn Ser Leu Tyr		
65	70	75	80	
Leu Gln Met Asn Ser	Leu Arg Ala Glu Asp	Thr Ala Leu Tyr Tyr Cys		
	85	90	95	
Ala Lys Gly Ser Gly Ser Tyr Tyr	Val Ser Trp Phe Asp Pro Trp Gly			
	100	105	110	
Gln Gly Thr Leu Val Thr Val Ser Ser				
	115	120		

<210> 299
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 299
 ggattcgccc ttcattgatta tgcc 24

<210> 300
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 300
 Gly Phe Ala Leu His Asp Tyr Ala
 1 5

<210> 301
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 301
 attagttgga atagtggtgt cata 24

<210> 302
 <211> 8
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 302
 Ile Ser Trp Asn Ser Gly Val Ile
 1 5

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<210> 303
<211> 42
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 303
gcaaaaaggta gtgggagcta ctacgtcagt tggttcgacc cc 42

<210> 304
<211> 14
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 304
Ala Lys Gly Ser Gly Ser Tyr Tyr Val Ser Trp Phe Asp Pro
  1             5             10

<210> 305
<211> 369
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 305
cagctgcagc tgcaggagtc gggcccagga ctggttcagc ctteggagac cctgtccctc 60
acctgcactg tctctggtga ctccatcagt agtactgott accactggga ctggatccgc 120
cagcccccgc ggaagggact ggagtggatt gggaccatca cttataatgg gaacacctac 180
ttcaaccctt cctcaagag togagtcacc atatccgttg acacgtccaa gaaccagttc 240
tcctgaagc tactctctat gaccgcgcga gaaacggctg ttttttactg tgcgcgacat 300
ctaggatata acagtgactt ctttcccttt gacttctggg gccagggaac cctgggcact 360
gtctcctca 369

<210> 306
<211> 123
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 306
Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Gln Pro Ser Glu
  1             5             10             15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp Ser Ile Ser Ser Thr
  20             25             30
Ala Tyr His Trp Asp Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
  35             40             45
Trp Ile Gly Thr Ile Thr Tyr Asn Gly Asn Thr Tyr Phe Asn Pro Ser
  50             55             60
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe

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65					70					75				80
Ser	Leu	Lys	Leu	Leu	Ser	Met	Thr	Ala	Ala	Glu	Thr	Ala	Val	Phe
				85					90					95
Cys	Ala	Arg	His	Leu	Gly	Tyr	Asn	Ser	Asp	Phe	Phe	Pro	Phe	Asp
			100					105					110	
Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser				
		115					120							

<210> 307
 <211> 30
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 307
 ggtgactcca tcagtagtac tgcttaccac 30

<210> 308
 <211> 10
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 308
 Gly Asp Ser Ile Ser Ser Thr Ala Tyr His
 1 5 10

<210> 309
 <211> 21
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 309
 atcacttata atgggaacac c 21

<210> 310
 <211> 7
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 310
 Ile Thr Tyr Asn Gly Asn Thr
 1 5

<210> 311
 <211> 45

<212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 311
 gcgcgacatc taggatataa cagtgacttc tttccctttg acttc 45

 <210> 312
 <211> 15
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 312
 Ala Arg His Leu Gly Tyr Asn Ser Asp Phe Phe Pro Phe Asp Phe
 1 5 10 15

 <210> 313
 <211> 357
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 313
 gaggtgcagc tgggtggagtc tgggggaggc ctggtacggc cggggggggtc cctgagactc 60
 tcctgtgcag cctctggatt caccttttagc acctatgcc a tggcctgggt ccgccagact 120
 ccagggaagg ggctggaggg ggtctcagct attgggggta gtgggtgatag tacctattat 180
 gtgcactccg tgaagggccg gttcaccatc tccagggaca actccaagag cacgcttttt 240
 ctgcaaatga atagcctgag agccgaggac acggccggtt attactgtgt gaaagtccgg 300
 aattacgacg gttcttttga tatctggggc caagggacaa tggtcaccgt ctcttca 357

 <210> 314
 <211> 119
 <212> PRT
 <213> Secuencia artificial

 <220>
 <223> Sintético

 <400> 314
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Arg Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr
 20 25 30
 Ala Met Ala Trp Val Arg Gln Thr Pro Gly Lys Gly Leu Glu Gly Val
 35 40 45
 Ser Ala Ile Gly Gly Ser Gly Asp Ser Thr Tyr Tyr Val Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ser Thr Leu Phe
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Val Lys Val Arg Asn Tyr Asp Gly Ser Phe Asp Ile Trp Gly Gln Gly
100 105 110
Thr Met Val Thr Val Ser Ser
115

<210> 315
<211> 24
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 315
ggattcacct ttagcaccta tgcc

24

<210> 316
<211> 8
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 316
Gly Phe Thr Phe Ser Thr Tyr Ala
1 5

<210> 317
<211> 24
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintético

<400> 317
attgggggta gtggtgatag tacc

24

<210> 318
<211> 8
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintético

<400> 318
Ile Gly Gly Ser Gly Asp Ser Thr
1 5

<210> 319
<211> 36
<212> ADN
<213> Secuencia artificial

<220>
 <223> Sintético

<400> 319
 gtgaaagtcc ggaattacga cggttcctttt gatatc

36

<210> 320
 <211> 12
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintético

<400> 320
 Val Lys Val Arg Asn Tyr Asp Gly Ser Phe Asp Ile
 1 5 10

<210> 321
 <211> 174
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> hPD-1-MMH

<220>
 <223> 1-146: aa 25-170 de NP_005009.2 con C93S

<220>
 <223> 147-174: myc-myc-hexahistidina

<400> 321
 Leu Asp Ser Pro Asp Arg Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala
 1 5 10 15
 Leu Leu Val Val Thr Glu Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe
 20 25 30
 Ser Asn Thr Ser Glu Ser Phe Val Leu Asn Trp Tyr Arg Met Ser Pro
 35 40 45
 Ser Asn Gln Thr Asp Lys Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln
 50 55 60
 Pro Gly Gln Asp Ser Arg Phe Arg Val Thr Gln Leu Pro Asn Gly Arg
 65 70 75 80
 Asp Phe His Met Ser Val Val Arg Ala Arg Arg Asn Asp Ser Gly Thr
 85 90 95
 Tyr Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu
 100 105 110
 Ser Leu Arg Ala Glu Leu Arg Val Thr Glu Arg Arg Ala Glu Val Pro
 115 120 125
 Thr Ala His Pro Ser Pro Ser Pro Arg Pro Ala Gly Gln Phe Gln Thr
 130 135 140
 Leu Val Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly Glu Gln
 145 150 155 160
 Lys Leu Ile Ser Glu Glu Asp Leu His His His His His His
 165 170

<210> 322

<211> 174
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> MfPD-1-MMH

<220>
 <223> 1-146: M.fascicularis PD-1 con C93S

<220>
 <223> 147-174: myc-myc-hexahistidina

<400> 322
 Leu Glu Ser Pro Asp Arg Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala
 1 5 10 15
 Leu Leu Leu Val Thr Glu Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe
 20 25 30
 Ser Asn Ala Ser Glu Ser Phe Val Leu Asn Trp Tyr Arg Met Ser Pro
 35 40 45
 Ser Asn Gln Thr Asp Lys Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln
 50 55 60
 Pro Gly Arg Asp Ser Arg Phe Arg Val Thr Gln Leu Pro Asn Gly Arg
 65 70 75 80
 Asp Phe His Met Ser Val Val Arg Ala Arg Asn Asp Ser Gly Thr
 85 90 95
 Tyr Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu
 100 105 110
 Ser Leu Arg Ala Glu Leu Arg Val Thr Glu Arg Arg Ala Glu Val Pro
 115 120 125
 Thr Ala His Pro Ser Pro Ser Pro Arg Pro Ala Gly Gln Phe Gln Ala
 130 135 140
 Leu Val Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly Glu Gln
 145 150 155 160
 Lys Leu Ile Ser Glu Glu Asp Leu His His His His His His
 165 170

<210> 323
 <211> 379
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> hPD-1-mFc

<220>
 <223> 1-146: aa 25-170 de NP-005009.2 con C93S

<220>
 <223> 147-379: mFc: aa 98-330 de P01863

<400> 323
 Leu Asp Ser Pro Asp Arg Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala
 1 5 10 15
 Leu Leu Val Val Thr Glu Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe
 20 25 30
 Ser Asn Thr Ser Glu Ser Phe Val Leu Asn Trp Tyr Arg Met Ser Pro
 35 40 45

Ser Asn Gln Thr Asp Lys Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln
 50 55 60
 Pro Gly Gln Asp Ser Arg Phe Arg Val Thr Gln Leu Pro Asn Gly Arg
 65 70 75 80
 Asp Phe His Met Ser Val Val Arg Ala Arg Arg Asn Asp Ser Gly Thr
 85 90 95
 Tyr Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu
 100 105 110
 Ser Leu Arg Ala Glu Leu Arg Val Thr Glu Arg Arg Ala Glu Val Pro
 115 120 125
 Thr Ala His Pro Ser Pro Ser Pro Arg Pro Ala Gly Gln Phe Gln Thr
 130 135 140
 Leu Val Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys
 145 150 155 160
 Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val Phe Ile Phe Pro
 165 170 175
 Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser Pro Ile Val Thr
 180 185 190
 Cys Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln Ile Ser
 195 200 205
 Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr Gln Thr His
 210 215 220
 Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser Ala Leu Pro Ile
 225 230 235 240
 Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys Cys Lys Val Asn
 245 250 255
 Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile Ser Lys Pro Lys
 260 265 270
 Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro Pro Glu Glu
 275 280 285
 Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met Val Thr Asp Phe
 290 295 300
 Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr Glu
 305 310 315 320
 Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr
 325 330 335
 Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn Trp Val Glu Arg
 340 345 350
 Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu His Asn His His
 355 360 365
 Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
 370 375

<210> 324
 <211> 373
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> hPD-1-hFc

<220>
 <223> 1-146: aa 25-170 de NP_005009.2 con C93S

<220>
 <223> 147-373: hFc: aa 104-330 de P01857

<400> 324

Leu Asp Ser Pro Asp Arg Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala
 1 5 10 15
 Leu Leu Val Val Thr Glu Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe
 20 25 30
 Ser Asn Thr Ser Glu Ser Phe Val Leu Asn Trp Tyr Arg Met Ser Pro
 35 40 45
 Ser Asn Gln Thr Asp Lys Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln
 50 55 60
 Pro Gly Gln Asp Ser Arg Phe Arg Val Thr Gln Leu Pro Asn Gly Arg
 65 70 75 80
 Asp Phe His Met Ser Val Val Arg Ala Arg Arg Asn Asp Ser Gly Thr
 85 90 95
 Tyr Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu
 100 105 110
 Ser Leu Arg Ala Glu Leu Arg Val Thr Glu Arg Arg Ala Glu Val Pro
 115 120 125
 Thr Ala His Pro Ser Pro Ser Pro Arg Pro Ala Gly Gln Phe Gln Thr
 130 135 140
 Leu Val Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
 145 150 155 160
 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
 165 170 175
 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
 180 185 190
 Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
 195 200 205
 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
 210 215 220
 Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
 225 230 235 240
 Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
 245 250 255
 Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
 260 265 270
 Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
 275 280 285
 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
 290 295 300
 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
 305 310 315 320
 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
 325 330 335
 Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
 340 345 350
 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
 355 360 365
 Leu Ser Pro Gly Lys
 370

<210> 325
 <211> 448
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> hPD-L1-hFc

<220>

<223> 1-221: aa 19-239 de NP_054862.1

<220>

<223> 222-448: hFc: aa 104-330 de P01857

<400> 325

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Phe Thr Val Thr Val Pro Lys Asp Leu Tyr Val Val Glu Tyr Gly Ser
 1      5      10      15
Asn Met Thr Ile Glu Cys Lys Phe Pro Val Glu Lys Gln Leu Asp Leu
 20      25      30
Ala Ala Leu Ile Val Tyr Trp Glu Met Glu Asp Lys Asn Ile Ile Gln
 35      40      45
Phe Val His Gly Glu Glu Asp Leu Lys Val Gln His Ser Ser Tyr Arg
 50      55      60
Gln Arg Ala Arg Leu Leu Lys Asp Gln Leu Ser Leu Gly Asn Ala Ala
 65      70      75      80
Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr Arg Cys
 85      90      95
Met Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Val Lys Val
100      105      110
Asn Ala Pro Tyr Asn Lys Ile Asn Gln Arg Ile Leu Val Val Asp Pro
115      120      125
Val Thr Ser Glu His Glu Leu Thr Cys Gln Ala Glu Gly Tyr Pro Lys
130      135      140
Ala Glu Val Ile Trp Thr Ser Ser Asp His Gln Val Leu Ser Gly Lys
145      150      155      160
Thr Thr Thr Thr Asn Ser Lys Arg Glu Glu Lys Leu Phe Asn Val Thr
165      170      175
Ser Thr Leu Arg Ile Asn Thr Thr Thr Asn Glu Ile Phe Tyr Cys Thr
180      185      190
Phe Arg Arg Leu Asp Pro Glu Glu Asn His Thr Ala Glu Leu Val Ile
195      200      205
Pro Glu Leu Pro Leu Ala His Pro Pro Asn Glu Arg Thr Asp Lys Thr
210      215      220
His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
225      230      235      240
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
245      250      255
Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
260      265      270
Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
275      280      285
Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
290      295      300
Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
305      310      315      320
Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
325      330      335
Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
340      345      350
Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
355      360      365
Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
370      375      380
Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
385      390      395      400
Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
405      410      415
Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
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		420					425				430	
Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser
		435					440				445	

<210> 326
 <211> 454
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> hPD-L1-mFc

<220>
 <223> 1-221: aa 19-239 de NP_054862.1

<220>
 <223> 222-454: mFc: aa 98-330 de P01863

<400> 326
 Phe Thr Val Thr Val Pro Lys Asp Leu Tyr Val Val Glu Tyr Gly Ser
 1 5 10 15
 Asn Met Thr Ile Glu Cys Lys Phe Pro Val Glu Lys Gln Leu Asp Leu
 20 25 30
 Ala Ala Leu Ile Val Tyr Trp Glu Met Glu Asp Lys Asn Ile Ile Gln
 35 40 45
 Phe Val His Gly Glu Glu Asp Leu Lys Val Gln His Ser Ser Tyr Arg
 50 55 60
 Gln Arg Ala Arg Leu Leu Lys Asp Gln Leu Ser Leu Gly Asn Ala Ala
 65 70 75 80
 Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr Arg Cys
 85 90 95
 Met Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Val Lys Val
 100 105 110
 Asn Ala Pro Tyr Asn Lys Ile Asn Gln Arg Ile Leu Val Val Asp Pro
 115 120 125
 Val Thr Ser Glu His Glu Leu Thr Cys Gln Ala Glu Gly Tyr Pro Lys
 130 135 140
 Ala Glu Val Ile Trp Thr Ser Ser Asp His Gln Val Leu Ser Gly Lys
 145 150 155 160
 Thr Thr Thr Thr Asn Ser Lys Arg Glu Glu Lys Leu Phe Asn Val Thr
 165 170 175
 Ser Thr Leu Arg Ile Asn Thr Thr Thr Asn Glu Ile Phe Tyr Cys Thr
 180 185 190
 Phe Arg Arg Leu Asp Pro Glu Glu Asn His Thr Ala Glu Leu Val Ile
 195 200 205
 Pro Glu Leu Pro Leu Ala His Pro Pro Asn Glu Arg Thr Glu Pro Arg
 210 215 220
 Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn
 225 230 235 240
 Leu Leu Gly Gly Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp
 245 250 255
 Val Leu Met Ile Ser Leu Ser Pro Ile Val Thr Cys Val Val Asp
 260 265 270
 Val Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn
 275 280 285
 Val Glu Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn
 290 295 300
 Ser Thr Leu Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp


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305          310          315          320
Met Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro
          325          330          335
Ala Pro Ile Glu Arg Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala
          340          345          350
Pro Gln Val Tyr Val Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys
          355          360          365
Gln Val Thr Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile
          370          375          380
Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn
385          390          395          400
Thr Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys
          405          410          415
Leu Arg Val Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys
          420          425          430
Ser Val Val His Glu Gly Leu His Asn His His Thr Thr Lys Ser Phe
          435          440          445
Ser Arg Thr Pro Gly Lys
          450

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<210> 327
<211> 288
<212> PRT
<213> Secuencia artificial

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<220>
<223> hPD-1 NP_005009.2

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<400> 327
Met Gln Ile Pro Gln Ala Pro Trp Pro Val Val Trp Ala Val Leu Gln
 1          5          10          15
Leu Gly Trp Arg Pro Gly Trp Phe Leu Asp Ser Pro Asp Arg Pro Trp
          20          25          30
Asn Pro Pro Thr Phe Ser Pro Ala Leu Leu Val Val Thr Glu Gly Asp
          35          40          45
Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser Phe Val
          50          55          60
Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp Lys Leu Ala
65          70          75          80
Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg Phe Arg
          85          90          95
Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser Val Val Arg
          100          105          110
Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser Leu
          115          120          125
Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu Arg Val
          130          135          140
Thr Glu Arg Arg Ala Glu Val Pro Thr Ala His Pro Ser Pro Ser Pro
145          150          155          160
Arg Pro Ala Gly Gln Phe Gln Thr Leu Val Val Gly Val Val Gly Gly
          165          170          175
Leu Leu Gly Ser Leu Val Leu Leu Val Trp Val Leu Ala Val Ile Cys
          180          185          190
Ser Arg Ala Ala Arg Gly Thr Ile Gly Ala Arg Arg Thr Gly Gln Pro
          195          200          205
Leu Lys Glu Asp Pro Ser Ala Val Pro Val Phe Ser Val Asp Tyr Gly
210          215          220
Glu Leu Asp Phe Gln Trp Arg Glu Lys Thr Pro Glu Pro Pro Val Pro

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225					230				235				240		
Cys	Val	Pro	Glu	Gln	Thr	Glu	Tyr	Ala	Thr	Ile	Val	Phe	Pro	Ser	Gly
				245					250					255	
Met	Gly	Thr	Ser	Ser	Pro	Ala	Arg	Arg	Gly	Ser	Ala	Asp	Gly	Pro	Arg
			260					265					270		
Ser	Ala	Gln	Pro	Leu	Arg	Pro	Glu	Asp	Gly	His	Cys	Ser	Trp	Pro	Leu
		275					280					285			

<210> 328
 <211> 290
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> hPD-L1 NP_054862.1

<400> 328

Met	Arg	Ile	Phe	Ala	Val	Phe	Ile	Phe	Met	Thr	Tyr	Trp	His	Leu	Leu
1				5					10					15	
Asn	Ala	Phe	Thr	Val	Thr	Val	Pro	Lys	Asp	Leu	Tyr	Val	Val	Glu	Tyr
		20						25					30		
Gly	Ser	Asn	Met	Thr	Ile	Glu	Cys	Lys	Phe	Pro	Val	Glu	Lys	Gln	Leu
		35					40					45			
Asp	Leu	Ala	Ala	Leu	Ile	Val	Tyr	Trp	Glu	Met	Glu	Asp	Lys	Asn	Ile
	50				55					60					
Ile	Gln	Phe	Val	His	Gly	Glu	Glu	Asp	Leu	Lys	Val	Gln	His	Ser	Ser
65				70				75						80	
Tyr	Arg	Gln	Arg	Ala	Arg	Leu	Leu	Lys	Asp	Gln	Leu	Ser	Leu	Gly	Asn
			85					90					95		
Ala	Ala	Leu	Gln	Ile	Thr	Asp	Val	Lys	Leu	Gln	Asp	Ala	Gly	Val	Tyr
		100						105					110		
Arg	Cys	Met	Ile	Ser	Tyr	Gly	Gly	Ala	Asp	Tyr	Lys	Arg	Ile	Thr	Val
		115				120						125			
Lys	Val	Asn	Ala	Pro	Tyr	Asn	Lys	Ile	Asn	Gln	Arg	Ile	Leu	Val	Val
		130				135				140					
Asp	Pro	Val	Thr	Ser	Glu	His	Glu	Leu	Thr	Cys	Gln	Ala	Glu	Gly	Tyr
145				150						155				160	
Pro	Lys	Ala	Glu	Val	Ile	Trp	Thr	Ser	Ser	Asp	His	Gln	Val	Leu	Ser
			165					170					175		
Gly	Lys	Thr	Thr	Thr	Thr	Asn	Ser	Lys	Arg	Glu	Glu	Lys	Leu	Phe	Asn
		180				185						190			
Val	Thr	Ser	Thr	Leu	Arg	Ile	Asn	Thr	Thr	Thr	Asn	Glu	Ile	Phe	Tyr
		195				200						205			
Cys	Thr	Phe	Arg	Arg	Leu	Asp	Pro	Glu	Glu	Asn	His	Thr	Ala	Glu	Leu
	210				215						220				
Val	Ile	Pro	Glu	Leu	Pro	Leu	Ala	His	Pro	Pro	Asn	Glu	Arg	Thr	His
225				230						235				240	
Leu	Val	Ile	Leu	Gly	Ala	Ile	Leu	Leu	Cys	Leu	Gly	Val	Ala	Leu	Thr
			245						250					255	
Phe	Ile	Phe	Arg	Leu	Arg	Lys	Gly	Arg	Met	Met	Asp	Val	Lys	Lys	Cys
		260					265					270			
Gly	Ile	Gln	Asp	Thr	Asn	Ser	Lys	Lys	Gln	Ser	Asp	Thr	His	Leu	Glu
		275				280						285			
Glu	Thr														
	290														

<210> 329

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<211> 379
<212> PRT
<213> Secuencia artificial

<220>
<223> aal-146: M.fascicularis PD-1 (con cambio C93S)
      aal47-379: etiqueta mFc(aa 98-330 de P01863)

<400> 329
Leu Glu Ser Pro Asp Arg Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala
 1      5      10      15
Leu Leu Leu Val Thr Glu Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe
 20      25      30
Ser Asn Ala Ser Glu Ser Phe Val Leu Asn Trp Tyr Arg Met Ser Pro
 35      40      45
Ser Asn Gln Thr Asp Lys Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln
 50      55      60
Pro Gly Arg Asp Ser Arg Phe Arg Val Thr Gln Leu Pro Asn Gly Arg
 65      70      75      80
Asp Phe His Met Ser Val Val Arg Ala Arg Arg Asn Asp Ser Gly Thr
 85      90      95
Tyr Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu
100      105      110
Ser Leu Arg Ala Glu Leu Arg Val Thr Glu Arg Arg Ala Glu Val Pro
115      120      125
Thr Ala His Pro Ser Pro Ser Pro Arg Pro Ala Gly Gln Phe Gln Ala
130      135      140
Leu Val Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys
145      150      155      160
Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val Phe Ile Phe Pro
165      170      175
Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser Pro Ile Val Thr
180      185      190
Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln Ile Ser
195      200      205
Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr Gln Thr His
210      215      220
Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser Ala Leu Pro Ile
225      230      235      240
Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys Cys Lys Val Asn
245      250      255
Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile Ser Lys Pro Lys
260      265      270
Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro Pro Pro Glu Glu
275      280      285
Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met Val Thr Asp Phe
290      295      300
Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr Glu
305      310      315      320
Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr
325      330      335
Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn Trp Val Glu Arg
340      345      350
Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu His Asn His His
355      360      365
Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
370      375

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<210> 330
 <211> 444
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> H4H7798N
 aal-117: HCVR
 aal18-444: constante HC

<400> 330
 Glu Val Gln Leu Leu Glu Ser Gly Gly Val Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
 20 25 30
 Gly Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Gly Ile Ser Gly Gly Gly Arg Asp Thr Tyr Phe Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Lys Gly Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Val Lys Trp Gly Asn Ile Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu
 100 105 110
 Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 115 120 125
 Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
 130 135 140
 Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160
 Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175
 Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190
 Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
 195 200 205
 Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
 210 215 220
 Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
 225 230 235 240
 Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 245 250 255
 Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
 260 265 270
 Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 275 280 285
 Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 290 295 300
 Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 305 310 315 320
 Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
 325 330 335
 Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
 340 345 350
 Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 355 360 365
 Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 385 390 395 400
 Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
 405 410 415
 Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 420 425 430
 Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440

<210> 331
 <211> 214
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> H4H7798N
 aal-107: LCVR
 aal08-214: constante LC

<400> 331
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Ser Ile Thr Ile Thr Cys Arg Ala Ser Leu Ser Ile Asn Thr Phe
 20 25 30
 Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
 35 40 45
 Tyr Ala Ala Ser Ser Leu His Gly Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Thr Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Ser Asn Thr Pro Phe
 85 90 95
 Thr Phe Gly Pro Gly Thr Val Val Asp Phe Arg Arg Thr Val Ala Ala
 100 105 110
 Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125
 Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140
 Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160
 Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175
 Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
 180 185 190
 Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205
 Phe Asn Arg Gly Glu Cys
 210

<210> 332
 <211> 449
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> H4H7795N2
 aal-122: HCVR

aal23-449: constante HC

<400> 332

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Glu Val Gln Val Val Glu Ser Gly Gly Gly Leu Val Glu Pro Gly Arg
 1          5          10          15
Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Phe Thr Phe Asp Asp Tyr
          20          25          30
Ala Met His Trp Val Arg Gln Thr Pro Gly Lys Ala Leu Glu Trp Val
          35          40          45
Ser Gly Ile Ser Trp Ser Gly Asn Asn Ile Gly Tyr Ala Asp Ser Val
          50          55          60
Lys Gly Arg Phe Thr Ile Ser Lys Asp Asp Ala Lys Asn Ser Leu Tyr
65          70          75          80
Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
          85          90          95
Thr Lys Asp Ile Ser Ile Thr Gly Thr Leu Asp Ala Phe Asp Val Trp
          100          105          110
Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
          115          120          125
Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr
          130          135          140
Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
145          150          155          160
Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
          165          170          175
Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
          180          185          190
Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp
          195          200          205
His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr
          210          215          220
Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro
225          230          235          240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
          245          250          255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp
          260          265          270
Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
          275          280          285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val
          290          295          300
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305          310          315          320
Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys
          325          330          335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
          340          345          350
Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
          355          360          365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
          370          375          380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385          390          395          400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys
          405          410          415
Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu
          420          425          430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly
          435          440          445

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Lys

<210> 333
<211> 214
<212> PRT
<213> Secuencia artificial

<220>
<223> H4H7795N2
aai-107: LCVR
aai08-214: constante LC

<400> 333
Asp Ile Gln Met Thr Gln Ser Pro Ile Ser Val Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Trp
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Ile Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Ser Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Arg Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Gly Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala His Ser Phe Pro Leu
85 90 95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110
Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125
Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140
Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160
Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175
Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190
Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205
Phe Asn Arg Gly Glu Cys
210

<210> 334
<211> 446
<212> PRT
<213> Secuencia artificial

<220>
<223> H4H9008P
aai-119: HCVR
aai20-446: constante HC

<400> 334
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Arg Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr

<220>
 <223> H4H9008P
 aal-108: LCVR
 aal09-215: constante LC

<400> 335
 Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15
 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30
 Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45
 Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
 50 55 60
 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
 65 70 75 80
 Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Tyr Gly Ser Ser Pro
 85 90 95
 Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
 100 105 110
 Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
 115 120 125
 Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
 130 135 140
 Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
 145 150 155 160
 Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
 165 170 175
 Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
 180 185 190
 Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
 195 200 205
 Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 336
 <211> 448
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> H4H9048P2
 aal-121: HCVR
 aal22-448: constante HC

<400> 336
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Arg Pro Gly Ser
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Val Ser Gly Val Thr Phe Arg Asn Phe
 20 25 30
 Ala Ile Ile Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Gly Ile Ile Pro Phe Phe Ser Ala Ala Asn Tyr Ala Gln Ser Phe
 50 55 60
 Gln Gly Arg Val Thr Ile Thr Pro Asp Glu Ser Thr Ser Thr Ala Phe
 65 70 75 80
 Met Glu Leu Ala Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys

1		5		10		15									
Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Ser	Ser	Tyr
		20						25				30			
Leu	Asn	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile
		35					40					45			
Tyr	Ala	Ala	Ser	Ser	Leu	Gln	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
	50					55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Ser	Tyr	Ser	Thr	Pro	Pro
			85						90					95	
Ile	Thr	Phe	Gly	Gln	Gly	Thr	Arg	Leu	Glu	Ile	Lys	Arg	Thr	Val	Ala
		100						105					110		
Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser
		115					120					125			
Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu
	130					135					140				
Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser
145					150					155					160
Gln	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu
			165						170					175	
Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val
		180						185					190		
Tyr	Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys
		195					200					205			
Ser	Phe	Asn	Arg	Gly	Glu	Cys									
	210					215									