LISTADO DE SECUENCIAS

<110> EISAI R&D MANAGEMENT CO., LTD.

<120> CONJUGADOS DE ANTICUERPO-FÁRMACO QUE COMPRENDEN MODULADORES DE EMPALME DERIVADOS DE ARIL O HETEROARIL PLADIENOLIDA PARA CÁNCER

<140> NC2024/0006782
<141> 2024-05-02

<150> 62/779,324
<151> 2018-12-13

<150> 62/679,672
<151> 2018-06-01

<150> 62/679,631
<151> 2018-06-01

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<170> PatentIn version 3.5

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Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val Lys
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Gly

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Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Val
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Lys Ala

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Phe Gln His

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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr
20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ser Arg Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
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1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Val Asn Thr Ala
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Ala Ser Phe Leu Tyr Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Arg 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 His Tyr Thr Thr Pro Pro
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
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Gln Val Gln Leu Gln Gln Ser Gly Ser Glu Leu Met Met Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Thr Gly Tyr Thr Phe Ser Asn Tyr
20 25 30

Trp Ile Gln Arg Pro Gly His Gly Leu Glu Trp Ile Gly Glu Ile Leu
35 40 45

Pro Gly Thr Gly Arg Thr Ile Tyr Asn Glu Lys Phe Lys Gly Lys Ala
50 55 60

Thr Phe Thr Ala Asp Ile Ser Ser Asn Thr Val Gln Met Gln Leu Ser
65 70 75 80

Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Arg Asp
85 90 95

Tyr Tyr Gly Asn Phe Tyr Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Ser Val Thr Val Ser Ser
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Asp Ile Gln Met Thr Gln Ser Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Ser Ala Ser Gln Gly Ile Asn Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Glu Leu Leu Ile

35 40 45

Tyr Tyr Thr Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Pro
65 70 75 80

Glu Asp Ile Gly Thr Tyr Tyr Cys Gln Gln Tyr Ser Lys Leu Pro Arg
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

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Glu Val Gln Leu Leu 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 Ser His Tyr
20 25 30

Met Met Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Arg Ile Gly Pro Ser Gly Gly Pro Thr His Tyr 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 Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Gly Tyr Asp Ser Gly Tyr Asp Tyr Val Ala Val Ala Gly Pro Ala
100 105 110

Glu Tyr Phe Gln His Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

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1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Thr Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Ser Leu Thr Ile Ser Gly Leu Gln Pro
65 70 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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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 Asn Ile Lys Asp Thr
20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ser Arg Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
115 120 125

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
130 135 140

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145 150 155 160

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
165 170 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
180 185 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
195 200 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Pro Lys Ser Cys
210 215 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225 230 235 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
245 250 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
260 265 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
275 280 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
290 295 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305 310 315 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
325 330 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
340 345 350

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
355 360 365

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
370 375 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385 390 395 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
405 410 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
420 425 430

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Pro Gly Lys
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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 Asp Val Asn Thr Ala
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Ala Ser Phe Leu Tyr Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Arg 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 His Tyr Thr Thr Pro Pro
85 90 95

Thr Phe Gly Gln 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
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Phe Asn Arg Gly Glu Cys

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1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Thr Gly Tyr Thr Phe Ser Asn Tyr
20 25 30

Trp Ile Gln Arg Pro Gly His Gly Leu Glu Trp Ile Gly Glu Ile Leu
35 40 45

Pro Gly Thr Gly Arg Thr Ile Tyr Asn Glu Lys Phe Lys Gly Lys Ala
50 55 60

Thr Phe Thr Ala Asp Ile Ser Ser Asn Thr Val Gln Met Gln Leu Ser
65 70 75 80

Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Arg Asp
85 90 95

Tyr Tyr Gly Asn Phe Tyr Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Ser Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro
115 120 125

Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly
130 135 140

Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn
145 150 155 160

Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr
180 185 190

Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser
195 200 205

Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys Lys Pro
210 215 220

Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro
225 230 235 240

Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys
245 250 255

Val Val Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp
260 265 270

Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg Glu
275 280 285

Glu Gln Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro Ile Met
290 295 300

His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser
305 310 315 320

Ala Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly
325 330 335

Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln
340 345 350

Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe
355 360 365

Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu
370 375 380

Asn Tyr Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser Tyr Phe
385 390 395 400

Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn
405 410 415

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Glu Lys Ser Leu Ser His Ser Pro Gly
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Asp Ile Gln Met Thr Gln Ser Thr Ser Ser Leu Ser Ala Ser Leu Gly
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Asp Arg Val Thr Ile Ser Cys Ser Ala Ser Gln Gly Ile Asn Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Glu Leu Leu Ile

35 40 45

Tyr Tyr Thr Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Pro
65 70 75 80

Glu Asp Ile Gly Thr Tyr Tyr Cys Gln Gln Tyr Ser Lys Leu Pro Arg
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly
115 120 125

Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile
130 135 140

Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu
145 150 155 160

Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
165 170 175

Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr
180 185 190

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Phe Asn Arg Asn Glu Cys
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1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser His Tyr
20 25 30

Met Met Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Arg Ile Gly Pro Ser Gly Gly Pro Thr His Tyr 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 Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Gly Tyr Asp Ser Gly Tyr Asp Tyr Val Ala Val Ala Gly Pro Ala
100 105 110

Glu Tyr Phe Gln His Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
130 135 140

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
145 150 155 160

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
165 170 175

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
210 215 220

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
225 230 235 240

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
290 295 300

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
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Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
355 360 365

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
405 410 415

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
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Gln Lys Ser Leu Ser Leu Ser Pro Gly
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Thr Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Ser Leu Thr Ile Ser Gly Leu Gln Pro
65 70 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Arg
85 90 95

Thr Phe Gly Gln 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

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Phe Asn Arg Gly Glu Cys
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Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys
20 25 30

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Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr
50 55 60

Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val
65 70 75 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu
85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr
100 105 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro
115 120 125

Val Thr Gly Ala Ser Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser
130 135 140

Leu Thr Glu Ile Leu Lys Gly Gly Val Leu Ile Gln Arg Asn Pro Gln
145 150 155 160

Leu Cys Tyr Gln Asp Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn
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Asn Gln Leu Ala Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys
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His Pro Cys Ser Pro Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser
195 200 205

Ser Glu Asp Cys Gln Ser Leu Thr Arg Thr Val Cys Ala Gly Gly Cys
210 215 220

Ala Arg Cys Lys Gly Pro Leu Pro Thr Asp Cys Cys His Glu Gln Cys
225 230 235 240

Ala Ala Gly Cys Thr Gly Pro Lys His Ser Asp Cys Leu Ala Cys Leu
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His Phe Asn His Ser Gly Ile Cys Glu Leu His Cys Pro Ala Leu Val
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Thr Tyr Asn Thr Asp Thr Phe Glu Ser Met Pro Asn Pro Glu Gly Arg
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Tyr Thr Phe Gly Ala Ser Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu
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Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys Pro Leu His Asn Gln
305 310 315 320

Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys
325 330 335

Pro Cys Ala Arg Val Cys Tyr Gly Leu Gly Met Glu His Leu Arg Glu
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Val Arg Ala Val Thr Ser Ala Asn Ile Gln Glu Phe Ala Gly Cys Lys
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Lys Ile Phe Gly Ser Leu Ala Phe Leu Pro Glu Ser Phe Asp Gly Asp
370 375 380

Pro Ala Ser Asn Thr Ala Pro Leu Gln Pro Glu Gln Leu Gln Val Phe
385 390 395 400

Glu Thr Leu Glu Glu Ile Thr Gly Tyr Leu Tyr Ile Ser Ala Trp Pro
405 410 415

Asp Ser Leu Pro Asp Leu Ser Val Phe Gln Asn Leu Gln Val Ile Arg
420 425 430

Gly Arg Ile Leu His Asn Gly Ala Tyr Ser Leu Thr Leu Gln Gly Leu
435 440 445

Gly Ile Ser Trp Leu Gly Leu Arg Ser Leu Arg Glu Leu Gly Ser Gly
450 455 460

Leu Ala Leu Ile His His Asn Thr His Leu Cys Phe Val His Thr Val
465 470 475 480

Pro Trp Asp Gln Leu Phe Arg Asn Pro His Gln Ala Leu Leu His Thr
485 490 495

Ala Asn Arg Pro Glu Asp Glu Cys Val Gly Glu Gly Leu Ala Cys His
500 505 510

Gln Leu Cys Ala Arg Gly His Cys Trp Gly Pro Gly Pro Thr Gln Cys
515 520 525

Val Asn Cys Ser Gln Phe Leu Arg Gly Gln Glu Cys Val Glu Glu Cys
530 535 540

Arg Val Leu Gln Gly Leu Pro Arg Glu Tyr Val Asn Ala Arg His Cys
545 550 555 560

Leu Pro Cys His Pro Glu Cys Gln Pro Gln Asn Gly Ser Val Thr Cys
565 570 575

Phe Gly Pro Glu Ala Asp Gln Cys Val Ala Cys Ala His Tyr Lys Asp
580 585 590

Pro Pro Phe Cys Val Ala Arg Cys Pro Ser Gly Val Lys Pro Asp Leu
595 600 605

Ser Tyr Met Pro Ile Trp Lys Phe Pro Asp Glu Glu Gly Ala Cys Gln
610 615 620

Pro Cys Pro Ile Asn Cys Thr His Ser Cys Val Asp Leu Asp Asp Lys
625 630 635 640

Gly Cys Pro Ala Glu Gln Arg Ala Ser Pro Leu Thr Ser Ile Ile Ser
645 650 655

Ala Val Val Gly Ile Leu Leu Val Val Val Leu Gly Val Val Phe Gly
660 665 670

Ile Leu Ile Lys Arg Arg Gln Gln Lys Ile Arg Lys Tyr Thr Met Arg
675 680 685

Arg Leu Leu Gln Glu Thr Glu Leu Val Glu Pro Leu Thr Pro Ser Gly
690 695 700

Ala Met Pro Asn Gln Ala Gln Met Arg Ile Leu Lys Glu Thr Glu Leu
705 710 715 720

Arg Lys Val Lys Val Leu Gly Ser Gly Ala Phe Gly Thr Val Tyr Lys
725 730 735

Gly Ile Trp Ile Pro Asp Gly Glu Asn Val Lys Ile Pro Val Ala Ile
740 745 750

Lys Val Leu Arg Glu Asn Thr Ser Pro Lys Ala Asn Lys Glu Ile Leu
755 760 765

Asp Glu Ala Tyr Val Met Ala Gly Val Gly Ser Pro Tyr Val Ser Arg
770 775 780

Leu Leu Gly Ile Cys Leu Thr Ser Thr Val Gln Leu Val Thr Gln Leu
785 790 795 800

Met Pro Tyr Gly Cys Leu Leu Asp His Val Arg Glu Asn Arg Gly Arg
805 810 815

Leu Gly Ser Gln Asp Leu Leu Asn Trp Cys Met Gln Ile Ala Lys Gly
820 825 830

Met Ser Tyr Leu Glu Asp Val Arg Leu Val His Arg Asp Leu Ala Ala
835 840 845

Arg Asn Val Leu Val Lys Ser Pro Asn His Val Lys Ile Thr Asp Phe
850 855 860

Gly Leu Ala Arg Leu Leu Asp Ile Asp Glu Thr Glu Tyr His Ala Asp
865 870 875 880

Gly Gly Lys Val Pro Ile Lys Trp Met Ala Leu Glu Ser Ile Leu Arg
885 890 895

Arg Arg Phe Thr His Gln Ser Asp Val Trp Ser Tyr Gly Val Thr Val
900 905 910

Trp Glu Leu Met Thr Phe Gly Ala Lys Pro Tyr Asp Gly Ile Pro Ala
915 920 925

Arg Glu Ile Pro Asp Leu Leu Glu Lys Gly Glu Arg Leu Pro Gln Pro
930 935 940

Pro Ile Cys Thr Ile Asp Val Tyr Met Ile Met Val Lys Cys Trp Met
945 950 955 960

Ile Asp Ser Glu Cys Arg Pro Arg Phe Arg Glu Leu Val Ser Glu Phe
965 970 975

Ser Arg Met Ala Arg Asp Pro Gln Arg Phe Val Val Ile Gln Asn Glu
980 985 990

Asp Leu Gly Pro Ala Ser Pro Leu Asp Ser Thr Phe Tyr Arg Ser Leu
995 1000 1005

Leu Glu Asp Asp Asp Met Gly Asp Leu Val Asp Ala Glu Glu Tyr
1010 1015 1020

Leu Val Pro Gln Gln Gly Phe Phe Cys Pro Asp Pro Ala Pro Gly
1025 1030 1035

Ala Gly Gly Met Val His His Arg His Arg Ser Ser Ser Thr Arg
    1040 1045 1050

Ser Gly Gly Gly Asp Leu Thr Leu Gly Leu Glu Pro Ser Glu Glu
    1055 1060 1065

Glu Ala Pro Arg Ser Pro Leu Ala Pro Ser Glu Gly Ala Gly Ser
    1070 1075 1080

Asp Val Phe Asp Gly Asp Leu Gly Met Gly Ala Ala Lys Gly Leu
    1085 1090 1095

Gln Ser Leu Pro Thr His Asp Pro Ser Pro Leu Gln Arg Tyr Ser
    1100 1105 1110

Glu Asp Pro Thr Val Pro Leu Pro Ser Glu Thr Asp Gly Tyr Val
    1115 1120 1125

Ala Pro Leu Thr Cys Ser Pro Gln Pro Glu Tyr Val Asn Gln Pro
    1130 1135 1140

Asp Val Arg Pro Gln Pro Pro Ser Pro Arg Glu Gly Pro Leu Pro
    1145 1150 1155

Ala Ala Arg Pro Ala Gly Ala Thr Leu Glu Arg Pro Lys Thr Leu
    1160 1165 1170

Ser Pro Gly Lys Asn Gly Val Val Lys Asp Val Phe Ala Phe Gly
    1175 1180 1185

Gly Ala Val Glu Asn Pro Glu Tyr Leu Thr Pro Gln Gly Gly Ala
    1190 1195 1200

Ala Pro Gln Pro His Pro Pro Pro Ala Phe Ser Pro Ala Phe Asp
    1205 1210 1215

Asn Leu Tyr Tyr Trp Asp Gln Asp Pro Pro Glu Arg Gly Ala Pro
    1220 1225 1230

Pro Ser Thr Phe Lys Gly Thr Pro Thr Ala Glu Asn Pro Glu Tyr
    1235 1240 1245

Leu Gly Leu Asp Val Pro Val
    1250 1255

<210> 32
<211> 310
<212> PRT
<213> Homo sapiens

<400> 32
Met Arg Arg Ala Ala Leu Trp Leu Trp Leu Cys Ala Leu Ala Leu Ser
1 5 10 15

Leu Gln Pro Ala Leu Pro Gln Ile Val Ala Thr Asn Leu Pro Pro Glu

20 25 30

Asp Gln Asp Gly Ser Gly Asp Asp Ser Asp Asn Phe Ser Gly Ser Gly
35 40 45

Ala Gly Ala Leu Gln Asp Ile Thr Leu Ser Gln Gln Thr Pro Ser Thr
50 55 60

Trp Lys Asp Thr Gln Leu Leu Thr Ala Ile Pro Thr Ser Pro Glu Pro
65 70 75 80

Thr Gly Leu Glu Ala Thr Ala Ala Ser Thr Ser Thr Leu Pro Ala Gly
85 90 95

Glu Gly Pro Lys Glu Gly Glu Ala Val Val Leu Pro Glu Val Glu Pro
100 105 110

Gly Leu Thr Ala Arg Glu Gln Glu Ala Thr Pro Arg Pro Arg Glu Thr
115 120 125

Thr Gln Leu Pro Thr Thr His Leu Ala Ser Thr Thr Thr Ala Thr Thr
130 135 140

Ala Gln Glu Pro Ala Thr Ser His Pro His Arg Asp Met Gln Pro Gly
145 150 155 160

His His Glu Thr Ser Thr Pro Ala Gly Pro Ser Gln Ala Asp Leu His
165 170 175

Thr Pro His Thr Glu Asp Gly Gly Pro Ser Ala Thr Glu Arg Ala Ala
180 185 190

Glu Asp Gly Ala Ser Ser Gln Leu Pro Ala Ala Glu Gly Ser Gly Glu
195 200 205

Gln Asp Phe Thr Phe Glu Thr Ser Gly Glu Asn Thr Ala Val Val Ala
210 215 220

Val Glu Pro Asp Arg Arg Asn Gln Ser Pro Val Asp Gln Gly Ala Thr
225 230 235 240

Gly Ala Ser Gln Gly Leu Leu Asp Arg Lys Glu Val Leu Gly Gly Val
245 250 255

Ile Ala Gly Gly Leu Val Gly Leu Ile Phe Ala Val Cys Leu Val Gly
260 265 270

Phe Met Leu Tyr Arg Met Lys Lys Lys Asp Glu Gly Ser Tyr Ser Leu
275 280 285

Glu Glu Pro Lys Gln Ala Asn Gly Gly Ala Tyr Gln Lys Pro Thr Lys
290 295 300

Gln Glu Glu Phe Tyr Ala

305 310

<210> 33
<211> 976
<212> PRT
<213> Homo sapiens

<400> 33
Met Glu Leu Gln Ala Ala Arg Ala Cys Phe Ala Leu Leu Trp Gly Cys
1 5 10 15

Ala Leu Ala Ala Ala Ala Ala Ala Gln Gly Lys Glu Val Val Leu Leu
20 25 30

Asp Phe Ala Ala Ala Gly Gly Glu Leu Gly Trp Leu Thr His Pro Tyr
35 40 45

Gly Lys Gly Trp Asp Leu Met Gln Asn Ile Met Asn Asp Met Pro Ile
50 55 60

Tyr Met Tyr Ser Val Cys Asn Val Met Ser Gly Asp Gln Asp Asn Trp
65 70 75 80

Leu Arg Thr Asn Trp Val Tyr Arg Gly Glu Ala Glu Arg Ile Phe Ile
85 90 95

Glu Leu Lys Phe Thr Val Arg Asp Cys Asn Ser Phe Pro Gly Gly Ala
100 105 110

Ser Ser Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Ala Glu Ser Asp Leu
115 120 125

Asp Tyr Gly Thr Asn Phe Gln Lys Arg Leu Phe Thr Lys Ile Asp Thr
130 135 140

Ile Ala Pro Asp Glu Ile Thr Val Ser Ser Asp Phe Glu Ala Arg His
145 150 155 160

Val Lys Leu Asn Val Glu Glu Arg Ser Val Gly Pro Leu Thr Arg Lys
165 170 175

Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Val Ala Leu Leu
180 185 190

Ser Val Arg Val Tyr Tyr Lys Lys Cys Pro Glu Leu Leu Gln Gly Leu
195 200 205

Ala His Phe Pro Glu Thr Ile Ala Gly Ser Asp Ala Pro Ser Leu Ala
210 215 220

Thr Val Ala Gly Thr Cys Val Asp His Ala Val Val Pro Pro Gly Gly
225 230 235 240

Glu Glu Pro Arg Met His Cys Ala Val Asp Gly Glu Trp Leu Val Pro
245 250 255

Ile Gly Gln Cys Leu Cys Gln Ala Gly Tyr Glu Lys Val Glu Asp Ala
260 265 270

Cys Gln Ala Cys Ser Pro Gly Phe Phe Lys Phe Glu Ala Ser Glu Ser
275 280 285

Pro Cys Leu Glu Cys Pro Glu His Thr Leu Pro Ser Pro Glu Gly Ala
290 295 300

Thr Ser Cys Glu Cys Glu Glu Gly Phe Phe Arg Ala Pro Gln Asp Pro
305 310 315 320

Ala Ser Met Pro Cys Thr Arg Pro Pro Ser Ala Pro His Tyr Leu Thr
325 330 335

Ala Val Gly Met Gly Ala Lys Val Glu Leu Arg Trp Thr Pro Pro Gln
340 345 350

Asp Ser Gly Gly Arg Glu Asp Ile Val Tyr Ser Val Thr Cys Glu Gln
355 360 365

Cys Trp Pro Glu Ser Gly Glu Cys Gly Pro Cys Glu Ala Ser Val Arg
370 375 380

Tyr Ser Glu Pro Pro His Gly Leu Thr Arg Thr Ser Val Thr Val Ser
385 390 395 400

Asp Leu Glu Pro His Met Asn Tyr Thr Phe Thr Val Glu Ala Arg Asn
405 410 415

Gly Val Ser Gly Leu Val Thr Ser Arg Ser Phe Arg Thr Ala Ser Val
420 425 430

Ser Ile Asn Gln Thr Glu Pro Pro Lys Val Arg Leu Glu Gly Arg Ser
435 440 445

Thr Thr Ser Leu Ser Val Ser Trp Ser Ile Pro Pro Pro Gln Gln Ser
450 455 460

Arg Val Trp Lys Tyr Glu Val Thr Tyr Arg Lys Lys Gly Asp Ser Asn
465 470 475 480

Ser Tyr Asn Val Arg Arg Thr Glu Gly Phe Ser Val Thr Leu Asp Asp
485 490 495

Leu Ala Pro Asp Thr Thr Tyr Leu Val Gln Val Gln Ala Leu Thr Gln
500 505 510

Glu Gly Gln Gly Ala Gly Ser Lys Val His Glu Phe Gln Thr Leu Ser
515 520 525

Pro Glu Gly Ser Gly Asn Leu Ala Val Ile Gly Gly Val Ala Val Gly
530 535 540

Val Val Leu Leu Leu Val Leu Ala Gly Val Gly Phe Phe Ile His Arg
545 550 555 560

Arg Arg Lys Asn Gln Arg Ala Arg Gln Ser Pro Glu Asp Val Tyr Phe
565 570 575

Ser Lys Ser Glu Gln Leu Lys Pro Leu Lys Thr Tyr Val Asp Pro His
580 585 590

Thr Tyr Glu Asp Pro Asn Gln Ala Val Leu Lys Phe Thr Thr Glu Ile
595 600 605

His Pro Ser Cys Val Thr Arg Gln Lys Val Ile Gly Ala Gly Glu Phe
610 615 620

Gly Glu Val Tyr Lys Gly Met Leu Lys Thr Ser Ser Gly Lys Lys Glu
625 630 635 640

Val Pro Val Ala Ile Lys Thr Leu Lys Ala Gly Tyr Thr Glu Lys Gln
645 650 655

Arg Val Asp Phe Leu Gly Glu Ala Gly Ile Met Gly Gln Phe Ser His
660 665 670

His Asn Ile Ile Arg Leu Glu Gly Val Ile Ser Lys Tyr Lys Pro Met
675 680 685

Met Ile Ile Thr Glu Tyr Met Glu Asn Gly Ala Leu Asp Lys Phe Leu
690 695 700

Arg Glu Lys Asp Gly Glu Phe Ser Val Leu Gln Leu Val Gly Met Leu
705 710 715 720

Arg Gly Ile Ala Ala Gly Met Lys Tyr Leu Ala Asn Met Asn Tyr Val
725 730 735

His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val Asn Ser Asn Leu Val
740 745 750

Cys Lys Val Ser Asp Phe Gly Leu Ser Arg Val Leu Glu Asp Asp Pro
755 760 765

Glu Ala Thr Tyr Thr Thr Ser Gly Gly Lys Ile Pro Ile Arg Trp Thr
770 775 780

Ala Pro Glu Ala Ile Ser Tyr Arg Lys Phe Thr Ser Ala Ser Asp Val
785 790 795 800

Trp Ser Phe Gly Ile Val Met Trp Glu Val Met Thr Tyr Gly Glu Arg
805 810 815

Pro Tyr Trp Glu Leu Ser Asn His Glu Val Met Lys Ala Ile Asn Asp
820 825 830

Gly Phe Arg Leu Pro Thr Pro Met Asp Cys Pro Ser Ala Ile Tyr Gln
835 840 845

Leu Met Met Gln Cys Trp Gln Gln Glu Arg Ala Arg Arg Pro Lys Phe
850 855 860

Ala Asp Ile Val Ser Ile Leu Asp Lys Leu Ile Arg Ala Pro Asp Ser
865 870 875 880

Leu Lys Thr Leu Ala Asp Phe Asp Pro Arg Val Ser Ile Arg Leu Pro
885 890 895

Ser Thr Ser Gly Ser Glu Gly Val Pro Phe Arg Thr Val Ser Glu Trp
900 905 910

Leu Glu Ser Ile Lys Met Gln Gln Tyr Thr Glu His Phe Met Ala Ala
915 920 925

Gly Tyr Thr Ala Ile Glu Lys Val Val Gln Met Thr Asn Asp Asp Ile
930 935 940

Lys Arg Ile Gly Val Arg Leu Pro Gly His Gln Lys Arg Ile Ala Tyr
945 950 955 960

Ser Leu Leu Gly Leu Lys Asp Gln Val Asn Thr Val Gly Ile Pro Ile
965 970 975

<210> 34
<211> 4
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 34
Gly Phe Gly Gly
1

<210> 35
<211> 4
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 35
Gly Phe Leu Gly
1

<210> 36
<211> 4
<212> PRT
<213> Secuencia Artificial

<220>
<221> source

<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 36
Ala Leu Ala Leu
1

<210> 37
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 37
Ser Pro Thr Leu Pro Pro Arg Ser Leu
1 5

<210> 38
<211> 11
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 38
His Pro Ser Ile Lys Arg Gly Leu Ser Ser Leu
1 5 10

<210> 39
<211> 8
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 39
Leu Leu Leu Pro His His Val Leu
1 5

<210> 40
<211> 10
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 40
Arg Thr Ala Pro Gly Val Arg Pro Pro Phe
1 5 10

<210> 41
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 41
Arg Pro Gln Lys Ser Ile Gln Ala Leu
1 5

<210> 42
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 42
Ala Pro Ala Pro Pro Pro Leu Pro Ala
1 5

<210> 43
<211> 630
<212> PRT
<213> Homo sapiens

<400> 43
Met Ala Leu Pro Thr Ala Arg Pro Leu Leu Gly Ser Cys Gly Thr Pro
1 5 10 15

Ala Leu Gly Ser Leu Leu Phe Leu Leu Phe Ser Leu Gly Trp Val Gln
20 25 30

Pro Ser Arg Thr Leu Ala Gly Glu Thr Gly Gln Glu Ala Ala Pro Leu
35 40 45

Asp Gly Val Leu Ala Asn Pro Pro Asn Ile Ser Ser Leu Ser Pro Arg
50 55 60

Gln Leu Leu Gly Phe Pro Cys Ala Glu Val Ser Gly Leu Ser Thr Glu
65 70 75 80

Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
85 90 95

Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
100 105 110

Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
115 120 125

Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
130 135 140

Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
145 150 155 160

Arg Leu Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
165 170 175

Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
180 185 190

Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
195 200 205

Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
210 215 220

Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp
225 230 235 240

Ser Val Ser Thr Met Asp Ala Leu Arg Gly Leu Leu Pro Val Leu Gly
245 250 255

Gln Pro Ile Ile Arg Ser Ile Pro Gln Gly Ile Val Ala Ala Trp Arg
260 265 270

Gln Arg Ser Ser Arg Asp Pro Ser Trp Arg Gln Pro Glu Arg Thr Ile
275 280 285

Leu Arg Pro Arg Phe Arg Arg Glu Val Glu Lys Thr Ala Cys Pro Ser
290 295 300

Gly Lys Lys Ala Arg Glu Ile Asp Glu Ser Leu Ile Phe Tyr Lys Lys
305 310 315 320

Trp Glu Leu Glu Ala Cys Val Asp Ala Ala Leu Leu Ala Thr Gln Met
325 330 335

Asp Arg Val Asn Ala Ile Pro Phe Thr Tyr Glu Gln Leu Asp Val Leu
340 345 350

Lys His Lys Leu Asp Glu Leu Tyr Pro Gln Gly Tyr Pro Glu Ser Val
355 360 365

Ile Gln His Leu Gly Tyr Leu Phe Leu Lys Met Ser Pro Glu Asp Ile
370 375 380

Arg Lys Trp Asn Val Thr Ser Leu Glu Thr Leu Lys Ala Leu Leu Glu
385 390 395 400

Val Asn Lys Gly His Glu Met Ser Pro Gln Ala Pro Arg Arg Pro Leu
405 410 415

Pro Gln Val Ala Thr Leu Ile Asp Arg Phe Val Lys Gly Arg Gly Gln
420 425 430

Leu Asp Lys Asp Thr Leu Asp Thr Leu Thr Ala Phe Tyr Pro Gly Tyr
435 440 445

Leu Cys Ser Leu Ser Pro Glu Glu Leu Ser Ser Val Pro Pro Ser Ser
450 455 460

Ile Trp Ala Val Arg Pro Gln Asp Leu Asp Thr Cys Asp Pro Arg Gln
465 470 475 480

Leu Asp Val Leu Tyr Pro Lys Ala Arg Leu Ala Phe Gln Asn Met Asn
485 490 495

Gly Ser Glu Tyr Phe Val Lys Ile Gln Ser Phe Leu Gly Gly Ala Pro
500 505 510

Thr Glu Asp Leu Lys Ala Leu Ser Gln Gln Asn Val Ser Met Asp Leu
515 520 525

Ala Thr Phe Met Lys Leu Arg Thr Asp Ala Val Leu Pro Leu Thr Val
530 535 540

Ala Glu Val Gln Lys Leu Leu Gly Pro His Val Glu Gly Leu Lys Ala
545 550 555 560

Glu Glu Arg His Arg Pro Val Arg Asp Trp Ile Leu Arg Gln Arg Gln
565 570 575

Asp Asp Leu Asp Thr Leu Gly Leu Gly Leu Gln Gly Gly Ile Pro Asn
580 585 590

Gly Tyr Leu Val Leu Asp Leu Ser Met Gln Glu Ala Leu Ser Gly Thr
595 600 605

Pro Cys Leu Leu Gly Pro Gly Pro Val Leu Thr Val Leu Ala Leu Leu
610 615 620

Leu Ala Ser Thr Leu Ala
625 630

<210> 44
<211> 750
<212> PRT
<213> Homo sapiens

<400> 44
Met Trp Asn Leu Leu His Glu Thr Asp Ser Ala Val Ala Thr Ala Arg
1 5 10 15

Arg Pro Arg Trp Leu Cys Ala Gly Ala Leu Val Leu Ala Gly Gly Phe
20 25 30

Phe Leu Leu Gly Phe Leu Phe Gly Trp Phe Ile Lys Ser Ser Asn Glu
35 40 45

Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala Phe Leu Asp Glu
50 55 60

Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu Tyr Asn Phe Thr Gln Ile
65 70 75 80

Pro His Leu Ala Gly Thr Glu Gln Asn Phe Gln Leu Ala Lys Gln Ile
85 90 95

Gln Ser Gln Trp Lys Glu Phe Gly Leu Asp Ser Val Glu Leu Ala His

100 105 110

Tyr Asp Val Leu Leu Ser Tyr Pro Asn Lys Thr His Pro Asn Tyr Ile
115 120 125

Ser Ile Ile Asn Glu Asp Gly Asn Glu Ile Phe Asn Thr Ser Leu Phe
130 135 140

Glu Pro Pro Pro Pro Gly Tyr Glu Asn Val Ser Asp Ile Val Pro Pro
145 150 155 160

Phe Ser Ala Phe Ser Pro Gln Gly Met Pro Glu Gly Asp Leu Val Tyr
165 170 175

Val Asn Tyr Ala Arg Thr Glu Asp Phe Phe Lys Leu Glu Arg Asp Met
180 185 190

Lys Ile Asn Cys Ser Gly Lys Ile Val Ile Ala Arg Tyr Gly Lys Val
195 200 205

Phe Arg Gly Asn Lys Val Lys Asn Ala Gln Leu Ala Gly Ala Lys Gly
210 215 220

Val Ile Leu Tyr Ser Asp Pro Ala Asp Tyr Phe Ala Pro Gly Val Lys
225 230 235 240

Ser Tyr Pro Asp Gly Trp Asn Leu Pro Gly Gly Gly Val Gln Arg Gly
245 250 255

Asn Ile Leu Asn Leu Asn Gly Ala Gly Asp Pro Leu Thr Pro Gly Tyr
260 265 270

Pro Ala Asn Glu Tyr Ala Tyr Arg Arg Gly Ile Ala Glu Ala Val Gly
275 280 285

Leu Pro Ser Ile Pro Val His Pro Ile Gly Tyr Tyr Asp Ala Gln Lys
290 295 300

Leu Leu Glu Lys Met Gly Gly Ser Ala Pro Pro Asp Ser Ser Trp Arg
305 310 315 320

Gly Ser Leu Lys Val Pro Tyr Asn Val Gly Pro Gly Phe Thr Gly Asn
325 330 335

Phe Ser Thr Gln Lys Val Lys Met His Ile His Ser Thr Asn Glu Val
340 345 350

Thr Arg Ile Tyr Asn Val Ile Gly Thr Leu Arg Gly Ala Val Glu Pro
355 360 365

Asp Arg Tyr Val Ile Leu Gly Gly His Arg Asp Ser Trp Val Phe Gly
370 375 380

Gly Ile Asp Pro Gln Ser Gly Ala Ala Val Val His Glu Ile Val Arg

385 390 395 400

Ser Phe Gly Thr Leu Lys Lys Glu Gly Trp Arg Pro Arg Arg Thr Ile
405 410 415

Leu Phe Ala Ser Trp Asp Ala Glu Glu Phe Gly Leu Leu Gly Ser Thr
420 425 430

Glu Trp Ala Glu Glu Asn Ser Arg Leu Leu Gln Glu Arg Gly Val Ala
435 440 445

Tyr Ile Asn Ala Asp Ser Ser Ile Glu Gly Asn Tyr Thr Leu Arg Val
450 455 460

Asp Cys Thr Pro Leu Met Tyr Ser Leu Val His Asn Leu Thr Lys Glu
465 470 475 480

Leu Lys Ser Pro Asp Glu Gly Phe Glu Gly Lys Ser Leu Tyr Glu Ser
485 490 495

Trp Thr Lys Lys Ser Pro Ser Pro Glu Phe Ser Gly Met Pro Arg Ile
500 505 510

Ser Lys Leu Gly Ser Gly Asn Asp Phe Glu Val Phe Phe Gln Arg Leu
515 520 525

Gly Ile Ala Ser Gly Arg Ala Arg Tyr Thr Lys Asn Trp Glu Thr Asn
530 535 540

Lys Phe Ser Gly Tyr Pro Leu Tyr His Ser Val Tyr Glu Thr Tyr Glu
545 550 555 560

Leu Val Glu Lys Phe Tyr Asp Pro Met Phe Lys Tyr His Leu Thr Val
565 570 575

Ala Gln Val Arg Gly Gly Met Val Phe Glu Leu Ala Asn Ser Ile Val
580 585 590

Leu Pro Phe Asp Cys Arg Asp Tyr Ala Val Val Leu Arg Lys Tyr Ala
595 600 605

Asp Lys Ile Tyr Ser Ile Ser Met Lys His Pro Gln Glu Met Lys Thr
610 615 620

Tyr Ser Val Ser Phe Asp Ser Leu Phe Ser Ala Val Lys Asn Phe Thr
625 630 635 640

Glu Ile Ala Ser Lys Phe Ser Glu Arg Leu Gln Asp Phe Asp Lys Ser
645 650 655

Asn Pro Ile Val Leu Arg Met Met Asn Asp Gln Leu Met Phe Leu Glu
660 665 670

Arg Ala Phe Ile Asp Pro Leu Gly Leu Pro Asp Arg Pro Phe Tyr Arg

675 680 685

His Val Ile Tyr Ala Pro Ser Ser His Asn Lys Tyr Ala Gly Glu Ser
690 695 700

Phe Pro Gly Ile Tyr Asp Ala Leu Phe Asp Ile Glu Ser Lys Val Asp
705 710 715 720

Pro Ser Lys Ala Trp Gly Glu Val Lys Arg Gln Ile Tyr Val Ala Ala
725 730 735

Phe Thr Val Gln Ala Ala Ala Glu Thr Leu Ser Glu Val Ala
740 745 750

<210> 45
<211> 790
<212> PRT
<213> Homo sapiens

<400> 45
Met Arg Thr Tyr Arg Tyr Phe Leu Leu Leu Phe Trp Val Gly Gln Pro
1 5 10 15

Tyr Pro Thr Leu Ser Thr Pro Leu Ser Lys Arg Thr Ser Gly Phe Pro
20 25 30

Ala Lys Lys Arg Ala Leu Glu Leu Ser Gly Asn Ser Lys Asn Glu Leu
35 40 45

Asn Arg Ser Lys Arg Ser Trp Met Trp Asn Gln Phe Phe Leu Leu Glu
50 55 60

Glu Tyr Thr Gly Ser Asp Tyr Gln Tyr Val Gly Lys Leu His Ser Asp
65 70 75 80

Gln Asp Arg Gly Asp Gly Ser Leu Lys Tyr Ile Leu Ser Gly Asp Gly
85 90 95

Ala Gly Asp Leu Phe Ile Ile Asn Glu Asn Thr Gly Asp Ile Gln Ala
100 105 110

Thr Lys Arg Leu Asp Arg Glu Glu Lys Pro Val Tyr Ile Leu Arg Ala
115 120 125

Gln Ala Ile Asn Arg Arg Thr Gly Arg Pro Val Glu Pro Glu Ser Glu
130 135 140

Phe Ile Ile Lys Ile His Asp Ile Asn Asp Asn Glu Pro Ile Phe Thr
145 150 155 160

Lys Glu Val Tyr Thr Ala Thr Val Pro Glu Met Ser Asp Val Gly Thr
165 170 175

Phe Val Val Gln Val Thr Ala Thr Asp Ala Asp Asp Pro Thr Tyr Gly
180 185 190

Asn Ser Ala Lys Val Val Tyr Ser Ile Leu Gln Gly Gln Pro Tyr Phe
195 200 205

Ser Val Glu Ser Glu Thr Gly Ile Ile Lys Thr Ala Leu Leu Asn Met
210 215 220

Asp Arg Glu Asn Arg Glu Gln Tyr Gln Val Val Ile Gln Ala Lys Asp
225 230 235 240

Met Gly Gly Gln Met Gly Gly Leu Ser Gly Thr Thr Thr Val Asn Ile
245 250 255

Thr Leu Thr Asp Val Asn Asp Asn Pro Pro Arg Phe Pro Gln Ser Thr
260 265 270

Tyr Gln Phe Lys Thr Pro Glu Ser Ser Pro Pro Gly Thr Pro Ile Gly
275 280 285

Arg Ile Lys Ala Ser Asp Ala Asp Val Gly Glu Asn Ala Glu Ile Glu
290 295 300

Tyr Ser Ile Thr Asp Gly Glu Gly Leu Asp Met Phe Asp Val Ile Thr
305 310 315 320

Asp Gln Glu Thr Gln Glu Gly Ile Ile Thr Val Lys Lys Leu Leu Asp
325 330 335

Phe Glu Lys Lys Lys Val Tyr Thr Leu Lys Val Glu Ala Ser Asn Pro
340 345 350

Tyr Val Glu Pro Arg Phe Leu Tyr Leu Gly Pro Phe Lys Asp Ser Ala
355 360 365

Thr Val Arg Ile Val Val Glu Asp Val Asp Glu Pro Pro Val Phe Ser
370 375 380

Lys Leu Ala Tyr Ile Leu Gln Ile Arg Glu Asp Ala Gln Ile Asn Thr
385 390 395 400

Thr Ile Gly Ser Val Thr Ala Gln Asp Pro Asp Ala Ala Arg Asn Pro
405 410 415

Val Lys Tyr Ser Val Asp Arg His Thr Asp Met Asp Arg Ile Phe Asn
420 425 430

Ile Asp Ser Gly Asn Gly Ser Ile Phe Thr Ser Lys Leu Leu Asp Arg
435 440 445

Glu Thr Leu Leu Trp His Asn Ile Thr Val Ile Ala Thr Glu Ile Asn
450 455 460

Asn Pro Lys Gln Ser Ser Arg Val Pro Leu Tyr Ile Lys Val Leu Asp
465 470 475 480

Val Asn Asp Asn Ala Pro Glu Phe Ala Glu Phe Tyr Glu Thr Phe Val
485 490 495

Cys Glu Lys Ala Lys Ala Asp Gln Leu Ile Gln Thr Leu His Ala Val
500 505 510

Asp Lys Asp Asp Pro Tyr Ser Gly His Gln Phe Ser Phe Ser Leu Ala
515 520 525

Pro Glu Ala Ala Ser Gly Ser Asn Phe Thr Ile Gln Asp Asn Lys Asp
530 535 540

Asn Thr Ala Gly Ile Leu Thr Arg Lys Asn Gly Tyr Asn Arg His Glu
545 550 555 560

Met Ser Thr Tyr Leu Leu Pro Val Val Ile Ser Asp Asn Asp Tyr Pro
565 570 575

Val Gln Ser Ser Thr Gly Thr Val Thr Val Arg Val Cys Ala Cys Asp
580 585 590

His His Gly Asn Met Gln Ser Cys His Ala Glu Ala Leu Ile His Pro
595 600 605

Thr Gly Leu Ser Thr Gly Ala Leu Val Ala Ile Leu Leu Cys Ile Val
610 615 620

Ile Leu Leu Val Thr Val Val Leu Phe Ala Ala Leu Arg Arg Gln Arg
625 630 635 640

Lys Lys Glu Pro Leu Ile Ile Ser Lys Glu Asp Ile Arg Asp Asn Ile
645 650 655

Val Ser Tyr Asn Asp Glu Gly Gly Gly Glu Glu Asp Thr Gln Ala Phe
660 665 670

Asp Ile Gly Thr Leu Arg Asn Pro Glu Ala Ile Glu Asp Asn Lys Leu
675 680 685

Arg Arg Asp Ile Val Pro Glu Ala Leu Phe Leu Pro Arg Arg Thr Pro
690 695 700

Thr Ala Arg Asp Asn Thr Asp Val Arg Asp Phe Ile Asn Gln Arg Leu
705 710 715 720

Lys Glu Asn Asp Thr Asp Pro Thr Ala Pro Pro Tyr Asp Ser Leu Ala
725 730 735

Thr Tyr Ala Tyr Glu Gly Thr Gly Ser Val Ala Asp Ser Leu Ser Ser
740 745 750

Leu Glu Ser Val Thr Thr Asp Ala Asp Gln Asp Tyr Asp Tyr Leu Ser
755 760 765

Asp Trp Gly Pro Arg Phe Lys Lys Leu Ala Asp Met Tyr Gly Gly Val
    770   775   780

Asp Ser Asp Lys Asp Ser
785   790

<210> 46
<211> 702
<212> PRT
<213> Homo sapiens

<400> 46
Met Glu Ser Pro Ser Ala Pro Pro His Arg Trp Cys Ile Pro Trp Gln
1   5   10   15

Arg Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
            20   25   30

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

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
    50   55   60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Ile
65   70   75   80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Tyr Ser
                85   90   95

Gly Arg Glu Ile Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Ile
            100   105   110

Ile Gln Asn Asp Thr Gly Phe Tyr Thr Leu His Val Ile Lys Ser Asp
        115   120   125

Leu Val Asn Glu Glu Ala Thr Gly Gln Phe Arg Val Tyr Pro Glu Leu
    130   135   140

Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro Val Glu Asp Lys
145   150   155   160

Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Thr Gln Asp Ala Thr Tyr
                165   170   175

Leu Trp Trp Val Asn Asn Gln Ser Leu Pro Val Ser Pro Arg Leu Gln
            180   185   190

Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe Asn Val Thr Arg Asn
        195   200   205

Asp Thr Ala Ser Tyr Lys Cys Glu Thr Gln Asn Pro Val Ser Ala Arg
    210   215   220

Arg Ser Asp Ser Val Ile Leu Asn Val Leu Tyr Gly Pro Asp Ala Pro

225 230 235 240

Thr Ile Ser Pro Leu Asn Thr Ser Tyr Arg Ser Gly Glu Asn Leu Asn
245 250 255

Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser Trp Phe
260 265 270

Val Asn Gly Thr Phe Gln Gln Ser Thr Gln Glu Leu Phe Ile Pro Asn
275 280 285

Ile Thr Val Asn Asn Ser Gly Ser Tyr Thr Cys Gln Ala His Asn Ser
290 295 300

Asp Thr Gly Leu Asn Arg Thr Thr Val Thr Thr Ile Thr Val Tyr Ala
305 310 315 320

Glu Pro Pro Lys Pro Phe Ile Thr Ser Asn Asn Ser Asn Pro Val Glu
325 330 335

Asp Glu Asp Ala Val Ala Leu Thr Cys Glu Pro Glu Ile Gln Asn Thr
340 345 350

Thr Tyr Leu Trp Trp Val Asn Asn Gln Ser Leu Pro Val Ser Pro Arg
355 360 365

Leu Gln Leu Ser Asn Asp Asn Arg Thr Leu Thr Leu Leu Ser Val Thr
370 375 380

Arg Asn Asp Val Gly Pro Tyr Glu Cys Gly Ile Gln Asn Lys Leu Ser
385 390 395 400

Val Asp His Ser Asp Pro Val Ile Leu Asn Val Leu Tyr Gly Pro Asp
405 410 415

Asp Pro Thr Ile Ser Pro Ser Tyr Thr Tyr Tyr Arg Pro Gly Val Asn
420 425 430

Leu Ser Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser
435 440 445

Trp Leu Ile Asp Gly Asn Ile Gln Gln His Thr Gln Glu Leu Phe Ile
450 455 460

Ser Asn Ile Thr Glu Lys Asn Ser Gly Leu Tyr Thr Cys Gln Ala Asn
465 470 475 480

Asn Ser Ala Ser Gly His Ser Arg Thr Thr Val Lys Thr Ile Thr Val
485 490 495

Ser Ala Glu Leu Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro
500 505 510

Val Glu Asp Lys Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Ala Gln

515 520 525

Asn Thr Thr Tyr Leu Trp Trp Val Asn Gly Gln Ser Leu Pro Val Ser
530 535 540

Pro Arg Leu Gln Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe Asn
545 550 555 560

Val Thr Arg Asn Asp Ala Arg Ala Tyr Val Cys Gly Ile Gln Asn Ser
565 570 575

Val Ser Ala Asn Arg Ser Asp Pro Val Thr Leu Asp Val Leu Tyr Gly
580 585 590

Pro Asp Thr Pro Ile Ile Ser Pro Pro Asp Ser Ser Tyr Leu Ser Gly
595 600 605

Ala Asn Leu Asn Leu Ser Cys His Ser Ala Ser Asn Pro Ser Pro Gln
610 615 620

Tyr Ser Trp Arg Ile Asn Gly Ile Pro Gln Gln His Thr Gln Val Leu
625 630 635 640

Phe Ile Ala Lys Ile Thr Pro Asn Asn Asn Gly Thr Tyr Ala Cys Phe
645 650 655

Val Ser Asn Leu Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile
660 665 670

Thr Val Ser Ala Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr
675 680 685

Val Gly Ile Met Ile Gly Val Leu Val Gly Val Ala Leu Ile
690 695 700

<210> 47
<211> 223
<212> PRT
<213> Homo sapiens

<400> 47
Met Thr Trp Arg His His Val Arg Leu Leu Phe Thr Val Ser Leu Ala
1 5 10 15

Leu Gln Ile Ile Asn Leu Gly Asn Ser Tyr Gln Arg Glu Lys His Asn
20 25 30

Gly Gly Arg Glu Glu Val Thr Lys Val Ala Thr Gln Lys His Arg Gln
35 40 45

Ser Pro Leu Asn Trp Thr Ser Ser His Phe Gly Glu Val Thr Gly Ser
50 55 60

Ala Glu Gly Trp Gly Pro Glu Glu Pro Leu Pro Tyr Ser Trp Ala Phe
65 70 75 80

Gly Glu Gly Ala Ser Ala Arg Pro Arg Cys Cys Arg Asn Gly Gly Thr
85 90 95

Cys Val Leu Gly Ser Phe Cys Val Cys Pro Ala His Phe Thr Gly Arg
100 105 110

Tyr Cys Glu His Asp Gln Arg Arg Ser Glu Cys Gly Ala Leu Glu His
115 120 125

Gly Ala Trp Thr Leu Arg Ala Cys His Leu Cys Arg Cys Ile Phe Gly
130 135 140

Ala Leu His Cys Leu Pro Leu Gln Thr Pro Asp Arg Cys Asp Pro Lys
145 150 155 160

Asp Phe Leu Ala Ser His Ala His Gly Pro Ser Ala Gly Gly Ala Pro
165 170 175

Ser Leu Leu Leu Leu Leu Pro Cys Ala Leu Leu His Arg Leu Leu Arg
180 185 190

Pro Asp Ala Pro Ala His Pro Arg Ser Leu Val Pro Ser Val Leu Gln
195 200 205

Arg Glu Arg Arg Pro Cys Gly Arg Pro Gly Leu Gly His Arg Leu
210 215 220

<210> 48
<211> 875
<212> PRT
<213> Homo sapiens

<400> 48
Met Glu Ser Thr Leu Thr Leu Ala Thr Glu Gln Pro Val Lys Lys Asn
1 5 10 15

Thr Leu Lys Lys Tyr Lys Ile Ala Cys Ile Val Leu Leu Ala Leu Leu
20 25 30

Val Ile Met Ser Leu Gly Leu Gly Leu Gly Leu Gly Leu Arg Lys Leu
35 40 45

Glu Lys Gln Gly Ser Cys Arg Lys Lys Cys Phe Asp Ala Ser Phe Arg
50 55 60

Gly Leu Glu Asn Cys Arg Cys Asp Val Ala Cys Lys Asp Arg Gly Asp
65 70 75 80

Cys Cys Trp Asp Phe Glu Asp Thr Cys Val Glu Ser Thr Arg Ile Trp
85 90 95

Met Cys Asn Lys Phe Arg Cys Gly Glu Thr Arg Leu Glu Ala Ser Leu
100 105 110

Cys Ser Cys Ser Asp Asp Cys Leu Gln Arg Lys Asp Cys Cys Ala Asp

115 120 125

Tyr Lys Ser Val Cys Gln Gly Glu Thr Ser Trp Leu Glu Glu Asn Cys
130 135 140

Asp Thr Ala Gln Gln Ser Gln Cys Pro Glu Gly Phe Asp Leu Pro Pro
145 150 155 160

Val Ile Leu Phe Ser Met Asp Gly Phe Arg Ala Glu Tyr Leu Tyr Thr
165 170 175

Trp Asp Thr Leu Met Pro Asn Ile Asn Lys Leu Lys Thr Cys Gly Ile
180 185 190

His Ser Lys Tyr Met Arg Ala Met Tyr Pro Thr Lys Thr Phe Pro Asn
195 200 205

His Tyr Thr Ile Val Thr Gly Leu Tyr Pro Glu Ser His Gly Ile Ile
210 215 220

Asp Asn Asn Met Tyr Asp Val Asn Leu Asn Lys Asn Phe Ser Leu Ser
225 230 235 240

Ser Lys Glu Gln Asn Asn Pro Ala Trp Trp His Gly Gln Pro Met Trp
245 250 255

Leu Thr Ala Met Tyr Gln Gly Leu Lys Ala Ala Thr Tyr Phe Trp Pro
260 265 270

Gly Ser Glu Val Ala Ile Asn Gly Ser Phe Pro Ser Ile Tyr Met Pro
275 280 285

Tyr Asn Gly Ser Val Pro Phe Glu Glu Arg Ile Ser Thr Leu Leu Lys
290 295 300

Trp Leu Asp Leu Pro Lys Ala Glu Arg Pro Arg Phe Tyr Thr Met Tyr
305 310 315 320

Phe Glu Glu Pro Asp Ser Ser Gly His Ala Gly Gly Pro Val Ser Ala
325 330 335

Arg Val Ile Lys Ala Leu Gln Val Val Asp His Ala Phe Gly Met Leu
340 345 350

Met Glu Gly Leu Lys Gln Arg Asn Leu His Asn Cys Val Asn Ile Ile
355 360 365

Leu Leu Ala Asp His Gly Met Asp Gln Thr Tyr Cys Asn Lys Met Glu
370 375 380

Tyr Met Thr Asp Tyr Phe Pro Arg Ile Asn Phe Phe Tyr Met Tyr Glu
385 390 395 400

Gly Pro Ala Pro Arg Ile Arg Ala His Asn Ile Pro His Asp Phe Phe

405 410 415

Ser Phe Asn Ser Glu Glu Ile Val Arg Asn Leu Ser Cys Arg Lys Pro
420 425 430

Asp Gln His Phe Lys Pro Tyr Leu Thr Pro Asp Leu Pro Lys Arg Leu
435 440 445

His Tyr Ala Lys Asn Val Arg Ile Asp Lys Val His Leu Phe Val Asp
450 455 460

Gln Gln Trp Leu Ala Val Arg Ser Lys Ser Asn Thr Asn Cys Gly Gly
465 470 475 480

Gly Asn His Gly Tyr Asn Asn Glu Phe Arg Ser Met Glu Ala Ile Phe
485 490 495

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

Glu Asn Ile Glu Val Tyr Asn Leu Met Cys Asp Leu Leu Arg Ile Gln
515 520 525

Pro Ala Pro Asn Asn Gly Thr His Gly Ser Leu Asn His Leu Leu Lys
530 535 540

Val Pro Phe Tyr Glu Pro Ser His Ala Glu Glu Val Ser Lys Phe Ser
545 550 555 560

Val Cys Gly Phe Ala Asn Pro Leu Pro Thr Glu Ser Leu Asp Cys Phe
565 570 575

Cys Pro His Leu Gln Asn Ser Thr Gln Leu Glu Gln Val Asn Gln Met
580 585 590

Leu Asn Leu Thr Gln Glu Glu Ile Thr Ala Thr Val Lys Val Asn Leu
595 600 605

Pro Phe Gly Arg Pro Arg Val Leu Gln Lys Asn Val Asp His Cys Leu
610 615 620

Leu Tyr His Arg Glu Tyr Val Ser Gly Phe Gly Lys Ala Met Arg Met
625 630 635 640

Pro Met Trp Ser Ser Tyr Thr Val Pro Gln Leu Gly Asp Thr Ser Pro
645 650 655

Leu Pro Pro Thr Val Pro Asp Cys Leu Arg Ala Asp Val Arg Val Pro
660 665 670

Pro Ser Glu Ser Gln Lys Cys Ser Phe Tyr Leu Ala Asp Lys Asn Ile
675 680 685

Thr His Gly Phe Leu Tyr Pro Pro Ala Ser Asn Arg Thr Ser Asp Ser

690 695 700

Gln Tyr Asp Ala Leu Ile Thr Ser Asn Leu Val Pro Met Tyr Glu Glu
705 710 715 720

Phe Arg Lys Met Trp Asp Tyr Phe His Ser Val Leu Leu Ile Lys His
725 730 735

Ala Thr Glu Arg Asn Gly Val Asn Val Val Ser Gly Pro Ile Phe Asp
740 745 750

Tyr Asn Tyr Asp Gly His Phe Asp Ala Pro Asp Glu Ile Thr Lys His
755 760 765

Leu Ala Asn Thr Asp Val Pro Ile Pro Thr His Tyr Phe Val Val Leu
770 775 780

Thr Ser Cys Lys Asn Lys Ser His Thr Pro Glu Asn Cys Pro Gly Trp
785 790 795 800

Leu Asp Val Leu Pro Phe Ile Ile Pro His Arg Pro Thr Asn Val Glu
805 810 815

Ser Cys Pro Glu Gly Lys Pro Glu Ala Leu Trp Val Glu Glu Arg Phe
820 825 830

Thr Ala His Ile Ala Arg Val Arg Asp Val Glu Leu Leu Thr Gly Leu
835 840 845

Asp Phe Tyr Gln Asp Lys Val Gln Pro Val Ser Glu Ile Leu Gln Leu
850 855 860

Lys Thr Tyr Leu Pro Thr Phe Glu Thr Thr Ile
865 870 875

<210> 49
<211> 257
<212> PRT
<213> Homo sapiens

<400> 49
Met Ala Gln Arg Met Thr Thr Gln Leu Leu Leu Leu Leu Val Trp Val
1 5 10 15

Ala Val Val Gly Glu Ala Gln Thr Arg Ile Ala Trp Ala Arg Thr Glu
20 25 30

Leu Leu Asn Val Cys Met Asn Ala Lys His His Lys Glu Lys Pro Gly
35 40 45

Pro Glu Asp Lys Leu His Glu Gln Cys Arg Pro Trp Arg Lys Asn Ala
50 55 60

Cys Cys Ser Thr Asn Thr Ser Gln Glu Ala His Lys Asp Val Ser Tyr
65 70 75 80

Leu Tyr Arg Phe Asn Trp Asn His Cys Gly Glu Met Ala Pro Ala Cys
85 90 95

Lys Arg His Phe Ile Gln Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn
100 105 110

Leu Gly Pro Trp Ile Gln Gln Val Asp Gln Ser Trp Arg Lys Glu Arg
115 120 125

Val Leu Asn Val Pro Leu Cys Lys Glu Asp Cys Glu Gln Trp Trp Glu
130 135 140

Asp Cys Arg Thr Ser Tyr Thr Cys Lys Ser Asn Trp His Lys Gly Trp
145 150 155 160

Asn Trp Thr Ser Gly Phe Asn Lys Cys Ala Val Gly Ala Ala Cys Gln
165 170 175

Pro Phe His Phe Tyr Phe Pro Thr Pro Thr Val Leu Cys Asn Glu Ile
180 185 190

Trp Thr His Ser Tyr Lys Val Ser Asn Tyr Ser Arg Gly Ser Gly Arg
195 200 205

Cys Ile Gln Met Trp Phe Asp Pro Ala Gln Gly Asn Pro Asn Glu Glu
210 215 220

Val Ala Arg Phe Tyr Ala Ala Ala Met Ser Gly Ala Gly Pro Trp Ala
225 230 235 240

Ala Trp Pro Phe Leu Leu Ser Leu Ala Leu Met Leu Leu Trp Leu Leu
245 250 255

Ser

<210> 50
<211> 364
<212> PRT
<213> Homo sapiens

<400> 50
Met His Pro Gln Val Val Ile Leu Ser Leu Ile Leu His Leu Ala Asp
1 5 10 15

Ser Val Ala Gly Ser Val Lys Val Gly Gly Glu Ala Gly Pro Ser Val
20 25 30

Thr Leu Pro Cys His Tyr Ser Gly Ala Val Thr Ser Met Cys Trp Asn
35 40 45

Arg Gly Ser Cys Ser Leu Phe Thr Cys Gln Asn Gly Ile Val Trp Thr
50 55 60

Asn Gly Thr His Val Thr Tyr Arg Lys Asp Thr Arg Tyr Lys Leu Leu

65 70 75 80

Gly Asp Leu Ser Arg Arg Asp Val Ser Leu Thr Ile Glu Asn Thr Ala
85 90 95

Val Ser Asp Ser Gly Val Tyr Cys Cys Arg Val Glu His Arg Gly Trp
100 105 110

Phe Asn Asp Met Lys Ile Thr Val Ser Leu Glu Ile Val Pro Pro Lys
115 120 125

Val Thr Thr Thr Pro Ile Val Thr Thr Val Pro Thr Val Thr Thr Val
130 135 140

Arg Thr Ser Thr Thr Val Pro Thr Thr Thr Thr Val Pro Met Thr Thr
145 150 155 160

Val Pro Thr Thr Thr Val Pro Thr Thr Met Ser Ile Pro Thr Thr Thr
165 170 175

Thr Val Leu Thr Thr Met Thr Val Ser Thr Thr Thr Ser Val Pro Thr
180 185 190

Thr Thr Ser Ile Pro Thr Thr Thr Ser Val Pro Val Thr Thr Thr Val
195 200 205

Ser Thr Phe Val Pro Pro Met Pro Leu Pro Arg Gln Asn His Glu Pro
210 215 220

Val Ala Thr Ser Pro Ser Ser Pro Gln Pro Ala Glu Thr His Pro Thr
225 230 235 240

Thr Leu Gln Gly Ala Ile Arg Arg Glu Pro Thr Ser Ser Pro Leu Tyr
245 250 255

Ser Tyr Thr Thr Asp Gly Asn Asp Thr Val Thr Glu Ser Ser Asp Gly
260 265 270

Leu Trp Asn Asn Asn Gln Thr Gln Leu Phe Leu Glu His Ser Leu Leu
275 280 285

Thr Ala Asn Thr Thr Lys Gly Ile Tyr Ala Gly Val Cys Ile Ser Val
290 295 300

Leu Val Leu Leu Ala Leu Leu Gly Val Ile Ile Ala Lys Lys Tyr Phe
305 310 315 320

Phe Lys Lys Glu Val Gln Gln Leu Ser Val Ser Phe Ser Ser Leu Gln
325 330 335

Ile Lys Ala Leu Gln Asn Ala Val Glu Lys Glu Val Gln Ala Glu Asp
340 345 350

Asn Ile Tyr Ile Glu Asn Ser Leu Tyr Ala Thr Asp

355 360

<210> 51
<211> 976
<212> PRT
<213> Homo sapiens

<400> 51
Met Arg Gly Ala Arg Gly Ala Trp Asp Phe Leu Cys Val Leu Leu Leu
1 5 10 15

Leu Leu Arg Val Gln Thr Gly Ser Ser Gln Pro Ser Val Ser Pro Gly
20 25 30

Glu Pro Ser Pro Pro Ser Ile His Pro Gly Lys Ser Asp Leu Ile Val
35 40 45

Arg Val Gly Asp Glu Ile Arg Leu Leu Cys Thr Asp Pro Gly Phe Val
50 55 60

Lys Trp Thr Phe Glu Ile Leu Asp Glu Thr Asn Glu Asn Lys Gln Asn
65 70 75 80

Glu Trp Ile Thr Glu Lys Ala Glu Ala Thr Asn Thr Gly Lys Tyr Thr
85 90 95

Cys Thr Asn Lys His Gly Leu Ser Asn Ser Ile Tyr Val Phe Val Arg
100 105 110

Asp Pro Ala Lys Leu Phe Leu Val Asp Arg Ser Leu Tyr Gly Lys Glu
115 120 125

Asp Asn Asp Thr Leu Val Arg Cys Pro Leu Thr Asp Pro Glu Val Thr
130 135 140

Asn Tyr Ser Leu Lys Gly Cys Gln Gly Lys Pro Leu Pro Lys Asp Leu
145 150 155 160

Arg Phe Ile Pro Asp Pro Lys Ala Gly Ile Met Ile Lys Ser Val Lys
165 170 175

Arg Ala Tyr His Arg Leu Cys Leu His Cys Ser Val Asp Gln Glu Gly
180 185 190

Lys Ser Val Leu Ser Glu Lys Phe Ile Leu Lys Val Arg Pro Ala Phe
195 200 205

Lys Ala Val Pro Val Val Ser Val Ser Lys Ala Ser Tyr Leu Leu Arg
210 215 220

Glu Gly Glu Glu Phe Thr Val Thr Cys Thr Ile Lys Asp Val Ser Ser
225 230 235 240

Ser Val Tyr Ser Thr Trp Lys Arg Glu Asn Ser Gln Thr Lys Leu Gln
245 250 255

Glu Lys Tyr Asn Ser Trp His His Gly Asp Phe Asn Tyr Glu Arg Gln
260 265 270

Ala Thr Leu Thr Ile Ser Ser Ala Arg Val Asn Asp Ser Gly Val Phe
275 280 285

Met Cys Tyr Ala Asn Asn Thr Phe Gly Ser Ala Asn Val Thr Thr Thr
290 295 300

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

Thr Thr Val Phe Val Asn Asp Gly Glu Asn Val Asp Leu Ile Val Glu
325 330 335

Tyr Glu Ala Phe Pro Lys Pro Glu His Gln Gln Trp Ile Tyr Met Asn
340 345 350

Arg Thr Phe Thr Asp Lys Trp Glu Asp Tyr Pro Lys Ser Glu Asn Glu
355 360 365

Ser Asn Ile Arg Tyr Val Ser Glu Leu His Leu Thr Arg Leu Lys Gly
370 375 380

Thr Glu Gly Gly Thr Tyr Thr Phe Leu Val Ser Asn Ser Asp Val Asn
385 390 395 400

Ala Ala Ile Ala Phe Asn Val Tyr Val Asn Thr Lys Pro Glu Ile Leu
405 410 415

Thr Tyr Asp Arg Leu Val Asn Gly Met Leu Gln Cys Val Ala Ala Gly
420 425 430

Phe Pro Glu Pro Thr Ile Asp Trp Tyr Phe Cys Pro Gly Thr Glu Gln
435 440 445

Arg Cys Ser Ala Ser Val Leu Pro Val Asp Val Gln Thr Leu Asn Ser
450 455 460

Ser Gly Pro Pro Phe Gly Lys Leu Val Val Gln Ser Ser Ile Asp Ser
465 470 475 480

Ser Ala Phe Lys His Asn Gly Thr Val Glu Cys Lys Ala Tyr Asn Asp
485 490 495

Val Gly Lys Thr Ser Ala Tyr Phe Asn Phe Ala Phe Lys Gly Asn Asn
500 505 510

Lys Glu Gln Ile His Pro His Thr Leu Phe Thr Pro Leu Leu Ile Gly
515 520 525

Phe Val Ile Val Ala Gly Met Met Cys Ile Ile Val Met Ile Leu Thr
530 535 540

Tyr Lys Tyr Leu Gln Lys Pro Met Tyr Glu Val Gln Trp Lys Val Val
545 550 555 560

Glu Glu Ile Asn Gly Asn Asn Tyr Val Tyr Ile Asp Pro Thr Gln Leu
565 570 575

Pro Tyr Asp His Lys Trp Glu Phe Pro Arg Asn Arg Leu Ser Phe Gly
580 585 590

Lys Thr Leu Gly Ala Gly Ala Phe Gly Lys Val Val Glu Ala Thr Ala
595 600 605

Tyr Gly Leu Ile Lys Ser Asp Ala Ala Met Thr Val Ala Val Lys Met
610 615 620

Leu Lys Pro Ser Ala His Leu Thr Glu Arg Glu Ala Leu Met Ser Glu
625 630 635 640

Leu Lys Val Leu Ser Tyr Leu Gly Asn His Met Asn Ile Val Asn Leu
645 650 655

Leu Gly Ala Cys Thr Ile Gly Gly Pro Thr Leu Val Ile Thr Glu Tyr
660 665 670

Cys Cys Tyr Gly Asp Leu Leu Asn Phe Leu Arg Arg Lys Arg Asp Ser
675 680 685

Phe Ile Cys Ser Lys Gln Glu Asp His Ala Glu Ala Ala Leu Tyr Lys
690 695 700

Asn Leu Leu His Ser Lys Glu Ser Ser Cys Ser Asp Ser Thr Asn Glu
705 710 715 720

Tyr Met Asp Met Lys Pro Gly Val Ser Tyr Val Val Pro Thr Lys Ala
725 730 735

Asp Lys Arg Arg Ser Val Arg Ile Gly Ser Tyr Ile Glu Arg Asp Val
740 745 750

Thr Pro Ala Ile Met Glu Asp Asp Glu Leu Ala Leu Asp Leu Glu Asp
755 760 765

Leu Leu Ser Phe Ser Tyr Gln Val Ala Lys Gly Met Ala Phe Leu Ala
770 775 780

Ser Lys Asn Cys Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Leu
785 790 795 800

Thr His Gly Arg Ile Thr Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp
805 810 815

Ile Lys Asn Asp Ser Asn Tyr Val Val Lys Gly Asn Ala Arg Leu Pro
820 825 830

Val Lys Trp Met Ala Pro Glu Ser Ile Phe Asn Cys Val Tyr Thr Phe
835 840 845

Glu Ser Asp Val Trp Ser Tyr Gly Ile Phe Leu Trp Glu Leu Phe Ser
850 855 860

Leu Gly Ser Ser Pro Tyr Pro Gly Met Pro Val Asp Ser Lys Phe Tyr
865 870 875 880

Lys Met Ile Lys Glu Gly Phe Arg Met Leu Ser Pro Glu His Ala Pro
885 890 895

Ala Glu Met Tyr Asp Ile Met Lys Thr Cys Trp Asp Ala Asp Pro Leu
900 905 910

Lys Arg Pro Thr Phe Lys Gln Ile Val Gln Leu Ile Glu Lys Gln Ile
915 920 925

Ser Glu Ser Thr Asn His Ile Tyr Ser Asn Leu Ala Asn Cys Ser Pro
930 935 940

Asn Arg Gln Lys Pro Val Val Asp His Ser Val Arg Ile Asn Ser Val
945 950 955 960

Gly Ser Thr Ala Ser Ser Ser Gln Pro Leu Leu Val His Asp Asp Val
965 970 975

<210> 52
<211> 1390
<212> PRT
<213> Homo sapiens

<400> 52
Met Lys Ala Pro Ala Val Leu Ala Pro Gly Ile Leu Val Leu Leu Phe
1 5 10 15

Thr Leu Val Gln Arg Ser Asn Gly Glu Cys Lys Glu Ala Leu Ala Lys
20 25 30

Ser Glu Met Asn Val Asn Met Lys Tyr Gln Leu Pro Asn Phe Thr Ala
35 40 45

Glu Thr Pro Ile Gln Asn Val Ile Leu His Glu His His Ile Phe Leu
50 55 60

Gly Ala Thr Asn Tyr Ile Tyr Val Leu Asn Glu Glu Asp Leu Gln Lys
65 70 75 80

Val Ala Glu Tyr Lys Thr Gly Pro Val Leu Glu His Pro Asp Cys Phe
85 90 95

Pro Cys Gln Asp Cys Ser Ser Lys Ala Asn Leu Ser Gly Gly Val Trp
100 105 110

Lys Asp Asn Ile Asn Met Ala Leu Val Val Asp Thr Tyr Tyr Asp Asp

115 120 125

Gln Leu Ile Ser Cys Gly Ser Val Asn Arg Gly Thr Cys Gln Arg His
130 135 140

Val Phe Pro His Asn His Thr Ala Asp Ile Gln Ser Glu Val His Cys
145 150 155 160

Ile Phe Ser Pro Gln Ile Glu Glu Pro Ser Gln Cys Pro Asp Cys Val
165 170 175

Val Ser Ala Leu Gly Ala Lys Val Leu Ser Ser Val Lys Asp Arg Phe
180 185 190

Ile Asn Phe Phe Val Gly Asn Thr Ile Asn Ser Ser Tyr Phe Pro Asp
195 200 205

His Pro Leu His Ser Ile Ser Val Arg Arg Leu Lys Glu Thr Lys Asp
210 215 220

Gly Phe Met Phe Leu Thr Asp Gln Ser Tyr Ile Asp Val Leu Pro Glu
225 230 235 240

Phe Arg Asp Ser Tyr Pro Ile Lys Tyr Val His Ala Phe Glu Ser Asn
245 250 255

Asn Phe Ile Tyr Phe Leu Thr Val Gln Arg Glu Thr Leu Asp Ala Gln
260 265 270

Thr Phe His Thr Arg Ile Ile Arg Phe Cys Ser Ile Asn Ser Gly Leu
275 280 285

His Ser Tyr Met Glu Met Pro Leu Glu Cys Ile Leu Thr Glu Lys Arg
290 295 300

Lys Lys Arg Ser Thr Lys Lys Glu Val Phe Asn Ile Leu Gln Ala Ala
305 310 315 320

Tyr Val Ser Lys Pro Gly Ala Gln Leu Ala Arg Gln Ile Gly Ala Ser
325 330 335

Leu Asn Asp Asp Ile Leu Phe Gly Val Phe Ala Gln Ser Lys Pro Asp
340 345 350

Ser Ala Glu Pro Met Asp Arg Ser Ala Met Cys Ala Phe Pro Ile Lys
355 360 365

Tyr Val Asn Asp Phe Phe Asn Lys Ile Val Asn Lys Asn Asn Val Arg
370 375 380

Cys Leu Gln His Phe Tyr Gly Pro Asn His Glu His Cys Phe Asn Arg
385 390 395 400

Thr Leu Leu Arg Asn Ser Ser Gly Cys Glu Ala Arg Arg Asp Glu Tyr

405 410 415

Arg Thr Glu Phe Thr Thr Ala Leu Gln Arg Val Asp Leu Phe Met Gly
420 425 430

Gln Phe Ser Glu Val Leu Leu Thr Ser Ile Ser Thr Phe Ile Lys Gly
435 440 445

Asp Leu Thr Ile Ala Asn Leu Gly Thr Ser Glu Gly Arg Phe Met Gln
450 455 460

Val Val Val Ser Arg Ser Gly Pro Ser Thr Pro His Val Asn Phe Leu
465 470 475 480

Leu Asp Ser His Pro Val Ser Pro Glu Val Ile Val Glu His Thr Leu
485 490 495

Asn Gln Asn Gly Tyr Thr Leu Val Ile Thr Gly Lys Lys Ile Thr Lys
500 505 510

Ile Pro Leu Asn Gly Leu Gly Cys Arg His Phe Gln Ser Cys Ser Gln
515 520 525

Cys Leu Ser Ala Pro Pro Phe Val Gln Cys Gly Trp Cys His Asp Lys
530 535 540

Cys Val Arg Ser Glu Glu Cys Leu Ser Gly Thr Trp Thr Gln Gln Ile
545 550 555 560

Cys Leu Pro Ala Ile Tyr Lys Val Phe Pro Asn Ser Ala Pro Leu Glu
565 570 575

Gly Gly Thr Arg Leu Thr Ile Cys Gly Trp Asp Phe Gly Phe Arg Arg
580 585 590

Asn Asn Lys Phe Asp Leu Lys Lys Thr Arg Val Leu Leu Gly Asn Glu
595 600 605

Ser Cys Thr Leu Thr Leu Ser Glu Ser Thr Met Asn Thr Leu Lys Cys
610 615 620

Thr Val Gly Pro Ala Met Asn Lys His Phe Asn Met Ser Ile Ile Ile
625 630 635 640

Ser Asn Gly His Gly Thr Thr Gln Tyr Ser Thr Phe Ser Tyr Val Asp
645 650 655

Pro Val Ile Thr Ser Ile Ser Pro Lys Tyr Gly Pro Met Ala Gly Gly
660 665 670

Thr Leu Leu Thr Leu Thr Gly Asn Tyr Leu Asn Ser Gly Asn Ser Arg
675 680 685

His Ile Ser Ile Gly Gly Lys Thr Cys Thr Leu Lys Ser Val Ser Asn

690 695 700

Ser Ile Leu Glu Cys Tyr Thr Pro Ala Gln Thr Ile Ser Thr Glu Phe
705 710 715 720

Ala Val Lys Leu Lys Ile Asp Leu Ala Asn Arg Glu Thr Ser Ile Phe
725 730 735

Ser Tyr Arg Glu Asp Pro Ile Val Tyr Glu Ile His Pro Thr Lys Ser
740 745 750

Phe Ile Ser Gly Gly Ser Thr Ile Thr Gly Val Gly Lys Asn Leu Asn
755 760 765

Ser Val Ser Val Pro Arg Met Val Ile Asn Val His Glu Ala Gly Arg
770 775 780

Asn Phe Thr Val Ala Cys Gln His Arg Ser Asn Ser Glu Ile Ile Cys
785 790 795 800

Cys Thr Thr Pro Ser Leu Gln Gln Leu Asn Leu Gln Leu Pro Leu Lys
805 810 815

Thr Lys Ala Phe Phe Met Leu Asp Gly Ile Leu Ser Lys Tyr Phe Asp
820 825 830

Leu Ile Tyr Val His Asn Pro Val Phe Lys Pro Phe Glu Lys Pro Val
835 840 845

Met Ile Ser Met Gly Asn Glu Asn Val Leu Glu Ile Lys Gly Asn Asp
850 855 860

Ile Asp Pro Glu Ala Val Lys Gly Glu Val Leu Lys Val Gly Asn Lys
865 870 875 880

Ser Cys Glu Asn Ile His Leu His Ser Glu Ala Val Leu Cys Thr Val
885 890 895

Pro Asn Asp Leu Leu Lys Leu Asn Ser Glu Leu Asn Ile Glu Trp Lys
900 905 910

Gln Ala Ile Ser Ser Thr Val Leu Gly Lys Val Ile Val Gln Pro Asp
915 920 925

Gln Asn Phe Thr Gly Leu Ile Ala Gly Val Val Ser Ile Ser Thr Ala
930 935 940

Leu Leu Leu Leu Leu Gly Phe Phe Leu Trp Leu Lys Lys Arg Lys Gln
945 950 955 960

Ile Lys Asp Leu Gly Ser Glu Leu Val Arg Tyr Asp Ala Arg Val His
965 970 975

Thr Pro His Leu Asp Arg Leu Val Ser Ala Arg Ser Val Ser Pro Thr

980 985 990

Thr Glu Met Val Ser Asn Glu Ser Val Asp Tyr Arg Ala Thr Phe Pro
995 1000 1005

Glu Asp Gln Phe Pro Asn Ser Ser Gln Asn Gly Ser Cys Arg Gln
1010 1015 1020

Val Gln Tyr Pro Leu Thr Asp Met Ser Pro Ile Leu Thr Ser Gly
1025 1030 1035

Asp Ser Asp Ile Ser Ser Pro Leu Leu Gln Asn Thr Val His Ile
1040 1045 1050

Asp Leu Ser Ala Leu Asn Pro Glu Leu Val Gln Ala Val Gln His
1055 1060 1065

Val Val Ile Gly Pro Ser Ser Leu Ile Val His Phe Asn Glu Val
1070 1075 1080

Ile Gly Arg Gly His Phe Gly Cys Val Tyr His Gly Thr Leu Leu
1085 1090 1095

Asp Asn Asp Gly Lys Lys Ile His Cys Ala Val Lys Ser Leu Asn
1100 1105 1110

Arg Ile Thr Asp Ile Gly Glu Val Ser Gln Phe Leu Thr Glu Gly
1115 1120 1125

Ile Ile Met Lys Asp Phe Ser His Pro Asn Val Leu Ser Leu Leu
1130 1135 1140

Gly Ile Cys Leu Arg Ser Glu Gly Ser Pro Leu Val Val Leu Pro
1145 1150 1155

Tyr Met Lys His Gly Asp Leu Arg Asn Phe Ile Arg Asn Glu Thr
1160 1165 1170

His Asn Pro Thr Val Lys Asp Leu Ile Gly Phe Gly Leu Gln Val
1175 1180 1185

Ala Lys Gly Met Lys Tyr Leu Ala Ser Lys Lys Phe Val His Arg
1190 1195 1200

Asp Leu Ala Ala Arg Asn Cys Met Leu Asp Glu Lys Phe Thr Val
1205 1210 1215

Lys Val Ala Asp Phe Gly Leu Ala Arg Asp Met Tyr Asp Lys Glu
1220 1225 1230

Tyr Tyr Ser Val His Asn Lys Thr Gly Ala Lys Leu Pro Val Lys
1235 1240 1245

Trp Met Ala Leu Glu Ser Leu Gln Thr Gln Lys Phe Thr Thr Lys

1250 1255 1260

Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Leu Met Thr
1265 1270 1275

Arg Gly Ala Pro Pro Tyr Pro Asp Val Asn Thr Phe Asp Ile Thr
1280 1285 1290

Val Tyr Leu Leu Gln Gly Arg Arg Leu Leu Gln Pro Glu Tyr Cys
1295 1300 1305

Pro Asp Pro Leu Tyr Glu Val Met Leu Lys Cys Trp His Pro Lys
1310 1315 1320

Ala Glu Met Arg Pro Ser Phe Ser Glu Leu Val Ser Arg Ile Ser
1325 1330 1335

Ala Ile Phe Ser Thr Phe Ile Gly Glu His Tyr Val His Val Asn
1340 1345 1350

Ala Thr Tyr Val Asn Val Lys Cys Val Ala Pro Tyr Pro Ser Leu
1355 1360 1365

Leu Ser Ser Glu Asp Asn Ala Asp Asp Glu Val Asp Thr Arg Pro
1370 1375 1380

Ala Ser Phe Trp Glu Thr Ser
1385 1390

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<211> 14507
<212> PRT
<213> Homo sapiens

<400> 53
Met Leu Lys Pro Ser Gly Leu Pro Gly Ser Ser Ser Pro Thr Arg Ser
1 5 10 15

Leu Met Thr Gly Ser Arg Ser Thr Lys Ala Thr Pro Glu Met Asp Ser
20 25 30

Gly Leu Thr Gly Ala Thr Leu Ser Pro Lys Thr Ser Thr Gly Ala Ile
35 40 45

Val Val Thr Glu His Thr Leu Pro Phe Thr Ser Pro Asp Lys Thr Leu
50 55 60

Ala Ser Pro Thr Ser Ser Val Val Gly Arg Thr Thr Gln Ser Leu Gly
65 70 75 80

Val Met Ser Ser Ala Leu Pro Glu Ser Thr Ser Arg Gly Met Thr His
85 90 95

Ser Glu Gln Arg Thr Ser Pro Ser Leu Ser Pro Gln Val Asn Gly Thr
100 105 110

Pro Ser Arg Asn Tyr Pro Ala Thr Ser Met Val Ser Gly Leu Ser Ser
115 120 125

Pro Arg Thr Arg Thr Ser Ser Thr Glu Gly Asn Phe Thr Lys Glu Ala
130 135 140

Ser Thr Tyr Thr Leu Thr Val Glu Thr Thr Ser Gly Pro Val Thr Glu
145 150 155 160

Lys Tyr Thr Val Pro Thr Glu Thr Ser Thr Thr Glu Gly Asp Ser Thr
165 170 175

Glu Thr Pro Trp Asp Thr Arg Tyr Ile Pro Val Lys Ile Thr Ser Pro
180 185 190

Met Lys Thr Phe Ala Asp Ser Thr Ala Ser Lys Glu Asn Ala Pro Val
195 200 205

Ser Met Thr Pro Ala Glu Thr Thr Val Thr Asp Ser His Thr Pro Gly
210 215 220

Arg Thr Asn Pro Ser Phe Gly Thr Leu Tyr Ser Ser Phe Leu Asp Leu
225 230 235 240

Ser Pro Lys Gly Thr Pro Asn Ser Arg Gly Glu Thr Ser Leu Glu Leu
245 250 255

Ile Leu Ser Thr Thr Gly Tyr Pro Phe Ser Ser Pro Glu Pro Gly Ser
260 265 270

Ala Gly His Ser Arg Ile Ser Thr Ser Ala Pro Leu Ser Ser Ser Ala
275 280 285

Ser Val Leu Asp Asn Lys Ile Ser Glu Thr Ser Ile Phe Ser Gly Gln
290 295 300

Ser Leu Thr Ser Pro Leu Ser Pro Gly Val Pro Glu Ala Arg Ala Ser
305 310 315 320

Thr Met Pro Asn Ser Ala Ile Pro Phe Ser Met Thr Leu Ser Asn Ala
325 330 335

Glu Thr Ser Ala Glu Arg Val Arg Ser Thr Ile Ser Ser Leu Gly Thr
340 345 350

Pro Ser Ile Ser Thr Lys Gln Thr Ala Glu Thr Ile Leu Thr Phe His
355 360 365

Ala Phe Ala Glu Thr Met Asp Ile Pro Ser Thr His Ile Ala Lys Thr
370 375 380

Leu Ala Ser Glu Trp Leu Gly Ser Pro Gly Thr Leu Gly Gly Thr Ser
385 390 395 400

Thr Ser Ala Leu Thr Thr Thr Ser Pro Ser Thr Thr Leu Val Ser Glu
405 410 415

Glu Thr Asn Thr His His Ser Thr Ser Gly Lys Glu Thr Glu Gly Thr
420 425 430

Leu Asn Thr Ser Met Thr Pro Leu Glu Thr Ser Ala Pro Gly Glu Glu
435 440 445

Ser Glu Met Thr Ala Thr Leu Val Pro Thr Leu Gly Phe Thr Thr Leu
450 455 460

Asp Ser Lys Ile Arg Ser Pro Ser Gln Val Ser Ser Ser His Pro Thr
465 470 475 480

Arg Glu Leu Arg Thr Thr Gly Ser Thr Ser Gly Arg Gln Ser Ser Ser
485 490 495

Thr Ala Ala His Gly Ser Ser Asp Ile Leu Arg Ala Thr Thr Ser Ser
500 505 510

Thr Ser Lys Ala Ser Ser Trp Thr Ser Glu Ser Thr Ala Gln Gln Phe
515 520 525

Ser Glu Pro Gln His Thr Gln Trp Val Glu Thr Ser Pro Ser Met Lys
530 535 540

Thr Glu Arg Pro Pro Ala Ser Thr Ser Val Ala Ala Pro Ile Thr Thr
545 550 555 560

Ser Val Pro Ser Val Val Ser Gly Phe Thr Thr Leu Lys Thr Ser Ser
565 570 575

Thr Lys Gly Ile Trp Leu Glu Glu Thr Ser Ala Asp Thr Leu Ile Gly
580 585 590

Glu Ser Thr Ala Gly Pro Thr Thr His Gln Phe Ala Val Pro Thr Gly
595 600 605

Ile Ser Met Thr Gly Gly Ser Ser Thr Arg Gly Ser Gln Gly Thr Thr
610 615 620

His Leu Leu Thr Arg Ala Thr Ala Ser Ser Glu Thr Ser Ala Asp Leu
625 630 635 640

Thr Leu Ala Thr Asn Gly Val Pro Val Ser Val Ser Pro Ala Val Ser
645 650 655

Lys Thr Ala Ala Gly Ser Ser Pro Pro Gly Gly Thr Lys Pro Ser Tyr
660 665 670

Thr Met Val Ser Ser Val Ile Pro Glu Thr Ser Ser Leu Gln Ser Ser
675 680 685

Ala Phe Arg Glu Gly Thr Ser Leu Gly Leu Thr Pro Leu Asn Thr Arg
    690   695   700

His Pro Phe Ser Ser Pro Glu Pro Asp Ser Ala Gly His Thr Lys Ile
705   710   715   720

Ser Thr Ser Ile Pro Leu Leu Ser Ser Ala Ser Val Leu Glu Asp Lys
                725   730   735

Val Ser Ala Thr Ser Thr Phe Ser His His Lys Ala Thr Ser Ser Ile
            740   745   750

Thr Thr Gly Thr Pro Glu Ile Ser Thr Lys Thr Lys Pro Ser Ser Ala
        755   760   765

Val Leu Ser Ser Met Thr Leu Ser Asn Ala Ala Thr Ser Pro Glu Arg
    770   775   780

Val Arg Asn Ala Thr Ser Pro Leu Thr His Pro Ser Pro Ser Gly Glu
785   790   795   800

Glu Thr Ala Gly Ser Val Leu Thr Leu Ser Thr Ser Ala Glu Thr Thr
                805   810   815

Asp Ser Pro Asn Ile His Pro Thr Gly Thr Leu Thr Ser Glu Ser Ser
            820   825   830

Glu Ser Pro Ser Thr Leu Ser Leu Pro Ser Val Ser Gly Val Lys Thr
        835   840   845

Thr Phe Ser Ser Ser Thr Pro Ser Thr His Leu Phe Thr Ser Gly Glu
    850   855   860

Glu Thr Glu Glu Thr Ser Asn Pro Ser Val Ser Gln Pro Glu Thr Ser
865   870   875   880

Val Ser Arg Val Arg Thr Thr Leu Ala Ser Thr Ser Val Pro Thr Pro
                885   890   895

Val Phe Pro Thr Met Asp Thr Trp Pro Thr Arg Ser Ala Gln Phe Ser
            900   905   910

Ser Ser His Leu Val Ser Glu Leu Arg Ala Thr Ser Ser Thr Ser Val
        915   920   925

Thr Asn Ser Thr Gly Ser Ala Leu Pro Lys Ile Ser His Leu Thr Gly
    930   935   940

Thr Ala Thr Met Ser Gln Thr Asn Arg Asp Thr Phe Asn Asp Ser Ala
945   950   955   960

Ala Pro Gln Ser Thr Thr Trp Pro Glu Thr Ser Pro Arg Phe Lys Thr
                965   970   975

Gly Leu Pro Ser Ala Thr Thr Thr Val Ser Thr Ser Ala Thr Ser Leu
980 985 990

Ser Ala Thr Val Met Val Ser Lys Phe Thr Ser Pro Ala Thr Ser Ser
995 1000 1005

Met Glu Ala Thr Ser Ile Arg Glu Pro Ser Thr Thr Ile Leu Thr
1010 1015 1020

Thr Glu Thr Thr Asn Gly Pro Gly Ser Met Ala Val Ala Ser Thr
1025 1030 1035

Asn Ile Pro Ile Gly Lys Gly Tyr Ile Thr Glu Gly Arg Leu Asp
1040 1045 1050

Thr Ser His Leu Pro Ile Gly Thr Thr Ala Ser Ser Glu Thr Ser
1055 1060 1065

Met Asp Phe Thr Met Ala Lys Glu Ser Val Ser Met Ser Val Ser
1070 1075 1080

Pro Ser Gln Ser Met Asp Ala Ala Gly Ser Ser Thr Pro Gly Arg
1085 1090 1095

Thr Ser Gln Phe Val Asp Thr Phe Ser Asp Asp Val Tyr His Leu
1100 1105 1110

Thr Ser Arg Glu Ile Thr Ile Pro Arg Asp Gly Thr Ser Ser Ala
1115 1120 1125

Leu Thr Pro Gln Met Thr Ala Thr His Pro Pro Ser Pro Asp Pro
1130 1135 1140

Gly Ser Ala Arg Ser Thr Trp Leu Gly Ile Leu Ser Ser Ser Pro
1145 1150 1155

Ser Ser Pro Thr Pro Lys Val Thr Met Ser Ser Thr Phe Ser Thr
1160 1165 1170

Gln Arg Val Thr Thr Ser Met Ile Met Asp Thr Val Glu Thr Ser
1175 1180 1185

Arg Trp Asn Met Pro Asn Leu Pro Ser Thr Thr Ser Leu Thr Pro
1190 1195 1200

Ser Asn Ile Pro Thr Ser Gly Ala Ile Gly Lys Ser Thr Leu Val
1205 1210 1215

Pro Leu Asp Thr Pro Ser Pro Ala Thr Ser Leu Glu Ala Ser Glu
1220 1225 1230

Gly Gly Leu Pro Thr Leu Ser Thr Tyr Pro Glu Ser Thr Asn Thr
1235 1240 1245

Pro Ser Ile His Leu Gly Ala His Ala Ser Ser Glu Ser Pro Ser
    1250 1255 1260

Thr Ile Lys Leu Thr Met Ala Ser Val Val Lys Pro Gly Ser Tyr
    1265 1270 1275

Thr Pro Leu Thr Phe Pro Ser Ile Glu Thr His Ile His Val Ser
    1280 1285 1290

Thr Ala Arg Met Ala Tyr Ser Ser Gly Ser Ser Pro Glu Met Thr
    1295 1300 1305

Ala Pro Gly Glu Thr Asn Thr Gly Ser Thr Trp Asp Pro Thr Thr
    1310 1315 1320

Tyr Ile Thr Thr Thr Asp Pro Lys Asp Thr Ser Ser Ala Gln Val
    1325 1330 1335

Ser Thr Pro His Ser Val Arg Thr Leu Arg Thr Thr Glu Asn His
    1340 1345 1350

Pro Lys Thr Glu Ser Ala Thr Pro Ala Ala Tyr Ser Gly Ser Pro
    1355 1360 1365

Lys Ile Ser Ser Ser Pro Asn Leu Thr Ser Pro Ala Thr Lys Ala
    1370 1375 1380

Trp Thr Ile Thr Asp Thr Thr Glu His Ser Thr Gln Leu His Tyr
    1385 1390 1395

Thr Lys Leu Ala Glu Lys Ser Ser Gly Phe Glu Thr Gln Ser Ala
    1400 1405 1410

Pro Gly Pro Val Ser Val Val Ile Pro Thr Ser Pro Thr Ile Gly
    1415 1420 1425

Ser Ser Thr Leu Glu Leu Thr Ser Asp Val Pro Gly Glu Pro Leu
    1430 1435 1440

Val Leu Ala Pro Ser Glu Gln Thr Thr Ile Thr Leu Pro Met Ala
    1445 1450 1455

Thr Trp Leu Ser Thr Ser Leu Thr Glu Glu Met Ala Ser Thr Asp
    1460 1465 1470

Leu Asp Ile Ser Ser Pro Ser Ser Pro Met Ser Thr Phe Ala Ile
    1475 1480 1485

Phe Pro Pro Met Ser Thr Pro Ser His Glu Leu Ser Lys Ser Glu
    1490 1495 1500

Ala Asp Thr Ser Ala Ile Arg Asn Thr Asp Ser Thr Thr Leu Asp
    1505 1510 1515

Gln His Leu Gly Ile Arg Ser Leu Gly Arg Thr Gly Asp Leu Thr
    1520 1525 1530

Thr Val Pro Ile Thr Pro Leu Thr Thr Thr Trp Thr Ser Val Ile
    1535 1540 1545

Glu His Ser Thr Gln Ala Gln Asp Thr Leu Ser Ala Thr Met Ser
    1550 1555 1560

Pro Thr His Val Thr Gln Ser Leu Lys Asp Gln Thr Ser Ile Pro
    1565 1570 1575

Ala Ser Ala Ser Pro Ser His Leu Thr Glu Val Tyr Pro Glu Leu
    1580 1585 1590

Gly Thr Gln Gly Arg Ser Ser Ser Glu Ala Thr Thr Phe Trp Lys
    1595 1600 1605

Pro Ser Thr Asp Thr Leu Ser Arg Glu Ile Glu Thr Gly Pro Thr
    1610 1615 1620

Asn Ile Gln Ser Thr Pro Pro Met Asp Asn Thr Thr Thr Gly Ser
    1625 1630 1635

Ser Ser Ser Gly Val Thr Leu Gly Ile Ala His Leu Pro Ile Gly
    1640 1645 1650

Thr Ser Ser Pro Ala Glu Thr Ser Thr Asn Met Ala Leu Glu Arg
    1655 1660 1665

Arg Ser Ser Thr Ala Thr Val Ser Met Ala Gly Thr Met Gly Leu
    1670 1675 1680

Leu Val Thr Ser Ala Pro Gly Arg Ser Ile Ser Gln Ser Leu Gly
    1685 1690 1695

Arg Val Ser Ser Val Leu Ser Glu Ser Thr Thr Glu Gly Val Thr
    1700 1705 1710

Asp Ser Ser Lys Gly Ser Ser Pro Arg Leu Asn Thr Gln Gly Asn
    1715 1720 1725

Thr Ala Leu Ser Ser Ser Leu Glu Pro Ser Tyr Ala Glu Gly Ser
    1730 1735 1740

Gln Met Ser Thr Ser Ile Pro Leu Thr Ser Ser Pro Thr Thr Pro
    1745 1750 1755

Asp Val Glu Phe Ile Gly Gly Ser Thr Phe Trp Thr Lys Glu Val
    1760 1765 1770

Thr Thr Val Met Thr Ser Asp Ile Ser Lys Ser Ser Ala Arg Thr
    1775 1780 1785

Glu Ser Ser Ser Ala Thr Leu Met Ser Thr Ala Leu Gly Ser Thr
    1790 1795 1800

Glu Asn Thr Gly Lys Glu Lys Leu Arg Thr Ala Ser Met Asp Leu
    1805 1810 1815

Pro Ser Pro Thr Pro Ser Met Glu Val Thr Pro Trp Ile Ser Leu
    1820 1825 1830

Thr Leu Ser Asn Ala Pro Asn Thr Thr Asp Ser Leu Asp Leu Ser
    1835 1840 1845

His Gly Val His Thr Ser Ser Ala Gly Thr Leu Ala Thr Asp Arg
    1850 1855 1860

Ser Leu Asn Thr Gly Val Thr Arg Ala Ser Arg Leu Glu Asn Gly
    1865 1870 1875

Ser Asp Thr Ser Ser Lys Ser Leu Ser Met Gly Asn Ser Thr His
    1880 1885 1890

Thr Ser Met Thr Tyr Thr Glu Lys Ser Glu Val Ser Ser Ser Ile
    1895 1900 1905

His Pro Arg Pro Glu Thr Ser Ala Pro Gly Ala Glu Thr Thr Leu
    1910 1915 1920

Thr Ser Thr Pro Gly Asn Arg Ala Ile Ser Leu Thr Leu Pro Phe
    1925 1930 1935

Ser Ser Ile Pro Val Glu Glu Val Ile Ser Thr Gly Ile Thr Ser
    1940 1945 1950

Gly Pro Asp Ile Asn Ser Ala Pro Met Thr His Ser Pro Ile Thr
    1955 1960 1965

Pro Pro Thr Ile Val Trp Thr Ser Thr Gly Thr Ile Glu Gln Ser
    1970 1975 1980

Thr Gln Pro Leu His Ala Val Ser Ser Glu Lys Val Ser Val Gln
    1985 1990 1995

Thr Gln Ser Thr Pro Tyr Val Asn Ser Val Ala Val Ser Ala Ser
    2000 2005 2010

Pro Thr His Glu Asn Ser Val Ser Ser Gly Ser Ser Thr Ser Ser
    2015 2020 2025

Pro Tyr Ser Ser Ala Ser Leu Glu Ser Leu Asp Ser Thr Ile Ser
    2030 2035 2040

Arg Arg Asn Ala Ile Thr Ser Trp Leu Trp Asp Leu Thr Thr Ser
    2045 2050 2055

Leu Pro Thr Thr Thr Trp Pro Ser Thr Ser Leu Ser Glu Ala Leu
    2060 2065 2070

Ser Ser Gly His Ser Gly Val Ser Asn Pro Ser Ser Thr Thr Thr
    2075 2080 2085

Glu Phe Pro Leu Phe Ser Ala Ala Ser Thr Ser Ala Ala Lys Gln
    2090 2095 2100

Arg Asn Pro Glu Thr Glu Thr His Gly Pro Gln Asn Thr Ala Ala
    2105 2110 2115

Ser Thr Leu Asn Thr Asp Ala Ser Ser Val Thr Gly Leu Ser Glu
    2120 2125 2130

Thr Pro Val Gly Ala Ser Ile Ser Ser Glu Val Pro Leu Pro Met
    2135 2140 2145

Ala Ile Thr Ser Arg Ser Asp Val Ser Gly Leu Thr Ser Glu Ser
    2150 2155 2160

Thr Ala Asn Pro Ser Leu Gly Thr Ala Ser Ser Ala Gly Thr Lys
    2165 2170 2175

Leu Thr Arg Thr Ile Ser Leu Pro Thr Ser Glu Ser Leu Val Ser
    2180 2185 2190

Phe Arg Met Asn Lys Asp Pro Trp Thr Val Ser Ile Pro Leu Gly
    2195 2200 2205

Ser His Pro Thr Thr Asn Thr Glu Thr Ser Ile Pro Val Asn Ser
    2210 2215 2220

Ala Gly Pro Pro Gly Leu Ser Thr Val Ala Ser Asp Val Ile Asp
    2225 2230 2235

Thr Pro Ser Asp Gly Ala Glu Ser Ile Pro Thr Val Ser Phe Ser
    2240 2245 2250

Pro Ser Pro Asp Thr Glu Val Thr Thr Ile Ser His Phe Pro Glu
    2255 2260 2265

Lys Thr Thr His Ser Phe Arg Thr Ile Ser Ser Leu Thr His Glu
    2270 2275 2280

Leu Thr Ser Arg Val Thr Pro Ile Pro Gly Asp Trp Met Ser Ser
    2285 2290 2295

Ala Met Ser Thr Lys Pro Thr Gly Ala Ser Pro Ser Ile Thr Leu
    2300 2305 2310

Gly Glu Arg Arg Thr Ile Thr Ser Ala Ala Pro Thr Thr Ser Pro
    2315 2320 2325

Ile Val Leu Thr Ala Ser Phe Thr Glu Thr Ser Thr Val Ser Leu
    2330 2335 2340

Asp Asn Glu Thr Thr Val Lys Thr Ser Asp Ile Leu Asp Ala Arg
    2345 2350 2355

Lys Thr Asn Glu Leu Pro Ser Asp Ser Ser Ser Ser Ser Asp Leu
    2360 2365 2370

Ile Asn Thr Ser Ile Ala Ser Ser Thr Met Asp Val Thr Lys Thr
    2375 2380 2385

Ala Ser Ile Ser Pro Thr Ser Ile Ser Gly Met Thr Ala Ser Ser
    2390 2395 2400

Ser Pro Ser Leu Phe Ser Ser Asp Arg Pro Gln Val Pro Thr Ser
    2405 2410 2415

Thr Thr Glu Thr Asn Thr Ala Thr Ser Pro Ser Val Ser Ser Asn
    2420 2425 2430

Thr Tyr Ser Leu Asp Gly Gly Ser Asn Val Gly Gly Thr Pro Ser
    2435 2440 2445

Thr Leu Pro Pro Phe Thr Ile Thr His Pro Val Glu Thr Ser Ser
    2450 2455 2460

Ala Leu Leu Ala Trp Ser Arg Pro Val Arg Thr Phe Ser Thr Met
    2465 2470 2475

Val Ser Thr Asp Thr Ala Ser Gly Glu Asn Pro Thr Ser Ser Asn
    2480 2485 2490

Ser Val Val Thr Ser Val Pro Ala Pro Gly Thr Trp Thr Ser Val
    2495 2500 2505

Gly Ser Thr Thr Asp Leu Pro Ala Met Gly Phe Leu Lys Thr Ser
    2510 2515 2520

Pro Ala Gly Glu Ala His Ser Leu Leu Ala Ser Thr Ile Glu Pro
    2525 2530 2535

Ala Thr Ala Phe Thr Pro His Leu Ser Ala Ala Val Val Thr Gly
    2540 2545 2550

Ser Ser Ala Thr Ser Glu Ala Ser Leu Leu Thr Thr Ser Glu Ser
    2555 2560 2565

Lys Ala Ile His Ser Ser Pro Gln Thr Pro Thr Thr Pro Thr Ser
    2570 2575 2580

Gly Ala Asn Trp Glu Thr Ser Ala Thr Pro Glu Ser Leu Leu Val
    2585 2590 2595

Val Thr Glu Thr Ser Asp Thr Thr Leu Thr Ser Lys Ile Leu Val
    2600   2605   2610

Thr Asp Thr Ile Leu Phe Ser Thr Val Ser Thr Pro Pro Ser Lys
    2615   2620   2625

Phe Pro Ser Thr Gly Thr Leu Ser Gly Ala Ser Phe Pro Thr Leu
    2630   2635   2640

Leu Pro Asp Thr Pro Ala Ile Pro Leu Thr Ala Thr Glu Pro Thr
    2645   2650   2655

Ser Ser Leu Ala Thr Ser Phe Asp Ser Thr Pro Leu Val Thr Ile
    2660   2665   2670

Ala Ser Asp Ser Leu Gly Thr Val Pro Glu Thr Thr Leu Thr Met
    2675   2680   2685

Ser Glu Thr Ser Asn Gly Asp Ala Leu Val Leu Lys Thr Val Ser
    2690   2695   2700

Asn Pro Asp Arg Ser Ile Pro Gly Ile Thr Ile Gln Gly Val Thr
    2705   2710   2715

Glu Ser Pro Leu His Pro Ser Ser Thr Ser Pro Ser Lys Ile Val
    2720   2725   2730

Ala Pro Arg Asn Thr Thr Tyr Glu Gly Ser Ile Thr Val Ala Leu
    2735   2740   2745

Ser Thr Leu Pro Ala Gly Thr Thr Gly Ser Leu Val Phe Ser Gln
    2750   2755   2760

Ser Ser Glu Asn Ser Glu Thr Thr Ala Leu Val Asp Ser Ser Ala
    2765   2770   2775

Gly Leu Glu Arg Ala Ser Val Met Pro Leu Thr Thr Gly Ser Gln
    2780   2785   2790

Gly Met Ala Ser Ser Gly Gly Ile Arg Ser Gly Ser Thr His Ser
    2795   2800   2805

Thr Gly Thr Lys Thr Phe Ser Ser Leu Pro Leu Thr Met Asn Pro
    2810   2815   2820

Gly Glu Val Thr Ala Met Ser Glu Ile Thr Thr Asn Arg Leu Thr
    2825   2830   2835

Ala Thr Gln Ser Thr Ala Pro Lys Gly Ile Pro Val Lys Pro Thr
    2840   2845   2850

Ser Ala Glu Ser Gly Leu Leu Thr Pro Val Ser Ala Ser Ser Ser
    2855   2860   2865

Pro Ser Lys Ala Phe Ala Ser Leu Thr Thr Ala Pro Pro Thr Trp
    2870   2875   2880

Gly Ile Pro Gln Ser Thr Leu Thr Phe Glu Phe Ser Glu Val Pro
    2885   2890   2895

Ser Leu Asp Thr Lys Ser Ala Ser Leu Pro Thr Pro Gly Gln Ser
    2900   2905   2910

Leu Asn Thr Ile Pro Asp Ser Asp Ala Ser Thr Ala Ser Ser Ser
    2915   2920   2925

Leu Ser Lys Ser Pro Glu Lys Asn Pro Arg Ala Arg Met Met Thr
    2930   2935   2940

Ser Thr Lys Ala Ile Ser Ala Ser Ser Phe Gln Ser Thr Gly Phe
    2945   2950   2955

Thr Glu Thr Pro Glu Gly Ser Ala Ser Pro Ser Met Ala Gly His
    2960   2965   2970

Glu Pro Arg Val Pro Thr Ser Gly Thr Gly Asp Pro Arg Tyr Ala
    2975   2980   2985

Ser Glu Ser Met Ser Tyr Pro Asp Pro Ser Lys Ala Ser Ser Ala
    2990   2995   3000

Met Thr Ser Thr Ser Leu Ala Ser Lys Leu Thr Thr Leu Phe Ser
    3005   3010   3015

Thr Gly Gln Ala Ala Arg Ser Gly Ser Ser Ser Ser Pro Ile Ser
    3020   3025   3030

Leu Ser Thr Glu Lys Glu Thr Ser Phe Leu Ser Pro Thr Ala Ser
    3035   3040   3045

Thr Ser Arg Lys Thr Ser Leu Phe Leu Gly Pro Ser Met Ala Arg
    3050   3055   3060

Gln Pro Asn Ile Leu Val His Leu Gln Thr Ser Ala Leu Thr Leu
    3065   3070   3075

Ser Pro Thr Ser Thr Leu Asn Met Ser Gln Glu Glu Pro Pro Glu
    3080   3085   3090

Leu Thr Ser Ser Gln Thr Ile Ala Glu Glu Glu Gly Thr Thr Ala
    3095   3100   3105

Glu Thr Gln Thr Leu Thr Phe Thr Pro Ser Glu Thr Pro Thr Ser
    3110   3115   3120

Leu Leu Pro Val Ser Ser Pro Thr Glu Pro Thr Ala Arg Arg Lys
    3125   3130   3135

Ser Ser Pro Glu Thr Trp Ala Ser Ser Ile Ser Val Pro Ala Lys
    3140   3145   3150

Thr Ser Leu Val Glu Thr Thr Asp Gly Thr Leu Val Thr Thr Ile
    3155   3160   3165

Lys Met Ser Ser Gln Ala Ala Gln Gly Asn Ser Thr Trp Pro Ala
    3170   3175   3180

Pro Ala Glu Glu Thr Gly Ser Ser Pro Ala Gly Thr Ser Pro Gly
    3185   3190   3195

Ser Pro Glu Met Ser Thr Thr Leu Lys Ile Met Ser Ser Lys Glu
    3200   3205   3210

Pro Ser Ile Ser Pro Glu Ile Arg Ser Thr Val Arg Asn Ser Pro
    3215   3220   3225

Trp Lys Thr Pro Glu Thr Thr Val Pro Met Glu Thr Thr Val Glu
    3230   3235   3240

Pro Val Thr Leu Gln Ser Thr Ala Leu Gly Ser Gly Ser Thr Ser
    3245   3250   3255

Ile Ser His Leu Pro Thr Gly Thr Thr Ser Pro Thr Lys Ser Pro
    3260   3265   3270

Thr Glu Asn Met Leu Ala Thr Glu Arg Val Ser Leu Ser Pro Ser
    3275   3280   3285

Pro Pro Glu Ala Trp Thr Asn Leu Tyr Ser Gly Thr Pro Gly Gly
    3290   3295   3300

Thr Arg Gln Ser Leu Ala Thr Met Ser Ser Val Ser Leu Glu Ser
    3305   3310   3315

Pro Thr Ala Arg Ser Ile Thr Gly Thr Gly Gln Gln Ser Ser Pro
    3320   3325   3330

Glu Leu Val Ser Lys Thr Thr Gly Met Glu Phe Ser Met Trp His
    3335   3340   3345

Gly Ser Thr Gly Gly Thr Thr Gly Asp Thr His Val Ser Leu Ser
    3350   3355   3360

Thr Ser Ser Asn Ile Leu Glu Asp Pro Val Thr Ser Pro Asn Ser
    3365   3370   3375

Val Ser Ser Leu Thr Asp Lys Ser Lys His Lys Thr Glu Thr Trp
    3380   3385   3390

Val Ser Thr Thr Ala Ile Pro Ser Thr Val Leu Asn Asn Lys Ile
    3395   3400   3405

Met Ala Ala Glu Gln Gln Thr Ser Arg Ser Val Asp Glu Ala Tyr
    3410 3415 3420

Ser Ser Thr Ser Ser Trp Ser Asp Gln Thr Ser Gly Ser Asp Ile
    3425 3430 3435

Thr Leu Gly Ala Ser Pro Asp Val Thr Asn Thr Leu Tyr Ile Thr
    3440 3445 3450

Ser Thr Ala Gln Thr Thr Ser Leu Val Ser Leu Pro Ser Gly Asp
    3455 3460 3465

Gln Gly Ile Thr Ser Leu Thr Asn Pro Ser Gly Gly Lys Thr Ser
    3470 3475 3480

Ser Ala Ser Ser Val Thr Ser Pro Ser Ile Gly Leu Glu Thr Leu
    3485 3490 3495

Arg Ala Asn Val Ser Ala Val Lys Ser Asp Ile Ala Pro Thr Ala
    3500 3505 3510

Gly His Leu Ser Gln Thr Ser Ser Pro Ala Glu Val Ser Ile Leu
    3515 3520 3525

Asp Val Thr Thr Ala Pro Thr Pro Gly Ile Ser Thr Thr Ile Thr
    3530 3535 3540

Thr Met Gly Thr Asn Ser Ile Ser Thr Thr Thr Pro Asn Pro Glu
    3545 3550 3555

Val Gly Met Ser Thr Met Asp Ser Thr Pro Ala Thr Glu Arg Arg
    3560 3565 3570

Thr Thr Ser Thr Glu His Pro Ser Thr Trp Ser Ser Thr Ala Ala
    3575 3580 3585

Ser Asp Ser Trp Thr Val Thr Asp Met Thr Ser Asn Leu Lys Val
    3590 3595 3600

Ala Arg Ser Pro Gly Thr Ile Ser Thr Met His Thr Thr Ser Phe
    3605 3610 3615

Leu Ala Ser Ser Thr Glu Leu Asp Ser Met Ser Thr Pro His Gly
    3620 3625 3630

Arg Ile Thr Val Ile Gly Thr Ser Leu Val Thr Pro Ser Ser Asp
    3635 3640 3645

Ala Ser Ala Val Lys Thr Glu Thr Ser Thr Ser Glu Arg Thr Leu
    3650 3655 3660

Ser Pro Ser Asp Thr Thr Ala Ser Thr Pro Ile Ser Thr Phe Ser
    3665 3670 3675

Arg Val Gln Arg Met Ser Ile Ser Val Pro Asp Ile Leu Ser Thr
    3680   3685   3690

Ser Trp Thr Pro Ser Ser Thr Glu Ala Glu Asp Val Pro Val Ser
    3695   3700   3705

Met Val Ser Thr Asp His Ala Ser Thr Lys Thr Asp Pro Asn Thr
    3710   3715   3720

Pro Leu Ser Thr Phe Leu Phe Asp Ser Leu Ser Thr Leu Asp Trp
    3725   3730   3735

Asp Thr Gly Arg Ser Leu Ser Ser Ala Thr Ala Thr Thr Ser Ala
    3740   3745   3750

Pro Gln Gly Ala Thr Thr Pro Gln Glu Leu Thr Leu Glu Thr Met
    3755   3760   3765

Ile Ser Pro Ala Thr Ser Gln Leu Pro Phe Ser Ile Gly His Ile
    3770   3775   3780

Thr Ser Ala Val Thr Pro Ala Ala Met Ala Arg Ser Ser Gly Val
    3785   3790   3795

Thr Phe Ser Arg Pro Asp Pro Thr Ser Lys Lys Ala Glu Gln Thr
    3800   3805   3810

Ser Thr Gln Leu Pro Thr Thr Thr Ser Ala His Pro Gly Gln Val
    3815   3820   3825

Pro Arg Ser Ala Ala Thr Thr Leu Asp Val Ile Pro His Thr Ala
    3830   3835   3840

Lys Thr Pro Asp Ala Thr Phe Gln Arg Gln Gly Gln Thr Ala Leu
    3845   3850   3855

Thr Thr Glu Ala Arg Ala Thr Ser Asp Ser Trp Asn Glu Lys Glu
    3860   3865   3870

Lys Ser Thr Pro Ser Ala Pro Trp Ile Thr Glu Met Met Asn Ser
    3875   3880   3885

Val Ser Glu Asp Thr Ile Lys Glu Val Thr Ser Ser Ser Ser Val
    3890   3895   3900

Leu Arg Thr Leu Asn Thr Leu Asp Ile Asn Leu Glu Ser Gly Thr
    3905   3910   3915

Thr Ser Ser Pro Ser Trp Lys Ser Ser Pro Tyr Glu Arg Ile Ala
    3920   3925   3930

Pro Ser Glu Ser Thr Thr Asp Lys Glu Ala Ile His Pro Ser Thr
    3935   3940   3945

Asn Thr Val Glu Thr Thr Gly Trp Val Thr Ser Ser Glu His Ala
    3950   3955   3960

Ser His Ser Thr Ile Pro Ala His Ser Ala Ser Ser Lys Leu Thr
    3965   3970   3975

Ser Pro Val Val Thr Thr Ser Thr Arg Glu Gln Ala Ile Val Ser
    3980   3985   3990

Met Ser Thr Thr Thr Trp Pro Glu Ser Thr Arg Ala Arg Thr Glu
    3995   4000   4005

Pro Asn Ser Phe Leu Thr Ile Glu Leu Arg Asp Val Ser Pro Tyr
    4010   4015   4020

Met Asp Thr Ser Ser Thr Thr Gln Thr Ser Ile Ile Ser Ser Pro
    4025   4030   4035

Gly Ser Thr Ala Ile Thr Lys Gly Pro Arg Thr Glu Ile Thr Ser
    4040   4045   4050

Ser Lys Arg Ile Ser Ser Ser Phe Leu Ala Gln Ser Met Arg Ser
    4055   4060   4065

Ser Asp Ser Pro Ser Glu Ala Ile Thr Arg Leu Ser Asn Phe Pro
    4070   4075   4080

Ala Met Thr Glu Ser Gly Gly Met Ile Leu Ala Met Gln Thr Ser
    4085   4090   4095

Pro Pro Gly Ala Thr Ser Leu Ser Ala Pro Thr Leu Asp Thr Ser
    4100   4105   4110

Ala Thr Ala Ser Trp Thr Gly Thr Pro Leu Ala Thr Thr Gln Arg
    4115   4120   4125

Phe Thr Tyr Ser Glu Lys Thr Thr Leu Phe Ser Lys Gly Pro Glu
    4130   4135   4140

Asp Thr Ser Gln Pro Ser Pro Pro Ser Val Glu Glu Thr Ser Ser
    4145   4150   4155

Ser Ser Ser Leu Val Pro Ile His Ala Thr Thr Ser Pro Ser Asn
    4160   4165   4170

Ile Leu Leu Thr Ser Gln Gly His Ser Pro Ser Ser Thr Pro Pro
    4175   4180   4185

Val Thr Ser Val Phe Leu Ser Glu Thr Ser Gly Leu Gly Lys Thr
    4190   4195   4200

Thr Asp Met Ser Arg Ile Ser Leu Glu Pro Gly Thr Ser Leu Pro
    4205   4210   4215

Pro Asn Leu Ser Ser Thr Ala Gly Glu Ala Leu Ser Thr Tyr Glu
    4220   4225   4230

Ala Ser Arg Asp Thr Lys Ala Ile His His Ser Ala Asp Thr Ala
    4235   4240   4245

Val Thr Asn Met Glu Ala Thr Ser Ser Glu Tyr Ser Pro Ile Pro
    4250   4255   4260

Gly His Thr Lys Pro Ser Lys Ala Thr Ser Pro Leu Val Thr Ser
    4265   4270   4275

His Ile Met Gly Asp Ile Thr Ser Ser Thr Ser Val Phe Gly Ser
    4280   4285   4290

Ser Glu Thr Thr Glu Ile Glu Thr Val Ser Ser Val Asn Gln Gly
    4295   4300   4305

Leu Gln Glu Arg Ser Thr Ser Gln Val Ala Ser Ser Ala Thr Glu
    4310   4315   4320

Thr Ser Thr Val Ile Thr His Val Ser Ser Gly Asp Ala Thr Thr
    4325   4330   4335

His Val Thr Lys Thr Gln Ala Thr Phe Ser Ser Gly Thr Ser Ile
    4340   4345   4350

Ser Ser Pro His Gln Phe Ile Thr Ser Thr Asn Thr Phe Thr Asp
    4355   4360   4365

Val Ser Thr Asn Pro Ser Thr Ser Leu Ile Met Thr Glu Ser Ser
    4370   4375   4380

Gly Val Thr Ile Thr Thr Gln Thr Gly Pro Thr Gly Ala Ala Thr
    4385   4390   4395

Gln Gly Pro Tyr Leu Leu Asp Thr Ser Thr Met Pro Tyr Leu Thr
    4400   4405   4410

Glu Thr Pro Leu Ala Val Thr Pro Asp Phe Met Gln Ser Glu Lys
    4415   4420   4425

Thr Thr Leu Ile Ser Lys Gly Pro Lys Asp Val Ser Trp Thr Ser
    4430   4435   4440

Pro Pro Ser Val Ala Glu Thr Ser Tyr Pro Ser Ser Leu Thr Pro
    4445   4450   4455

Phe Leu Val Thr Thr Ile Pro Pro Ala Thr Ser Thr Leu Gln Gly
    4460   4465   4470

Gln His Thr Ser Ser Pro Val Ser Ala Thr Ser Val Leu Thr Ser
    4475   4480   4485

Gly Leu Val Lys Thr Thr Asp Met Leu Asn Thr Ser Met Glu Pro
    4490 4495 4500

Val Thr Asn Ser Pro Gln Asn Leu Asn Asn Pro Ser Asn Glu Ile
    4505 4510 4515

Leu Ala Thr Leu Ala Ala Thr Thr Asp Ile Glu Thr Ile His Pro
    4520 4525 4530

Ser Ile Asn Lys Ala Val Thr Asn Met Gly Thr Ala Ser Ser Ala
    4535 4540 4545

His Val Leu His Ser Thr Leu Pro Val Ser Ser Glu Pro Ser Thr
    4550 4555 4560

Ala Thr Ser Pro Met Val Pro Ala Ser Ser Met Gly Asp Ala Leu
    4565 4570 4575

Ala Ser Ile Ser Ile Pro Gly Ser Glu Thr Thr Asp Ile Glu Gly
    4580 4585 4590

Glu Pro Thr Ser Ser Leu Thr Ala Gly Arg Lys Glu Asn Ser Thr
    4595 4600 4605

Leu Gln Glu Met Asn Ser Thr Thr Glu Ser Asn Ile Ile Leu Ser
    4610 4615 4620

Asn Val Ser Val Gly Ala Ile Thr Glu Ala Thr Lys Met Glu Val
    4625 4630 4635

Pro Ser Phe Asp Ala Thr Phe Ile Pro Thr Pro Ala Gln Ser Thr
    4640 4645 4650

Lys Phe Pro Asp Ile Phe Ser Val Ala Ser Ser Arg Leu Ser Asn
    4655 4660 4665

Ser Pro Pro Met Thr Ile Ser Thr His Met Thr Thr Thr Gln Thr
    4670 4675 4680

Gly Ser Ser Gly Ala Thr Ser Lys Ile Pro Leu Ala Leu Asp Thr
    4685 4690 4695

Ser Thr Leu Glu Thr Ser Ala Gly Thr Pro Ser Val Val Thr Glu
    4700 4705 4710

Gly Phe Ala His Ser Lys Ile Thr Thr Ala Met Asn Asn Asp Val
    4715 4720 4725

Lys Asp Val Ser Gln Thr Asn Pro Pro Phe Gln Asp Glu Ala Ser
    4730 4735 4740

Ser Pro Ser Ser Gln Ala Pro Val Leu Val Thr Thr Leu Pro Ser
    4745 4750 4755

Ser Val Ala Phe Thr Pro Gln Trp His Ser Thr Ser Ser Pro Val
    4760   4765   4770

Ser Met Ser Ser Val Leu Thr Ser Ser Leu Val Lys Thr Ala Gly
    4775   4780   4785

Lys Val Asp Thr Ser Leu Glu Thr Val Thr Ser Ser Pro Gln Ser
    4790   4795   4800

Met Ser Asn Thr Leu Asp Asp Ile Ser Val Thr Ser Ala Ala Thr
    4805   4810   4815

Thr Asp Ile Glu Thr Thr His Pro Ser Ile Asn Thr Val Val Thr
    4820   4825   4830

Asn Val Gly Thr Thr Gly Ser Ala Phe Glu Ser His Ser Thr Val
    4835   4840   4845

Ser Ala Tyr Pro Glu Pro Ser Lys Val Thr Ser Pro Asn Val Thr
    4850   4855   4860

Thr Ser Thr Met Glu Asp Thr Thr Ile Ser Arg Ser Ile Pro Lys
    4865   4870   4875

Ser Ser Lys Thr Thr Arg Thr Glu Thr Glu Thr Thr Ser Ser Leu
    4880   4885   4890

Thr Pro Lys Leu Arg Glu Thr Ser Ile Ser Gln Glu Ile Thr Ser
    4895   4900   4905

Ser Thr Glu Thr Ser Thr Val Pro Tyr Lys Glu Leu Thr Gly Ala
    4910   4915   4920

Thr Thr Glu Val Ser Arg Thr Asp Val Thr Ser Ser Ser Ser Thr
    4925   4930   4935

Ser Phe Pro Gly Pro Asp Gln Ser Thr Val Ser Leu Asp Ile Ser
    4940   4945   4950

Thr Glu Thr Asn Thr Arg Leu Ser Thr Ser Pro Ile Met Thr Glu
    4955   4960   4965

Ser Ala Glu Ile Thr Ile Thr Thr Gln Thr Gly Pro His Gly Ala
    4970   4975   4980

Thr Ser Gln Asp Thr Phe Thr Met Asp Pro Ser Asn Thr Thr Pro
    4985   4990   4995

Gln Ala Gly Ile His Ser Ala Met Thr His Gly Phe Ser Gln Leu
    5000   5005   5010

Asp Val Thr Thr Leu Met Ser Arg Ile Pro Gln Asp Val Ser Trp
    5015   5020   5025

Thr Ser Pro Pro Ser Val Asp Lys Thr Ser Ser Pro Ser Ser Phe
    5030   5035   5040

Leu Ser Ser Pro Ala Met Thr Thr Pro Ser Leu Ile Ser Ser Thr
    5045   5050   5055

Leu Pro Glu Asp Lys Leu Ser Ser Pro Met Thr Ser Leu Leu Thr
    5060   5065   5070

Ser Gly Leu Val Lys Ile Thr Asp Ile Leu Arg Thr Arg Leu Glu
    5075   5080   5085

Pro Val Thr Ser Ser Leu Pro Asn Phe Ser Ser Thr Ser Asp Lys
    5090   5095   5100

Ile Leu Ala Thr Ser Lys Asp Ser Lys Asp Thr Lys Glu Ile Phe
    5105   5110   5115

Pro Ser Ile Asn Thr Glu Glu Thr Asn Val Lys Ala Asn Asn Ser
    5120   5125   5130

Gly His Glu Ser His Ser Pro Ala Leu Ala Asp Ser Glu Thr Pro
    5135   5140   5145

Lys Ala Thr Thr Gln Met Val Ile Thr Thr Thr Val Gly Asp Pro
    5150   5155   5160

Ala Pro Ser Thr Ser Met Pro Val His Gly Ser Ser Glu Thr Thr
    5165   5170   5175

Asn Ile Lys Arg Glu Pro Thr Tyr Phe Leu Thr Pro Arg Leu Arg
    5180   5185   5190

Glu Thr Ser Thr Ser Gln Glu Ser Ser Phe Pro Thr Asp Thr Ser
    5195   5200   5205

Phe Leu Leu Ser Lys Val Pro Thr Gly Thr Ile Thr Glu Val Ser
    5210   5215   5220

Ser Thr Gly Val Asn Ser Ser Ser Lys Ile Ser Thr Pro Asp His
    5225   5230   5235

Asp Lys Ser Thr Val Pro Pro Asp Thr Phe Thr Gly Glu Ile Pro
    5240   5245   5250

Arg Val Phe Thr Ser Ser Ile Lys Thr Lys Ser Ala Glu Met Thr
    5255   5260   5265

Ile Thr Thr Gln Ala Ser Pro Pro Glu Ser Ala Ser His Ser Thr
    5270   5275   5280

Leu Pro Leu Asp Thr Ser Thr Thr Leu Ser Gln Gly Gly Thr His
    5285   5290   5295

Ser Thr Val Thr Gln Gly Phe Pro Tyr Ser Glu Val Thr Thr Leu
    5300   5305   5310

Met Gly Met Gly Pro Gly Asn Val Ser Trp Met Thr Thr Pro Pro
    5315   5320   5325

Val Glu Glu Thr Ser Ser Val Ser Ser Leu Met Ser Ser Pro Ala
    5330   5335   5340

Met Thr Ser Pro Ser Pro Val Ser Ser Thr Ser Pro Gln Ser Ile
    5345   5350   5355

Pro Ser Ser Pro Leu Pro Val Thr Ala Leu Pro Thr Ser Val Leu
    5360   5365   5370

Val Thr Thr Thr Asp Val Leu Gly Thr Thr Ser Pro Glu Ser Val
    5375   5380   5385

Thr Ser Ser Pro Pro Asn Leu Ser Ser Ile Thr His Glu Arg Pro
    5390   5395   5400

Ala Thr Tyr Lys Asp Thr Ala His Thr Glu Ala Ala Met His His
    5405   5410   5415

Ser Thr Asn Thr Ala Val Thr Asn Val Gly Thr Ser Gly Ser Gly
    5420   5425   5430

His Lys Ser Gln Ser Ser Val Leu Ala Asp Ser Glu Thr Ser Lys
    5435   5440   5445

Ala Thr Pro Leu Met Ser Thr Thr Ser Thr Leu Gly Asp Thr Ser
    5450   5455   5460

Val Ser Thr Ser Thr Pro Asn Ile Ser Gln Thr Asn Gln Ile Gln
    5465   5470   5475

Thr Glu Pro Thr Ala Ser Leu Ser Pro Arg Leu Arg Glu Ser Ser
    5480   5485   5490

Thr Ser Glu Lys Thr Ser Ser Thr Thr Glu Thr Asn Thr Ala Phe
    5495   5500   5505

Ser Tyr Val Pro Thr Gly Ala Ile Thr Gln Ala Ser Arg Thr Glu
    5510   5515   5520

Ile Ser Ser Ser Arg Thr Ser Ile Ser Asp Leu Asp Arg Pro Thr
    5525   5530   5535

Ile Ala Pro Asp Ile Ser Thr Gly Met Ile Thr Arg Leu Phe Thr
    5540   5545   5550

Ser Pro Ile Met Thr Lys Ser Ala Glu Met Thr Val Thr Thr Gln
    5555   5560   5565

Thr Thr Thr Pro Gly Ala Thr Ser Gln Gly Ile Leu Pro Trp Asp
    5570   5575   5580

Thr Ser Thr Thr Leu Phe Gln Gly Gly Thr His Ser Thr Val Ser
    5585   5590   5595

Gln Gly Phe Pro His Ser Glu Ile Thr Thr Leu Arg Ser Arg Thr
    5600   5605   5610

Pro Gly Asp Val Ser Trp Met Thr Thr Pro Pro Val Glu Glu Thr
    5615   5620   5625

Ser Ser Gly Phe Ser Leu Met Ser Pro Ser Met Thr Ser Pro Ser
    5630   5635   5640

Pro Val Ser Ser Thr Ser Pro Glu Ser Ile Pro Ser Ser Pro Leu
    5645   5650   5655

Pro Val Thr Ala Leu Leu Thr Ser Val Leu Val Thr Thr Thr Asn
    5660   5665   5670

Val Leu Gly Thr Thr Ser Pro Glu Pro Val Thr Ser Ser Pro Pro
    5675   5680   5685

Asn Leu Ser Ser Pro Thr Gln Glu Arg Leu Thr Thr Tyr Lys Asp
    5690   5695   5700

Thr Ala His Thr Glu Ala Met His Ala Ser Met His Thr Asn Thr
    5705   5710   5715

Ala Val Ala Asn Val Gly Thr Ser Ile Ser Gly His Glu Ser Gln
    5720   5725   5730

Ser Ser Val Pro Ala Asp Ser His Thr Ser Lys Ala Thr Ser Pro
    5735   5740   5745

Met Gly Ile Thr Phe Ala Met Gly Asp Thr Ser Val Ser Thr Ser
    5750   5755   5760

Thr Pro Ala Phe Phe Glu Thr Arg Ile Gln Thr Glu Ser Thr Ser
    5765   5770   5775

Ser Leu Ile Pro Gly Leu Arg Asp Thr Arg Thr Ser Glu Glu Ile
    5780   5785   5790

Asn Thr Val Thr Glu Thr Ser Thr Val Leu Ser Glu Val Pro Thr
    5795   5800   5805

Thr Thr Thr Thr Glu Val Ser Arg Thr Glu Val Ile Thr Ser Ser
    5810   5815   5820

Arg Thr Thr Ile Ser Gly Pro Asp His Ser Lys Met Ser Pro Tyr
    5825   5830   5835

Ile Ser Thr Glu Thr Ile Thr Arg Leu Ser Thr Phe Pro Phe Val
    5840   5845   5850

Thr Gly Ser Thr Glu Met Ala Ile Thr Asn Gln Thr Gly Pro Ile
    5855   5860   5865

Gly Thr Ile Ser Gln Ala Thr Leu Thr Leu Asp Thr Ser Ser Thr
    5870   5875   5880

Ala Ser Trp Glu Gly Thr His Ser Pro Val Thr Gln Arg Phe Pro
    5885   5890   5895

His Ser Glu Glu Thr Thr Thr Met Ser Arg Ser Thr Lys Gly Val
    5900   5905   5910

Ser Trp Gln Ser Pro Pro Ser Val Glu Glu Thr Ser Ser Pro Ser
    5915   5920   5925

Ser Pro Val Pro Leu Pro Ala Ile Thr Ser His Ser Ser Leu Tyr
    5930   5935   5940

Ser Ala Val Ser Gly Ser Ser Pro Thr Ser Ala Leu Pro Val Thr
    5945   5950   5955

Ser Leu Leu Thr Ser Gly Arg Arg Lys Thr Ile Asp Met Leu Asp
    5960   5965   5970

Thr His Ser Glu Leu Val Thr Ser Ser Leu Pro Ser Ala Ser Ser
    5975   5980   5985

Phe Ser Gly Glu Ile Leu Thr Ser Glu Ala Ser Thr Asn Thr Glu
    5990   5995   6000

Thr Ile His Phe Ser Glu Asn Thr Ala Glu Thr Asn Met Gly Thr
    6005   6010   6015

Thr Asn Ser Met His Lys Leu His Ser Ser Val Ser Ile His Ser
    6020   6025   6030

Gln Pro Ser Gly His Thr Pro Pro Lys Val Thr Gly Ser Met Met
    6035   6040   6045

Glu Asp Ala Ile Val Ser Thr Ser Thr Pro Gly Ser Pro Glu Thr
    6050   6055   6060

Lys Asn Val Asp Arg Asp Ser Thr Ser Pro Leu Thr Pro Glu Leu
    6065   6070   6075

Lys Glu Asp Ser Thr Ala Leu Val Met Asn Ser Thr Thr Glu Ser
    6080   6085   6090

Asn Thr Val Phe Ser Ser Val Ser Leu Asp Ala Ala Thr Glu Val
    6095   6100   6105

Ser Arg Ala Glu Val Thr Tyr Tyr Asp Pro Thr Phe Met Pro Ala
    6110   6115   6120

Ser Ala Gln Ser Thr Lys Ser Pro Asp Ile Ser Pro Glu Ala Ser
    6125   6130   6135

Ser Ser His Ser Asn Ser Pro Pro Leu Thr Ile Ser Thr His Lys
    6140   6145   6150

Thr Ile Ala Thr Gln Thr Gly Pro Ser Gly Val Thr Ser Leu Gly
    6155   6160   6165

Gln Leu Thr Leu Asp Thr Ser Thr Ile Ala Thr Ser Ala Gly Thr
    6170   6175   6180

Pro Ser Ala Arg Thr Gln Asp Phe Val Asp Ser Glu Thr Thr Ser
    6185   6190   6195

Val Met Asn Asn Asp Leu Asn Asp Val Leu Lys Thr Ser Pro Phe
    6200   6205   6210

Ser Ala Glu Glu Ala Asn Ser Leu Ser Ser Gln Ala Pro Leu Leu
    6215   6220   6225

Val Thr Thr Ser Pro Ser Pro Val Thr Ser Thr Leu Gln Glu His
    6230   6235   6240

Ser Thr Ser Ser Leu Val Ser Val Thr Ser Val Pro Thr Pro Thr
    6245   6250   6255

Leu Ala Lys Ile Thr Asp Met Asp Thr Asn Leu Glu Pro Val Thr
    6260   6265   6270

Arg Ser Pro Gln Asn Leu Arg Asn Thr Leu Ala Thr Ser Glu Ala
    6275   6280   6285

Thr Thr Asp Thr His Thr Met His Pro Ser Ile Asn Thr Ala Val
    6290   6295   6300

Ala Asn Val Gly Thr Thr Ser Ser Pro Asn Glu Phe Tyr Phe Thr
    6305   6310   6315

Val Ser Pro Asp Ser Asp Pro Tyr Lys Ala Thr Ser Ala Val Val
    6320   6325   6330

Ile Thr Ser Thr Ser Gly Asp Ser Ile Val Ser Thr Ser Met Pro
    6335   6340   6345

Arg Ser Ser Ala Met Lys Lys Ile Glu Ser Glu Thr Thr Phe Ser
    6350   6355   6360

Leu Ile Phe Arg Leu Arg Glu Thr Ser Thr Ser Gln Lys Ile Gly
    6365   6370   6375

Ser Ser Ser Asp Thr Ser Thr Val Phe Asp Lys Ala Phe Thr Ala
    6380   6385   6390

Ala Thr Thr Glu Val Ser Arg Thr Glu Leu Thr Ser Ser Ser Arg
    6395   6400   6405

Thr Ser Ile Gln Gly Thr Glu Lys Pro Thr Met Ser Pro Asp Thr
    6410   6415   6420

Ser Thr Arg Ser Val Thr Met Leu Ser Thr Phe Ala Gly Leu Thr
    6425   6430   6435

Lys Ser Glu Glu Arg Thr Ile Ala Thr Gln Thr Gly Pro His Arg
    6440   6445   6450

Ala Thr Ser Gln Gly Thr Leu Thr Trp Asp Thr Ser Ile Thr Thr
    6455   6460   6465

Ser Gln Ala Gly Thr His Ser Ala Met Thr His Gly Phe Ser Gln
    6470   6475   6480

Leu Asp Leu Ser Thr Leu Thr Ser Arg Val Pro Glu Tyr Ile Ser
    6485   6490   6495

Gly Thr Ser Pro Pro Ser Val Glu Lys Thr Ser Ser Ser Ser Ser
    6500   6505   6510

Leu Leu Ser Leu Pro Ala Ile Thr Ser Pro Ser Pro Val Pro Thr
    6515   6520   6525

Thr Leu Pro Glu Ser Arg Pro Ser Ser Pro Val His Leu Thr Ser
    6530   6535   6540

Leu Pro Thr Ser Gly Leu Val Lys Thr Thr Asp Met Leu Ala Ser
    6545   6550   6555

Val Ala Ser Leu Pro Pro Asn Leu Gly Ser Thr Ser His Lys Ile
    6560   6565   6570

Pro Thr Thr Ser Glu Asp Ile Lys Asp Thr Glu Lys Met Tyr Pro
    6575   6580   6585

Ser Thr Asn Ile Ala Val Thr Asn Val Gly Thr Thr Thr Ser Glu
    6590   6595   6600

Lys Glu Ser Tyr Ser Ser Val Pro Ala Tyr Ser Glu Pro Pro Lys
    6605   6610   6615

Val Thr Ser Pro Met Val Thr Ser Phe Asn Ile Arg Asp Thr Ile
    6620   6625   6630

Val Ser Thr Ser Met Pro Gly Ser Ser Glu Ile Thr Arg Ile Glu
    6635   6640   6645

Met Glu Ser Thr Phe Ser Leu Ala His Gly Leu Lys Gly Thr Ser
    6650   6655   6660

Thr Ser Gln Asp Pro Ile Val Ser Thr Glu Lys Ser Ala Val Leu
    6665   6670   6675

His Lys Leu Thr Thr Gly Ala Thr Glu Thr Ser Arg Thr Glu Val
    6680   6685   6690

Ala Ser Ser Arg Arg Thr Ser Ile Pro Gly Pro Asp His Ser Thr
    6695   6700   6705

Glu Ser Pro Asp Ile Ser Thr Glu Val Ile Pro Ser Leu Pro Ile
    6710   6715   6720

Ser Leu Gly Ile Thr Glu Ser Ser Asn Met Thr Ile Ile Thr Arg
    6725   6730   6735

Thr Gly Pro Pro Leu Gly Ser Thr Ser Gln Gly Thr Phe Thr Leu
    6740   6745   6750

Asp Thr Pro Thr Thr Ser Ser Arg Ala Gly Thr His Ser Met Ala
    6755   6760   6765

Thr Gln Glu Phe Pro His Ser Glu Met Thr Thr Val Met Asn Lys
    6770   6775   6780

Asp Pro Glu Ile Leu Ser Trp Thr Ile Pro Pro Ser Ile Glu Lys
    6785   6790   6795

Thr Ser Phe Ser Ser Ser Leu Met Pro Ser Pro Ala Met Thr Ser
    6800   6805   6810

Pro Pro Val Ser Ser Thr Leu Pro Lys Thr Ile His Thr Thr Pro
    6815   6820   6825

Ser Pro Met Thr Ser Leu Leu Thr Pro Ser Leu Val Met Thr Thr
    6830   6835   6840

Asp Thr Leu Gly Thr Ser Pro Glu Pro Thr Thr Ser Ser Pro Pro
    6845   6850   6855

Asn Leu Ser Ser Thr Ser His Glu Ile Leu Thr Thr Asp Glu Asp
    6860   6865   6870

Thr Thr Ala Ile Glu Ala Met His Pro Ser Thr Ser Thr Ala Ala
    6875   6880   6885

Thr Asn Val Glu Thr Thr Ser Ser Gly His Gly Ser Gln Ser Ser
    6890   6895   6900

Val Leu Ala Asp Ser Glu Lys Thr Lys Ala Thr Ala Pro Met Asp
    6905   6910   6915

Thr Thr Ser Thr Met Gly His Thr Thr Val Ser Thr Ser Met Ser
    6920   6925   6930

Val Ser Ser Glu Thr Thr Lys Ile Lys Arg Glu Ser Thr Tyr Ser
    6935   6940   6945

Leu Thr Pro Gly Leu Arg Glu Thr Ser Ile Ser Gln Asn Ala Ser
    6950   6955   6960

Phe Ser Thr Asp Thr Ser Ile Val Leu Ser Glu Val Pro Thr Gly
    6965   6970   6975

Thr Thr Ala Glu Val Ser Arg Thr Glu Val Thr Ser Ser Gly Arg
    6980   6985   6990

Thr Ser Ile Pro Gly Pro Ser Gln Ser Thr Val Leu Pro Glu Ile
    6995   7000   7005

Ser Thr Arg Thr Met Thr Arg Leu Phe Ala Ser Pro Thr Met Thr
    7010   7015   7020

Glu Ser Ala Glu Met Thr Ile Pro Thr Gln Thr Gly Pro Ser Gly
    7025   7030   7035

Ser Thr Ser Gln Asp Thr Leu Thr Leu Asp Thr Ser Thr Thr Lys
    7040   7045   7050

Ser Gln Ala Lys Thr His Ser Thr Leu Thr Gln Arg Phe Pro His
    7055   7060   7065

Ser Glu Met Thr Thr Leu Met Ser Arg Gly Pro Gly Asp Met Ser
    7070   7075   7080

Trp Gln Ser Ser Pro Ser Leu Glu Asn Pro Ser Ser Leu Pro Ser
    7085   7090   7095

Leu Leu Ser Leu Pro Ala Thr Thr Ser Pro Pro Pro Ile Ser Ser
    7100   7105   7110

Thr Leu Pro Val Thr Ile Ser Ser Ser Pro Leu Pro Val Thr Ser
    7115   7120   7125

Leu Leu Thr Ser Ser Pro Val Thr Thr Thr Asp Met Leu His Thr
    7130   7135   7140

Ser Pro Glu Leu Val Thr Ser Ser Pro Pro Lys Leu Ser His Thr
    7145   7150   7155

Ser Asp Glu Arg Leu Thr Thr Gly Lys Asp Thr Thr Asn Thr Glu
    7160   7165   7170

Ala Val His Pro Ser Thr Asn Thr Ala Ala Ser Asn Val Glu Ile
    7175   7180   7185

Pro Ser Ser Gly His Glu Ser Pro Ser Ser Ala Leu Ala Asp Ser
    7190   7195   7200

Glu Thr Ser Lys Ala Thr Ser Pro Met Phe Ile Thr Ser Thr Gln
    7205   7210   7215

Glu Asp Thr Thr Val Ala Ile Ser Thr Pro His Phe Leu Glu Thr
    7220   7225   7230

Ser Arg Ile Gln Lys Glu Ser Ile Ser Ser Leu Ser Pro Lys Leu
    7235   7240   7245

Arg Glu Thr Gly Ser Ser Val Glu Thr Ser Ser Ala Ile Glu Thr
    7250   7255   7260

Ser Ala Val Leu Ser Glu Val Ser Ile Gly Ala Thr Thr Glu Ile
    7265   7270   7275

Ser Arg Thr Glu Val Thr Ser Ser Ser Arg Thr Ser Ile Ser Gly
    7280   7285   7290

Ser Ala Glu Ser Thr Met Leu Pro Glu Ile Ser Thr Thr Arg Lys
    7295   7300   7305

Ile Ile Lys Phe Pro Thr Ser Pro Ile Leu Ala Glu Ser Ser Glu
    7310   7315   7320

Met Thr Ile Lys Thr Gln Thr Ser Pro Pro Gly Ser Thr Ser Glu
    7325   7330   7335

Ser Thr Phe Thr Leu Asp Thr Ser Thr Thr Pro Ser Leu Val Ile
    7340   7345   7350

Thr His Ser Thr Met Thr Gln Arg Leu Pro His Ser Glu Ile Thr
    7355   7360   7365

Thr Leu Val Ser Arg Gly Ala Gly Asp Val Pro Arg Pro Ser Ser
    7370   7375   7380

Leu Pro Val Glu Glu Thr Ser Pro Pro Ser Ser Gln Leu Ser Leu
    7385   7390   7395

Ser Ala Met Ile Ser Pro Ser Pro Val Ser Ser Thr Leu Pro Ala
    7400   7405   7410

Ser Ser His Ser Ser Ser Ala Ser Val Thr Ser Leu Leu Thr Pro
    7415   7420   7425

Gly Gln Val Lys Thr Thr Glu Val Leu Asp Ala Ser Ala Glu Pro
    7430   7435   7440

Glu Thr Ser Ser Pro Pro Ser Leu Ser Ser Thr Ser Val Glu Ile
    7445   7450   7455

Leu Ala Thr Ser Glu Val Thr Thr Asp Thr Glu Lys Ile His Pro
    7460   7465   7470

Phe Ser Asn Thr Ala Val Thr Lys Val Gly Thr Ser Ser Ser Gly
    7475   7480   7485

His Glu Ser Pro Ser Ser Val Leu Pro Asp Ser Glu Thr Thr Lys
    7490   7495   7500

Ala Thr Ser Ala Met Gly Thr Ile Ser Ile Met Gly Asp Thr Ser
    7505   7510   7515

Val Ser Thr Leu Thr Pro Ala Leu Ser Asn Thr Arg Lys Ile Gln
    7520   7525   7530

Ser Glu Pro Ala Ser Ser Leu Thr Thr Arg Leu Arg Glu Thr Ser
    7535   7540   7545

Thr Ser Glu Glu Thr Ser Leu Ala Thr Glu Ala Asn Thr Val Leu
    7550   7555   7560

Ser Lys Val Ser Thr Gly Ala Thr Thr Glu Val Ser Arg Thr Glu
    7565   7570   7575

Ala Ile Ser Phe Ser Arg Thr Ser Met Ser Gly Pro Glu Gln Ser
    7580   7585   7590

Thr Met Ser Gln Asp Ile Ser Ile Gly Thr Ile Pro Arg Ile Ser
    7595   7600   7605

Ala Ser Ser Val Leu Thr Glu Ser Ala Lys Met Thr Ile Thr Thr
    7610   7615   7620

Gln Thr Gly Pro Ser Glu Ser Thr Leu Glu Ser Thr Leu Asn Leu
    7625   7630   7635

Asn Thr Ala Thr Thr Pro Ser Trp Val Glu Thr His Ser Ile Val
    7640   7645   7650

Ile Gln Gly Phe Pro His Pro Glu Met Thr Thr Ser Met Gly Arg
    7655   7660   7665

Gly Pro Gly Gly Val Ser Trp Pro Ser Pro Pro Phe Val Lys Glu
    7670   7675   7680

Thr Ser Pro Pro Ser Ser Pro Leu Ser Leu Pro Ala Val Thr Ser
    7685   7690   7695

Pro His Pro Val Ser Thr Thr Phe Leu Ala His Ile Pro Pro Ser
    7700   7705   7710

Pro Leu Pro Val Thr Ser Leu Leu Thr Ser Gly Pro Ala Thr Thr
    7715   7720   7725

Thr Asp Ile Leu Gly Thr Ser Thr Glu Pro Gly Thr Ser Ser Ser
    7730   7735   7740

Ser Ser Leu Ser Thr Thr Ser His Glu Arg Leu Thr Thr Tyr Lys
    7745   7750   7755

Asp Thr Ala His Thr Glu Ala Val His Pro Ser Thr Asn Thr Gly
    7760   7765   7770

Gly Thr Asn Val Ala Thr Thr Ser Ser Gly Tyr Lys Ser Gln Ser
    7775   7780   7785

Ser Val Leu Ala Asp Ser Ser Pro Met Cys Thr Thr Ser Thr Met
    7790   7795   7800

Gly Asp Thr Ser Val Leu Thr Ser Thr Pro Ala Phe Leu Glu Thr
    7805   7810   7815

Arg Arg Ile Gln Thr Glu Leu Ala Ser Ser Leu Thr Pro Gly Leu
    7820   7825   7830

Arg Glu Ser Ser Gly Ser Glu Gly Thr Ser Ser Gly Thr Lys Met
    7835   7840   7845

Ser Thr Val Leu Ser Lys Val Pro Thr Gly Ala Thr Thr Glu Ile
    7850   7855   7860

Ser Lys Glu Asp Val Thr Ser Ile Pro Gly Pro Ala Gln Ser Thr
    7865   7870   7875

Ile Ser Pro Asp Ile Ser Thr Arg Thr Val Ser Trp Phe Ser Thr
    7880   7885   7890

Ser Pro Val Met Thr Glu Ser Ala Glu Ile Thr Met Asn Thr His
    7895   7900   7905

Thr Ser Pro Leu Gly Ala Thr Thr Gln Gly Thr Ser Thr Leu Asp
    7910   7915   7920

Thr Ser Ser Thr Thr Ser Leu Thr Met Thr His Ser Thr Ile Ser
    7925   7930   7935

Gln Gly Phe Ser His Ser Gln Met Ser Thr Leu Met Arg Arg Gly
    7940   7945   7950

Pro Glu Asp Val Ser Trp Met Ser Pro Pro Leu Leu Glu Lys Thr
    7955   7960   7965

Arg Pro Ser Phe Ser Leu Met Ser Ser Pro Ala Thr Thr Ser Pro
    7970   7975   7980

Ser Pro Val Ser Ser Thr Leu Pro Glu Ser Ile Ser Ser Ser Pro
    7985   7990   7995

Leu Pro Val Thr Ser Leu Leu Thr Ser Gly Leu Ala Lys Thr Thr
    8000 8005 8010

Asp Met Leu His Lys Ser Ser Glu Pro Val Thr Asn Ser Pro Ala
    8015 8020 8025

Asn Leu Ser Ser Thr Ser Val Glu Ile Leu Ala Thr Ser Glu Val
    8030 8035 8040

Thr Thr Asp Thr Glu Lys Thr His Pro Ser Ser Asn Arg Thr Val
    8045 8050 8055

Thr Asp Val Gly Thr Ser Ser Ser Gly His Glu Ser Thr Ser Phe
    8060 8065 8070

Val Leu Ala Asp Ser Gln Thr Ser Lys Val Thr Ser Pro Met Val
    8075 8080 8085

Ile Thr Ser Thr Met Glu Asp Thr Ser Val Ser Thr Ser Thr Pro
    8090 8095 8100

Gly Phe Phe Glu Thr Ser Arg Ile Gln Thr Glu Pro Thr Ser Ser
    8105 8110 8115

Leu Thr Leu Gly Leu Arg Lys Thr Ser Ser Ser Glu Gly Thr Ser
    8120 8125 8130

Leu Ala Thr Glu Met Ser Thr Val Leu Ser Gly Val Pro Thr Gly
    8135 8140 8145

Ala Thr Ala Glu Val Ser Arg Thr Glu Val Thr Ser Ser Ser Arg
    8150 8155 8160

Thr Ser Ile Ser Gly Phe Ala Gln Leu Thr Val Ser Pro Glu Thr
    8165 8170 8175

Ser Thr Glu Thr Ile Thr Arg Leu Pro Thr Ser Ser Ile Met Thr
    8180 8185 8190

Glu Ser Ala Glu Met Met Ile Lys Thr Gln Thr Asp Pro Pro Gly
    8195 8200 8205

Ser Thr Pro Glu Ser Thr His Thr Val Asp Ile Ser Thr Thr Pro
    8210 8215 8220

Asn Trp Val Glu Thr His Ser Thr Val Thr Gln Arg Phe Ser His
    8225 8230 8235

Ser Glu Met Thr Thr Leu Val Ser Arg Ser Pro Gly Asp Met Leu
    8240 8245 8250

Trp Pro Ser Gln Ser Ser Val Glu Glu Thr Ser Ser Ala Ser Ser
    8255 8260 8265

Leu Leu Ser Leu Pro Ala Thr Thr Ser Pro Ser Pro Val Ser Ser
    8270 8275 8280

Thr Leu Val Glu Asp Phe Pro Ser Ala Ser Leu Pro Val Thr Ser
    8285 8290 8295

Leu Leu Asn Pro Gly Leu Val Ile Thr Thr Asp Arg Met Gly Ile
    8300 8305 8310

Ser Arg Glu Pro Gly Thr Ser Ser Thr Ser Asn Leu Ser Ser Thr
    8315 8320 8325

Ser His Glu Arg Leu Thr Thr Leu Glu Asp Thr Val Asp Thr Glu
    8330 8335 8340

Asp Met Gln Pro Ser Thr His Thr Ala Val Thr Asn Val Arg Thr
    8345 8350 8355

Ser Ile Ser Gly His Glu Ser Gln Ser Ser Val Leu Ser Asp Ser
    8360 8365 8370

Glu Thr Pro Lys Ala Thr Ser Pro Met Gly Thr Thr Tyr Thr Met
    8375 8380 8385

Gly Glu Thr Ser Val Ser Ile Ser Thr Ser Asp Phe Phe Glu Thr
    8390 8395 8400

Ser Arg Ile Gln Ile Glu Pro Thr Ser Ser Leu Thr Ser Gly Leu
    8405 8410 8415

Arg Glu Thr Ser Ser Ser Glu Arg Ile Ser Ser Ala Thr Glu Gly
    8420 8425 8430

Ser Thr Val Leu Ser Glu Val Pro Ser Gly Ala Thr Thr Glu Val
    8435 8440 8445

Ser Arg Thr Glu Val Ile Ser Ser Arg Gly Thr Ser Met Ser Gly
    8450 8455 8460

Pro Asp Gln Phe Thr Ile Ser Pro Asp Ile Ser Thr Glu Ala Ile
    8465 8470 8475

Thr Arg Leu Ser Thr Ser Pro Ile Met Thr Glu Ser Ala Glu Ser
    8480 8485 8490

Ala Ile Thr Ile Glu Thr Gly Ser Pro Gly Ala Thr Ser Glu Gly
    8495 8500 8505

Thr Leu Thr Leu Asp Thr Ser Thr Thr Thr Phe Trp Ser Gly Thr
    8510 8515 8520

His Ser Thr Ala Ser Pro Gly Phe Ser His Ser Glu Met Thr Thr
    8525 8530 8535

Leu Met Ser Arg Thr Pro Gly Asp Val Pro Trp Pro Ser Leu Pro
    8540 8545 8550

Ser Val Glu Glu Ala Ser Ser Val Ser Ser Ser Leu Ser Ser Pro
    8555 8560 8565

Ala Met Thr Ser Thr Ser Phe Phe Ser Thr Leu Pro Glu Ser Ile
    8570 8575 8580

Ser Ser Ser Pro His Pro Val Thr Ala Leu Leu Thr Leu Gly Pro
    8585 8590 8595

Val Lys Thr Thr Asp Met Leu Arg Thr Ser Ser Glu Pro Glu Thr
    8600 8605 8610

Ser Ser Pro Pro Asn Leu Ser Ser Thr Ser Ala Glu Ile Leu Ala
    8615 8620 8625

Thr Ser Glu Val Thr Lys Asp Arg Glu Lys Ile His Pro Ser Ser
    8630 8635 8640

Asn Thr Pro Val Val Asn Val Gly Thr Val Ile Tyr Lys His Leu
    8645 8650 8655

Ser Pro Ser Ser Val Leu Ala Asp Leu Val Thr Thr Lys Pro Thr
    8660 8665 8670

Ser Pro Met Ala Thr Thr Ser Thr Leu Gly Asn Thr Ser Val Ser
    8675 8680 8685

Thr Ser Thr Pro Ala Phe Pro Glu Thr Met Met Thr Gln Pro Thr
    8690 8695 8700

Ser Ser Leu Thr Ser Gly Leu Arg Glu Ile Ser Thr Ser Gln Glu
    8705 8710 8715

Thr Ser Ser Ala Thr Glu Arg Ser Ala Ser Leu Ser Gly Met Pro
    8720 8725 8730

Thr Gly Ala Thr Thr Lys Val Ser Arg Thr Glu Ala Leu Ser Leu
    8735 8740 8745

Gly Arg Thr Ser Thr Pro Gly Pro Ala Gln Ser Thr Ile Ser Pro
    8750 8755 8760

Glu Ile Ser Thr Glu Thr Ile Thr Arg Ile Ser Thr Pro Leu Thr
    8765 8770 8775

Thr Thr Gly Ser Ala Glu Met Thr Ile Thr Pro Lys Thr Gly His
    8780 8785 8790

Ser Gly Ala Ser Ser Gln Gly Thr Phe Thr Leu Asp Thr Ser Ser
    8795 8800 8805

Arg Ala Ser Trp Pro Gly Thr His Ser Ala Ala Thr His Arg Ser
    8810 8815 8820

Pro His Ser Gly Met Thr Thr Pro Met Ser Arg Gly Pro Glu Asp
    8825 8830 8835

Val Ser Trp Pro Ser Arg Pro Ser Val Glu Lys Thr Ser Pro Pro
    8840 8845 8850

Ser Ser Leu Val Ser Leu Ser Ala Val Thr Ser Pro Ser Pro Leu
    8855 8860 8865

Tyr Ser Thr Pro Ser Glu Ser Ser His Ser Ser Pro Leu Arg Val
    8870 8875 8880

Thr Ser Leu Phe Thr Pro Val Met Met Lys Thr Thr Asp Met Leu
    8885 8890 8895

Asp Thr Ser Leu Glu Pro Val Thr Thr Ser Pro Pro Ser Met Asn
    8900 8905 8910

Ile Thr Ser Asp Glu Ser Leu Ala Thr Ser Lys Ala Thr Met Glu
    8915 8920 8925

Thr Glu Ala Ile Gln Leu Ser Glu Asn Thr Ala Val Thr Gln Met
    8930 8935 8940

Gly Thr Ile Ser Ala Arg Gln Glu Phe Tyr Ser Ser Tyr Pro Gly
    8945 8950 8955

Leu Pro Glu Pro Ser Lys Val Thr Ser Pro Val Val Thr Ser Ser
    8960 8965 8970

Thr Ile Lys Asp Ile Val Ser Thr Thr Ile Pro Ala Ser Ser Glu
    8975 8980 8985

Ile Thr Arg Ile Glu Met Glu Ser Thr Ser Thr Leu Thr Pro Thr
    8990 8995 9000

Pro Arg Glu Thr Ser Thr Ser Gln Glu Ile His Ser Ala Thr Lys
    9005 9010 9015

Pro Ser Thr Val Pro Tyr Lys Ala Leu Thr Ser Ala Thr Ile Glu
    9020 9025 9030

Asp Ser Met Thr Gln Val Met Ser Ser Ser Arg Gly Pro Ser Pro
    9035 9040 9045

Asp Gln Ser Thr Met Ser Gln Asp Ile Ser Thr Glu Val Ile Thr
    9050 9055 9060

Arg Leu Ser Thr Ser Pro Ile Lys Thr Glu Ser Thr Glu Met Thr
    9065 9070 9075

Ile Thr Thr Gln Thr Gly Ser Pro Gly Ala Thr Ser Arg Gly Thr
    9080   9085   9090

Leu Thr Leu Asp Thr Ser Thr Thr Phe Met Ser Gly Thr His Ser
    9095   9100   9105

Thr Ala Ser Gln Gly Phe Ser His Ser Gln Met Thr Ala Leu Met
    9110   9115   9120

Ser Arg Thr Pro Gly Asp Val Pro Trp Leu Ser His Pro Ser Val
    9125   9130   9135

Glu Glu Ala Ser Ser Ala Ser Phe Ser Leu Ser Ser Pro Val Met
    9140   9145   9150

Thr Ser Ser Ser Pro Val Ser Ser Thr Leu Pro Asp Ser Ile His
    9155   9160   9165

Ser Ser Ser Leu Pro Val Thr Ser Leu Leu Thr Ser Gly Leu Val
    9170   9175   9180

Lys Thr Thr Glu Leu Leu Gly Thr Ser Ser Glu Pro Glu Thr Ser
    9185   9190   9195

Ser Pro Pro Asn Leu Ser Ser Thr Ser Ala Glu Ile Leu Ala Ile
    9200   9205   9210

Thr Glu Val Thr Thr Asp Thr Glu Lys Leu Glu Met Thr Asn Val
    9215   9220   9225

Val Thr Ser Gly Tyr Thr His Glu Ser Pro Ser Ser Val Leu Ala
    9230   9235   9240

Asp Ser Val Thr Thr Lys Ala Thr Ser Ser Met Gly Ile Thr Tyr
    9245   9250   9255

Pro Thr Gly Asp Thr Asn Val Leu Thr Ser Thr Pro Ala Phe Ser
    9260   9265   9270

Asp Thr Ser Arg Ile Gln Thr Lys Ser Lys Leu Ser Leu Thr Pro
    9275   9280   9285

Gly Leu Met Glu Thr Ser Ile Ser Glu Glu Thr Ser Ser Ala Thr
    9290   9295   9300

Glu Lys Ser Thr Val Leu Ser Ser Val Pro Thr Gly Ala Thr Thr
    9305   9310   9315

Glu Val Ser Arg Thr Glu Ala Ile Ser Ser Ser Arg Thr Ser Ile
    9320   9325   9330

Pro Gly Pro Ala Gln Ser Thr Met Ser Ser Asp Thr Ser Met Glu
    9335   9340   9345

Thr Ile Thr Arg Ile Ser Thr Pro Leu Thr Arg Lys Glu Ser Thr
    9350   9355   9360

Asp Met Ala Ile Thr Pro Lys Thr Gly Pro Ser Gly Ala Thr Ser
    9365   9370   9375

Gln Gly Thr Phe Thr Leu Asp Ser Ser Ser Thr Ala Ser Trp Pro
    9380   9385   9390

Gly Thr His Ser Ala Thr Thr Gln Arg Phe Pro Gln Ser Val Val
    9395   9400   9405

Thr Thr Pro Met Ser Arg Gly Pro Glu Asp Val Ser Trp Pro Ser
    9410   9415   9420

Pro Leu Ser Val Glu Lys Asn Ser Pro Pro Ser Ser Leu Val Ser
    9425   9430   9435

Ser Ser Ser Val Thr Ser Pro Ser Pro Leu Tyr Ser Thr Pro Ser
    9440   9445   9450

Gly Ser Ser His Ser Ser Pro Val Pro Val Thr Ser Leu Phe Thr
    9455   9460   9465

Ser Ile Met Met Lys Ala Thr Asp Met Leu Asp Ala Ser Leu Glu
    9470   9475   9480

Pro Glu Thr Thr Ser Ala Pro Asn Met Asn Ile Thr Ser Asp Glu
    9485   9490   9495

Ser Leu Ala Ala Ser Lys Ala Thr Thr Glu Thr Glu Ala Ile His
    9500   9505   9510

Val Phe Glu Asn Thr Ala Ala Ser His Val Glu Thr Thr Ser Ala
    9515   9520   9525

Thr Glu Glu Leu Tyr Ser Ser Ser Pro Gly Phe Ser Glu Pro Thr
    9530   9535   9540

Lys Val Ile Ser Pro Val Val Thr Ser Ser Ser Ile Arg Asp Asn
    9545   9550   9555

Met Val Ser Thr Thr Met Pro Gly Ser Ser Gly Ile Thr Arg Ile
    9560   9565   9570

Glu Ile Glu Ser Met Ser Ser Leu Thr Pro Gly Leu Arg Glu Thr
    9575   9580   9585

Arg Thr Ser Gln Asp Ile Thr Ser Ser Thr Glu Thr Ser Thr Val
    9590   9595   9600

Leu Tyr Lys Met Pro Ser Gly Ala Thr Pro Glu Val Ser Arg Thr
    9605   9610   9615

Glu Val Met Pro Ser Ser Arg Thr Ser Ile Pro Gly Pro Ala Gln
    9620   9625   9630

Ser Thr Met Ser Leu Asp Ile Ser Asp Glu Val Val Thr Arg Leu
    9635   9640   9645

Ser Thr Ser Pro Ile Met Thr Glu Ser Ala Glu Ile Thr Ile Thr
    9650   9655   9660

Thr Gln Thr Gly Tyr Ser Leu Ala Thr Ser Gln Val Thr Leu Pro
    9665   9670   9675

Leu Gly Thr Ser Met Thr Phe Leu Ser Gly Thr His Ser Thr Met
    9680   9685   9690

Ser Gln Gly Leu Ser His Ser Glu Met Thr Asn Leu Met Ser Arg
    9695   9700   9705

Gly Pro Glu Ser Leu Ser Trp Thr Ser Pro Arg Phe Val Glu Thr
    9710   9715   9720

Thr Arg Ser Ser Ser Ser Leu Thr Ser Leu Pro Leu Thr Thr Ser
    9725   9730   9735

Leu Ser Pro Val Ser Ser Thr Leu Leu Asp Ser Ser Pro Ser Ser
    9740   9745   9750

Pro Leu Pro Val Thr Ser Leu Ile Leu Pro Gly Leu Val Lys Thr
    9755   9760   9765

Thr Glu Val Leu Asp Thr Ser Ser Glu Pro Lys Thr Ser Ser Ser
    9770   9775   9780

Pro Asn Leu Ser Ser Thr Ser Val Glu Ile Pro Ala Thr Ser Glu
    9785   9790   9795

Ile Met Thr Asp Thr Glu Lys Ile His Pro Ser Ser Asn Thr Ala
    9800   9805   9810

Val Ala Lys Val Arg Thr Ser Ser Ser Val His Glu Ser His Ser
    9815   9820   9825

Ser Val Leu Ala Asp Ser Glu Thr Thr Ile Thr Ile Pro Ser Met
    9830   9835   9840

Gly Ile Thr Ser Ala Val Asp Asp Thr Thr Val Phe Thr Ser Asn
    9845   9850   9855

Pro Ala Phe Ser Glu Thr Arg Arg Ile Pro Thr Glu Pro Thr Phe
    9860   9865   9870

Ser Leu Thr Pro Gly Phe Arg Glu Thr Ser Thr Ser Glu Glu Thr
    9875   9880   9885

Thr Ser Ile Thr Glu Thr Ser Ala Val Leu Tyr Gly Val Pro Thr
    9890   9895   9900

Ser Ala Thr Thr Glu Val Ser Met Thr Glu Ile Met Ser Ser Asn
    9905   9910   9915

Arg Ile His Ile Pro Asp Ser Asp Gln Ser Thr Met Ser Pro Asp
    9920   9925   9930

Ile Ile Thr Glu Val Ile Thr Arg Leu Ser Ser Ser Ser Met Met
    9935   9940   9945

Ser Glu Ser Thr Gln Met Thr Ile Thr Thr Gln Lys Ser Ser Pro
    9950   9955   9960

Gly Ala Thr Ala Gln Ser Thr Leu Thr Leu Ala Thr Thr Thr Ala
    9965   9970   9975

Pro Leu Ala Arg Thr His Ser Thr Val Pro Pro Arg Phe Leu His
    9980   9985   9990

Ser Glu Met Thr Thr Leu Met   Ser Arg Ser Pro Glu   Asn Pro Ser
    9995   10000   10005

Trp Lys   Ser Ser Leu Phe Val   Glu Lys Thr Ser Ser   Ser Ser Ser
    10010   10015   10020

Leu Leu   Ser Leu Pro Val Thr   Thr Ser Pro Ser Val   Ser Ser Thr
    10025   10030   10035

Leu Pro   Gln Ser Ile Pro Ser   Ser Ser Phe Ser Val   Thr Ser Leu
    10040   10045   10050

Leu Thr   Pro Gly Met Val Lys   Thr Thr Asp Thr Ser   Thr Glu Pro
    10055   10060   10065

Gly Thr   Ser Leu Ser Pro Asn   Leu Ser Gly Thr Ser   Val Glu Ile
    10070   10075   10080

Leu Ala   Ala Ser Glu Val Thr   Thr Asp Thr Glu Lys   Ile His Pro
    10085   10090   10095

Ser Ser   Ser Met Ala Val Thr   Asn Val Gly Thr Thr   Ser Ser Gly
    10100   10105   10110

His Glu   Leu Tyr Ser Ser Val   Ser Ile His Ser Glu   Pro Ser Lys
    10115   10120   10125

Ala Thr   Tyr Pro Val Gly Thr   Pro Ser Ser Met Ala   Glu Thr Ser
    10130   10135   10140

Ile Ser   Thr Ser Met Pro Ala   Asn Phe Glu Thr Thr   Gly Phe Glu
    10145   10150   10155

Ala Glu Pro Phe Ser His Leu Thr Ser Gly Phe Arg Lys Thr Asn
10160 10165 10170

Met Ser Leu Asp Thr Ser Ser Val Thr Pro Thr Asn Thr Pro Ser
10175 10180 10185

Ser Pro Gly Ser Thr His Leu Leu Gln Ser Ser Lys Thr Asp Phe
10190 10195 10200

Thr Ser Ser Ala Lys Thr Ser Ser Pro Asp Trp Pro Pro Ala Ser
10205 10210 10215

Gln Tyr Thr Glu Ile Pro Val Asp Ile Ile Thr Pro Phe Asn Ala
10220 10225 10230

Ser Pro Ser Ile Thr Glu Ser Thr Gly Ile Thr Ser Phe Pro Glu
10235 10240 10245

Ser Arg Phe Thr Met Ser Val Thr Glu Ser Thr His His Leu Ser
10250 10255 10260

Thr Asp Leu Leu Pro Ser Ala Glu Thr Ile Ser Thr Gly Thr Val
10265 10270 10275

Met Pro Ser Leu Ser Glu Ala Met Thr Ser Phe Ala Thr Thr Gly
10280 10285 10290

Val Pro Arg Ala Ile Ser Gly Ser Gly Ser Pro Phe Ser Arg Thr
10295 10300 10305

Glu Ser Gly Pro Gly Asp Ala Thr Leu Ser Thr Ile Ala Glu Ser
10310 10315 10320

Leu Pro Ser Ser Thr Pro Val Pro Phe Ser Ser Ser Thr Phe Thr
10325 10330 10335

Thr Thr Asp Ser Ser Thr Ile Pro Ala Leu His Glu Ile Thr Ser
10340 10345 10350

Ser Ser Ala Thr Pro Tyr Arg Val Asp Thr Ser Leu Gly Thr Glu
10355 10360 10365

Ser Ser Thr Thr Glu Gly Arg Leu Val Met Val Ser Thr Leu Asp
10370 10375 10380

Thr Ser Ser Gln Pro Gly Arg Thr Ser Ser Ser Pro Ile Leu Asp
10385 10390 10395

Thr Arg Met Thr Glu Ser Val Glu Leu Gly Thr Val Thr Ser Ala
10400 10405 10410

Tyr Gln Val Pro Ser Leu Ser Thr Arg Leu Thr Arg Thr Asp Gly
10415 10420 10425

Ile Met Glu His Ile Thr Lys Ile Pro Asn Glu Ala Ala His Arg
10430 10435 10440

Gly Thr Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr Ser Pro
10445 10450 10455

Ala Ser Pro Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met Glu
10460 10465 10470

Thr Thr Thr Thr Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr
10475 10480 10485

Thr Ser Arg Ala Thr Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu
10490 10495 10500

Gly Thr Leu Thr Pro Leu Asn Ala Ser Met Gln Met Ala Ser Thr
10505 10510 10515

Ile Pro Thr Glu Met Met Ile Thr Thr Pro Tyr Val Phe Pro Asp
10520 10525 10530

Val Pro Glu Thr Thr Ser Ser Leu Ala Thr Ser Leu Gly Ala Glu
10535 10540 10545

Thr Ser Thr Ala Leu Pro Arg Thr Thr Pro Ser Val Phe Asn Arg
10550 10555 10560

Glu Ser Glu Thr Thr Ala Ser Leu Val Ser Arg Ser Gly Ala Glu
10565 10570 10575

Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser Ser Ser Glu Pro
10580 10585 10590

Asp Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu Thr Ile Pro
10595 10600 10605

Thr Val Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu Leu Asp
10610 10615 10620

Thr Val Ser Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser Ser
10625 10630 10635

Ala Ile Pro Thr Asn Ile Ser Pro Ser Glu Leu Asp Ala Leu Thr
10640 10645 10650

Pro Leu Val Thr Ile Ser Gly Thr Asp Thr Ser Thr Thr Phe Pro
10655 10660 10665

Thr Leu Thr Lys Ser Pro His Glu Thr Glu Thr Arg Thr Thr Trp
10670 10675 10680

Leu Thr His Pro Ala Glu Thr Ser Ser Thr Ile Pro Arg Thr Ile
10685 10690 10695

Pro Asn Phe Ser His His Glu Ser Asp Ala Thr Pro Ser Ile Ala
10700 10705 10710

Thr Ser Pro Gly Ala Glu Thr Ser Ser Ala Ile Pro Ile Met Thr
10715 10720 10725

Val Ser Pro Gly Ala Glu Asp Leu Val Thr Ser Gln Val Thr Ser
10730 10735 10740

Ser Gly Thr Asp Arg Asn Met Thr Ile Pro Thr Leu Thr Leu Ser
10745 10750 10755

Pro Gly Glu Pro Lys Thr Ile Ala Ser Leu Val Thr His Pro Glu
10760 10765 10770

Ala Gln Thr Ser Ser Ala Ile Pro Thr Ser Thr Ile Ser Pro Ala
10775 10780 10785

Val Ser Arg Leu Val Thr Ser Met Val Thr Ser Leu Ala Ala Lys
10790 10795 10800

Thr Ser Thr Thr Asn Arg Ala Leu Thr Asn Ser Pro Gly Glu Pro
10805 10810 10815

Ala Thr Thr Val Ser Leu Val Thr His Pro Ala Gln Thr Ser Pro
10820 10825 10830

Thr Val Pro Trp Thr Thr Ser Ile Phe Phe His Ser Lys Ser Asp
10835 10840 10845

Thr Thr Pro Ser Met Thr Thr Ser His Gly Ala Glu Ser Ser Ser
10850 10855 10860

Ala Val Pro Thr Pro Thr Val Ser Thr Glu Val Pro Gly Val Val
10865 10870 10875

Thr Pro Leu Val Thr Ser Ser Arg Ala Val Ile Ser Thr Thr Ile
10880 10885 10890

Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser
10895 10900 10905

Met Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala Ile Pro Thr
10910 10915 10920

Pro Thr Val Ser Pro Gly Val Pro Gly Val Val Thr Ser Leu Val
10925 10930 10935

Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr
10940 10945 10950

Phe Ser Leu Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser
10955 10960 10965

His Gly Thr Glu Ala Gly Ser Ala Val Pro Thr Val Leu Pro Glu
10970 10975 10980

Val Pro Gly Met Val Thr Ser Leu Val Ala Ser Ser Arg Ala Val
10985 10990 10995

Thr Ser Thr Thr Leu Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro
11000 11005 11010

Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser
11015 11020 11025

Ser Thr Val Pro Thr Val Ser Pro Glu Val Pro Gly Val Val Thr
11030 11035 11040

Ser Leu Val Thr Ser Ser Ser Gly Val Asn Ser Thr Ser Ile Pro
11045 11050 11055

Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr Thr Pro Ser Met
11060 11065 11070

Ala Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val Pro Thr Pro
11075 11080 11085

Thr Val Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu Val Thr
11090 11095 11100

Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Leu
11105 11110 11115

Ser Ser Ser Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His
11120 11125 11130

Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val Ser Pro Glu Val
11135 11140 11145

Pro Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg Ala Val Thr
11150 11155 11160

Ser Thr Thr Ile Pro Thr Leu Thr Ile Ser Ser Asp Glu Pro Glu
11165 11170 11175

Thr Thr Thr Ser Leu Val Thr His Ser Glu Ala Lys Met Ile Ser
11180 11185 11190

Ala Ile Pro Thr Leu Ala Val Ser Pro Thr Val Gln Gly Leu Val
11195 11200 11205

Thr Ser Leu Val Thr Ser Ser Gly Ser Glu Thr Ser Ala Phe Ser
11210 11215 11220

Asn Leu Thr Val Ala Ser Ser Gln Pro Glu Thr Ile Asp Ser Trp
11225 11230 11235

Val Ala His Pro Gly Thr Glu Ala Ser Ser Val Val Pro Thr Leu
11240 11245 11250

Thr Val Ser Thr Gly Glu Pro Phe Thr Asn Ile Ser Leu Val Thr
11255 11260 11265

His Pro Ala Glu Ser Ser Ser Thr Leu Pro Arg Thr Thr Ser Arg
11270 11275 11280

Phe Ser His Ser Glu Leu Asp Thr Met Pro Ser Thr Val Thr Ser
11285 11290 11295

Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr Thr Ile Ser Pro
11300 11305 11310

Gly Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser Ser Gly Arg
11315 11320 11325

Asp Ile Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro His Glu
11330 11335 11340

Ser Glu Ala Thr Ala Ser Trp Val Thr His Pro Ala Val Thr Ser
11345 11350 11355

Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro
11360 11365 11370

Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr
11375 11380 11385

Ser Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val Pro Asp Met
11390 11395 11400

Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser Ile Thr
11405 11410 11415

Ile Pro Thr Leu Thr Leu Ser Ser Gly Glu Pro Glu Thr Thr Thr
11420 11425 11430

Ser Phe Ile Thr Tyr Ser Glu Thr His Thr Ser Ser Ala Ile Pro
11435 11440 11445

Thr Leu Pro Val Ser Pro Gly Ala Ser Lys Met Leu Thr Ser Leu
11450 11455 11460

Val Ile Ser Ser Gly Thr Asp Ser Thr Thr Thr Phe Pro Thr Leu
11465 11470 11475

Thr Glu Thr Pro Tyr Glu Pro Glu Thr Thr Ala Ile Gln Leu Ile
11480 11485 11490

His Pro Ala Glu Thr Asn Thr Met Val Pro Arg Thr Thr Pro Lys
11495 11500 11505

Phe Ser His Ser Lys Ser Asp Thr Thr Leu Pro Val Ala Ile Thr
11510 11515 11520

Ser Pro Gly Pro Glu Ala Ser Ser Ala Val Ser Thr Thr Thr Ile
11525 11530 11535

Ser Pro Asp Met Ser Asp Leu Val Thr Ser Leu Val Pro Ser Ser
11540 11545 11550

Gly Thr Asp Thr Ser Thr Thr Phe Pro Thr Leu Ser Glu Thr Pro
11555 11560 11565

Tyr Glu Pro Glu Thr Thr Ala Thr Trp Leu Thr His Pro Ala Glu
11570 11575 11580

Thr Ser Thr Thr Val Ser Gly Thr Ile Pro Asn Phe Ser His Arg
11585 11590 11595

Gly Ser Asp Thr Ala Pro Ser Met Val Thr Ser Pro Gly Val Asp
11600 11605 11610

Thr Arg Ser Gly Val Pro Thr Thr Thr Ile Pro Pro Ser Ile Pro
11615 11620 11625

Gly Val Val Thr Ser Gln Val Thr Ser Ser Ala Thr Asp Thr Ser
11630 11635 11640

Thr Ala Ile Pro Thr Leu Thr Pro Ser Pro Gly Glu Pro Glu Thr
11645 11650 11655

Thr Ala Ser Ser Ala Thr His Pro Gly Thr Gln Thr Gly Phe Thr
11660 11665 11670

Val Pro Ile Arg Thr Val Pro Ser Ser Glu Pro Asp Thr Met Ala
11675 11680 11685

Ser Trp Val Thr His Pro Pro Gln Thr Ser Thr Pro Val Ser Arg
11690 11695 11700

Thr Thr Ser Ser Phe Ser His Ser Ser Pro Asp Ala Thr Pro Val
11705 11710 11715

Met Ala Thr Ser Pro Arg Thr Glu Ala Ser Ser Ala Val Leu Thr
11720 11725 11730

Thr Ile Ser Pro Gly Ala Pro Glu Met Val Thr Ser Gln Ile Thr
11735 11740 11745

Ser Ser Gly Ala Ala Thr Ser Thr Thr Val Pro Thr Leu Thr His
11750 11755 11760

Ser Pro Gly Met Pro Glu Thr Thr Ala Leu Leu Ser Thr His Pro
11765 11770 11775

Arg Thr Glu Thr Ser Lys Thr Phe Pro Ala Ser Thr Val Phe Pro
11780 11785 11790

Gln Val Ser Glu Thr Thr Ala Ser Leu Thr Ile Arg Pro Gly Ala
11795 11800 11805

Glu Thr Ser Thr Ala Leu Pro Thr Gln Thr Thr Ser Ser Leu Phe
11810 11815 11820

Thr Leu Leu Val Thr Gly Thr Ser Arg Val Asp Leu Ser Pro Thr
11825 11830 11835

Ala Ser Pro Gly Val Ser Ala Lys Thr Ala Pro Leu Ser Thr His
11840 11845 11850

Pro Gly Thr Glu Thr Ser Thr Met Ile Pro Thr Ser Thr Leu Ser
11855 11860 11865

Leu Gly Leu Leu Glu Thr Thr Gly Leu Leu Ala Thr Ser Ser Ser
11870 11875 11880

Ala Glu Thr Ser Thr Ser Thr Leu Thr Leu Thr Val Ser Pro Ala
11885 11890 11895

Val Ser Gly Leu Ser Ser Ala Ser Ile Thr Thr Asp Lys Pro Gln
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Thr Val Thr Ser Trp Asn Thr Glu Thr Ser Pro Ser Val Thr Ser
11915 11920 11925

Val Gly Pro Pro Glu Phe Ser Arg Thr Val Thr Gly Thr Thr Met
11930 11935 11940

Thr Leu Ile Pro Ser Glu Met Pro Thr Pro Pro Lys Thr Ser His
11945 11950 11955

Gly Glu Gly Val Ser Pro Thr Thr Ile Leu Arg Thr Thr Met Val
11960 11965 11970

Glu Ala Thr Asn Leu Ala Thr Thr Gly Ser Ser Pro Thr Val Ala
11975 11980 11985

Lys Thr Thr Thr Thr Phe Asn Thr Leu Ala Gly Ser Leu Phe Thr
11990 11995 12000

Pro Leu Thr Thr Pro Gly Met Ser Thr Leu Ala Ser Glu Ser Val
12005 12010 12015

Thr Ser Arg Thr Ser Tyr Asn His Arg Ser Trp Ile Ser Thr Thr
12020 12025 12030

Ser Ser Tyr Asn Arg Arg Tyr Trp Thr Pro Ala Thr Ser Thr Pro
12035 12040 12045

Val Thr Ser Thr Phe Ser Pro Gly Ile Ser Thr Ser Ser Ile Pro
12050 12055 12060

Ser Ser Thr Ala Ala Thr Val Pro Phe Met Val Pro Phe Thr Leu
12065 12070 12075

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His
12080 12085 12090

Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Glu Leu Gln Gly
12095 12100 12105

Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr
12110 12115 12120

Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser
12125 12130 12135

Ala Thr Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu
12140 12145 12150

Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn
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Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg
12170 12175 12180

Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro
12185 12190 12195

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser
12200 12205 12210

Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu
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Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
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Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met
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Glu Ser Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr
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Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
12275 12280 12285

Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr
12290 12295 12300

His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu
12305 12310 12315

Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly
12320 12325 12330

Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr
12335 12340 12345

His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr
12350 12355 12360

Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro
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Thr Ile Met Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn
12380 12385 12390

Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro
12395 12400 12405

Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
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Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser
12425 12430 12435

Gly Cys Arg Leu Thr Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala
12440 12445 12450

Thr Gly Val Asp Ala Ile Cys Ile His His Leu Asp Pro Lys Ser
12455 12460 12465

Pro Gly Leu Asn Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu
12470 12475 12480

Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn
12485 12490 12495

Ser Leu Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro Thr
12500 12505 12510

Ser Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
12515 12520 12525

Thr Pro Phe Ser Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu
12530 12535 12540

Val Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu
12545 12550 12555

Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu
12560 12565 12570

Arg Val Leu Gln Thr Leu Leu Gly Pro Met Phe Lys Asn Thr Ser
12575 12580 12585

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser
12590 12595 12600

Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His
12605 12610 12615

Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr
12620 12625 12630

Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro
12635 12640 12645

Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His
12650 12655 12660

Trp Ile Pro Val Pro Thr Ser Ser Thr Pro Gly Thr Ser Thr Val
12665 12670 12675

Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr
12680 12685 12690

Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
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Asn Leu Lys Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys
12710 12715 12720

Phe Asn Thr Thr Glu Arg Val Leu Gln Ser Leu Leu Gly Pro Met
12725 12730 12735

Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
12740 12745 12750

Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp
12755 12760 12765

Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp
12770 12775 12780

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile
12785 12790 12795

Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val
12800 12805 12810

Asn Gly Phe Thr His Gln Thr Ser Ala Pro Asn Thr Ser Thr Pro
12815 12820 12825

Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser
12830 12835 12840

Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu Leu Val Pro Phe Thr
12845 12850 12855

Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met His
12860 12865 12870

His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln
12875 12880 12885

Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu
12890 12895 12900

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asn Gly
12905 12910 12915

Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu Asp Pro
12920 12925 12930

Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser
12935 12940 12945

Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp
12950 12955 12960

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val
12965 12970 12975

Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr
12980 12985 12990

Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro
12995 13000 13005

Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln
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Tyr Gly Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr
13025 13030 13035

Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn
13040 13045 13050

Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu
13055 13060 13065

Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys
13070 13075 13080

Thr His His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln
13085 13090 13095

Leu Tyr Trp Gln Leu Ser Gln Met Thr Asn Gly Ile Lys Glu Leu
13100 13105 13110

Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe
13115 13120 13125

Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser
13130 13135 13140

Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val Pro Ser
13145 13150 13155

Pro Thr Thr Thr Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe
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Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly
13175 13180 13185

Ser Arg Lys Phe Asn Ile Thr Glu Ser Val Leu Gln Gly Leu Leu
13190 13195 13200

Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly
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Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Val Ala Thr
13220 13225 13230

Arg Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Lys Ile Pro
13235 13240 13245

Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
13250 13255 13260

His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser
13265 13270 13275

Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr Thr
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Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr
13295 13300 13305

Pro Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu
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Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu
13325 13330 13335

Asp Met Arg Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg
13340 13345 13350

Val Leu Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val
13355 13360 13365

Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
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Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr His Arg
13385 13390 13395

Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
13400 13405 13410

Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr
13415 13420 13425

Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln
13430 13435 13440

Ser Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His
13445 13450 13455

Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro Met Thr
13460 13465 13470

Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr
13475 13480 13485

Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys
13490 13495 13500

Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val
13505 13510 13515

Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
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Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp
13535 13540 13545

Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp
13550 13555 13560

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile
13565 13570 13575

Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val
13580 13585 13590

Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Ile Pro
13595 13600 13605

Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser
13610 13615 13620

Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Val Leu Phe Thr
13625 13630 13635

Leu Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn Met Gln
13640 13645 13650

His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln
13655 13660 13665

Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu
13670 13675 13680

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly
13685 13690 13695

Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His His Pro Asp Pro
13700 13705 13710

Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser
13715 13720 13725

Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ala Leu Asp
13730 13735 13740

Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His Arg Ser Ser Val
13745 13750 13755

Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala
13760 13765 13770

Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala Ser His
13775 13780 13785

Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Arg
13790 13795 13800

Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn Thr Thr
13805 13810 13815

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr
13820 13825 13830

Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
13835 13840 13845

Pro Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr
13850 13855 13860

His Arg Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu
13865 13870 13875

Tyr Leu Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly
13880 13885 13890

Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr
13895 13900 13905

His Arg Ser Ser Val Pro Thr Thr Ser Thr Gly Val Val Ser Glu
13910 13915 13920

Glu Pro Phe Thr Leu Asn Phe Thr Ile Asn Asn Leu Arg Tyr Met
13925 13930 13935

Ala Asp Met Gly Gln Pro Gly Ser Leu Lys Phe Asn Ile Thr Asp
13940 13945 13950

Asn Val Met Gln His Leu Leu Ser Pro Leu Phe Gln Arg Ser Ser
13955 13960 13965

Leu Gly Ala Arg Tyr Thr Gly Cys Arg Val Ile Ala Leu Arg Ser
13970 13975 13980

Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu Leu Cys Thr Tyr
13985 13990 13995

Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys Gln Val Phe
14000 14005 14010

His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu Gly Pro
14015 14020 14025

Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr Asn Glu
14030 14035 14040

Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr Thr
14045 14050 14055

Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His
14060 14065 14070

Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr
14075 14080 14085

Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu
14090 14095 14100

Gly Val Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser
14105 14110 14115

Met Gly Pro Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro
14120 14125 14130

Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr
14135 14140 14145

His Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr
14150 14155 14160

Trp Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly Phe
14165 14170 14175

Tyr Val Leu Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr Ala Pro
14180 14185 14190

Gln Asn Leu Ser Ile Arg Gly Glu Tyr Gln Ile Asn Phe His Ile
14195 14200 14205

Val Asn Trp Asn Leu Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr
14210 14215 14220

Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr
14225 14230 14235

Lys Gly Ser Gln Leu His Asp Thr Phe Arg Phe Cys Leu Val Thr
14240 14245 14250

Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys Ala Leu Phe
14255 14260 14265

Ser Ser Asn Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu Asp
14270 14275 14280

Lys Thr Leu Asn Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln
14285 14290 14295

Leu Val Asp Ile His Val Thr Glu Met Glu Ser Ser Val Tyr Gln
14300 14305 14310

Pro Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr
14315 14320 14325

Ile Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro Gly Thr
14330 14335 14340

Thr Asn Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu Asn
14345 14350 14355

Gln Leu Phe Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys
14360 14365 14370

Gln Val Ser Thr Phe Arg Ser Val Pro Asn Arg His His Thr Gly
14375 14380 14385

Val Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala Arg Arg Val Asp
14390 14395 14400

Arg Val Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr Arg Asn Gly
14405 14410 14415

Thr Gln Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val
14420 14425 14430

Asp Gly Tyr Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser
14435 14440 14445

Asp Leu Pro Phe Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu
14450 14455 14460

Leu Gly Val Ile Thr Cys Leu Ile Cys Gly Val Leu Val Thr Thr
14465 14470 14475

Arg Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val Gln Gln Gln Cys
    14480   14485   14490

Pro Gly Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp Leu Gln
    14495   14500   14505

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<212> PRT
<213> Homo sapiens

<400> 54
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Val Thr Asn Pro Leu His Glu Leu Lys Ala Ala Ala Phe Pro Gln Thr
            20   25   30

Thr Glu Lys Ile Ser Pro Asn Trp Glu Ser Gly Ile Asn Val Asp Leu
        35   40   45

Ala Ile Ser Thr Arg Gln Tyr His Leu Gln Gln Leu Phe Tyr Arg Tyr
    50   55   60

Gly Glu Asn Asn Ser Leu Ser Val Glu Gly Phe Arg Lys Leu Leu Gln
65   70   75   80

Asn Ile Gly Ile Asp Lys Ile Lys Arg Ile His Ile His His Asp His
                85   90   95

Asp His His Ser Asp His Glu His His Ser Asp His Glu Arg His Ser
            100   105   110

Asp His Glu His His Ser Glu His Glu His His Ser Asp His Asp His
        115   120   125

His Ser His His Asn His Ala Ala Ser Gly Lys Asn Lys Arg Lys Ala
    130   135   140

Leu Cys Pro Asp His Asp Ser Asp Ser Ser Gly Lys Asp Pro Arg Asn
145   150   155   160

Ser Gln Gly Lys Gly Ala His Arg Pro Glu His Ala Ser Gly Arg Arg
                165   170   175

Asn Val Lys Asp Ser Val Ser Ala Ser Glu Val Thr Ser Thr Val Tyr
            180   185   190

Asn Thr Val Ser Glu Gly Thr His Phe Leu Glu Thr Ile Glu Thr Pro
        195   200   205

Arg Pro Gly Lys Leu Phe Pro Lys Asp Val Ser Ser Ser Thr Pro Pro
    210   215   220

Ser Val Thr Ser Lys Ser Arg Val Ser Arg Leu Ala Gly Arg Lys Thr

225 230 235 240

Asn Glu Ser Val Ser Glu Pro Arg Lys Gly Phe Met Tyr Ser Arg Asn
245 250 255

Thr Asn Glu Asn Pro Gln Glu Cys Phe Asn Ala Ser Lys Leu Leu Thr
260 265 270

Ser His Gly Met Gly Ile Gln Val Pro Leu Asn Ala Thr Glu Phe Asn
275 280 285

Tyr Leu Cys Pro Ala Ile Ile Asn Gln Ile Asp Ala Arg Ser Cys Leu
290 295 300

Ile His Thr Ser Glu Lys Lys Ala Glu Ile Pro Pro Lys Thr Tyr Ser
305 310 315 320

Leu Gln Ile Ala Trp Val Gly Gly Phe Ile Ala Ile Ser Ile Ile Ser
325 330 335

Phe Leu Ser Leu Leu Gly Val Ile Leu Val Pro Leu Met Asn Arg Val
340 345 350

Phe Phe Lys Phe Leu Leu Ser Phe Leu Val Ala Leu Ala Val Gly Thr
355 360 365

Leu Ser Gly Asp Ala Phe Leu His Leu Leu Pro His Ser His Ala Ser
370 375 380

His His His Ser His Ser His Glu Glu Pro Ala Met Glu Met Lys Arg
385 390 395 400

Gly Pro Leu Phe Ser His Leu Ser Ser Gln Asn Ile Glu Glu Ser Ala
405 410 415

Tyr Phe Asp Ser Thr Trp Lys Gly Leu Thr Ala Leu Gly Gly Leu Tyr
420 425 430

Phe Met Phe Leu Val Glu His Val Leu Thr Leu Ile Lys Gln Phe Lys
435 440 445

Asp Lys Lys Lys Lys Asn Gln Lys Lys Pro Glu Asn Asp Asp Asp Val
450 455 460

Glu Ile Lys Lys Gln Leu Ser Lys Tyr Glu Ser Gln Leu Ser Thr Asn
465 470 475 480

Glu Glu Lys Val Asp Thr Asp Asp Arg Thr Glu Gly Tyr Leu Arg Ala
485 490 495

Asp Ser Gln Glu Pro Ser His Phe Asp Ser Gln Gln Pro Ala Val Leu
500 505 510

Glu Glu Glu Glu Val Met Ile Ala His Ala His Pro Gln Glu Val Tyr

515 520 525

Asn Glu Tyr Val Pro Arg Gly Cys Lys Asn Lys Cys His Ser His Phe
530 535 540

His Asp Thr Leu Gly Gln Ser Asp Asp Leu Ile His His His His Asp
545 550 555 560

Tyr His His Ile Leu His His His His His Gln Asn His His Pro His
565 570 575

Ser His Ser Gln Arg Tyr Ser Arg Glu Glu Leu Lys Asp Ala Gly Val
580 585 590

Ala Thr Leu Ala Trp Met Val Ile Met Gly Asp Gly Leu His Asn Phe
595 600 605

Ser Asp Gly Leu Ala Ile Gly Ala Ala Phe Thr Glu Gly Leu Ser Ser
610 615 620

Gly Leu Ser Thr Ser Val Ala Val Phe Cys His Glu Leu Pro His Glu
625 630 635 640

Leu Gly Asp Phe Ala Val Leu Leu Lys Ala Gly Met Thr Val Lys Gln
645 650 655

Ala Val Leu Tyr Asn Ala Leu Ser Ala Met Leu Ala Tyr Leu Gly Met
660 665 670

Ala Thr Gly Ile Phe Ile Gly His Tyr Ala Glu Asn Val Ser Met Trp
675 680 685

Ile Phe Ala Leu Thr Ala Gly Leu Phe Met Tyr Val Ala Leu Val Asp
690 695 700

Met Val Pro Glu Met Leu His Asn Asp Ala Ser Asp His Gly Cys Ser
705 710 715 720

Arg Trp Gly Tyr Phe Phe Leu Gln Asn Ala Gly Met Leu Leu Gly Phe
725 730 735

Gly Ile Met Leu Leu Ile Ser Ile Phe Glu His Lys Ile Val Phe Arg
740 745 750

Ile Asn Phe
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<210> 55
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<212> PRT
<213> Homo sapiens

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Val Lys Tyr Asp Pro Ser Phe Arg Gly Pro Ile Lys Asn Arg Ser Cys
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Thr Asp Val Ile Cys Cys Val Leu Phe Leu Leu Phe Ile Leu Gly Tyr
35 40 45

Ile Val Val Gly Ile Val Ala Trp Leu Tyr Gly Asp Pro Arg Gln Val
50 55 60

Leu Tyr Pro Arg Asn Ser Thr Gly Ala Tyr Cys Gly Met Gly Glu Asn
65 70 75 80

Lys Asp Lys Pro Tyr Leu Leu Tyr Phe Asn Ile Phe Ser Cys Ile Leu
85 90 95

Ser Ser Asn Ile Ile Ser Val Ala Glu Asn Gly Leu Gln Cys Pro Thr
100 105 110

Pro Gln Val Cys Val Ser Ser Cys Pro Glu Asp Pro Trp Thr Val Gly
115 120 125

Lys Asn Glu Phe Ser Gln Thr Val Gly Glu Val Phe Tyr Thr Lys Asn
130 135 140

Arg Asn Phe Cys Leu Pro Gly Val Pro Trp Asn Met Thr Val Ile Thr
145 150 155 160

Ser Leu Gln Gln Glu Leu Cys Pro Ser Phe Leu Leu Pro Ser Ala Pro
165 170 175

Ala Leu Gly Arg Cys Phe Pro Trp Thr Asn Val Thr Pro Pro Ala Leu
180 185 190

Pro Gly Ile Thr Asn Asp Thr Thr Ile Gln Gln Gly Ile Ser Gly Leu
195 200 205

Ile Asp Ser Leu Asn Ala Arg Asp Ile Ser Val Lys Ile Phe Glu Asp
210 215 220

Phe Ala Gln Ser Trp Tyr Trp Ile Leu Val Ala Leu Gly Val Ala Leu
225 230 235 240

Val Leu Ser Leu Leu Phe Ile Leu Leu Leu Arg Leu Val Ala Gly Pro
245 250 255

Leu Val Leu Val Leu Ile Leu Gly Val Leu Gly Val Leu Ala Tyr Gly
260 265 270

Ile Tyr Tyr Cys Trp Glu Glu Tyr Arg Val Leu Arg Asp Lys Gly Ala
275 280 285

Ser Ile Ser Gln Leu Gly Phe Thr Thr Asn Leu Ser Ala Tyr Gln Ser
290 295 300

Val Gln Glu Thr Trp Leu Ala Ala Leu Ile Val Leu Ala Val Leu Glu
305 310 315 320

Ala Ile Leu Leu Leu Met Leu Ile Phe Leu Arg Gln Arg Ile Arg Ile
325 330 335

Ala Ile Ala Leu Leu Lys Glu Ala Ser Lys Ala Val Gly Gln Met Met
340 345 350

Ser Thr Met Phe Tyr Pro Leu Val Thr Phe Val Leu Leu Leu Ile Cys
355 360 365

Ile Ala Tyr Trp Ala Met Thr Ala Leu Tyr Leu Ala Thr Ser Gly Gln
370 375 380

Pro Gln Tyr Val Leu Trp Ala Ser Asn Ile Ser Ser Pro Gly Cys Glu
385 390 395 400

Lys Val Pro Ile Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn
405 410 415

Ser Ser Cys Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys
420 425 430

Gly Leu Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu
435 440 445

Gly Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val
450 455 460

Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro Gln
465 470 475 480

Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr Leu Arg
485 490 495

Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu Thr Leu Val
500 505 510

Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His Lys Leu Arg Gly
515 520 525

Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys Cys Phe Lys Cys Cys
530 535 540

Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe Leu Asn Arg Asn Ala Tyr
545 550 555 560

Ile Met Ile Ala Ile Tyr Gly Lys Asn Phe Cys Val Ser Ala Lys Asn
565 570 575

Ala Phe Met Leu Leu Met Arg Asn Ile Val Arg Val Val Val Leu Asp
580 585 590

Lys Val Thr Asp Leu Leu Leu Phe Phe Gly Lys Leu Leu Val Val Gly
595 600 605

Gly Val Gly Val Leu Ser Phe Phe Phe Phe Ser Gly Arg Ile Pro Gly
610 615 620

Leu Gly Lys Asp Phe Lys Ser Pro His Leu Asn Tyr Tyr Trp Leu Pro
625 630 635 640

Ile Met Thr Ser Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe
645 650 655

Ser Val Phe Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe Leu Glu
660 665 670

Asp Leu Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser
675 680 685

Lys Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp
690 695 700

Asn Lys Lys Arg Lys Lys
705 710

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<400> 56
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Lys Pro Arg Arg Asn Leu Glu Glu Asp Asp Tyr Leu His Lys Asp Thr
20 25 30

Gly Glu Thr Ser Met Leu Lys Arg Pro Val Leu Leu His Leu His Gln
35 40 45

Thr Ala His Ala Asp Glu Phe Asp Cys Pro Ser Glu Leu Gln His Thr
50 55 60

Gln Glu Leu Phe Pro Gln Trp His Leu Pro Ile Lys Ile Ala Ala Ile
65 70 75 80

Ile Ala Ser Leu Thr Phe Leu Tyr Thr Leu Leu Arg Glu Val Ile His
85 90 95

Pro Leu Ala Thr Ser His Gln Gln Tyr Phe Tyr Lys Ile Pro Ile Leu
100 105 110

Val Ile Asn Lys Val Leu Pro Met Val Ser Ile Thr Leu Leu Ala Leu
115 120 125

Val Tyr Leu Pro Gly Val Ile Ala Ala Ile Val Gln Leu His Asn Gly

130 135 140

Thr Lys Tyr Lys Lys Phe Pro His Trp Leu Asp Lys Trp Met Leu Thr
145 150 155 160

Arg Lys Gln Phe Gly Leu Leu Ser Phe Phe Phe Ala Val Leu His Ala
165 170 175

Ile Tyr Ser Leu Ser Tyr Pro Met Arg Arg Ser Tyr Arg Tyr Lys Leu
180 185 190

Leu Asn Trp Ala Tyr Gln Gln Val Gln Gln Asn Lys Glu Asp Ala Trp
195 200 205

Ile Glu His Asp Val Trp Arg Met Glu Ile Tyr Val Ser Leu Gly Ile
210 215 220

Val Gly Leu Ala Ile Leu Ala Leu Leu Ala Val Thr Ser Ile Pro Ser
225 230 235 240

Val Ser Asp Ser Leu Thr Trp Arg Glu Phe His Tyr Ile Gln Ser Lys
245 250 255

Leu Gly Ile Val Ser Leu Leu Leu Gly Thr Ile His Ala Leu Ile Phe
260 265 270

Ala Trp Asn Lys Trp Ile Asp Ile Lys Gln Phe Val Trp Tyr Thr Pro
275 280 285

Pro Thr Phe Met Ile Ala Val Phe Leu Pro Ile Val Val Leu Ile Phe
290 295 300

Lys Ser Ile Leu Phe Leu Pro Cys Leu Arg Lys Lys Ile Leu Lys Ile
305 310 315 320

Arg His Gly Trp Glu Asp Val Thr Lys Ile Asn Lys Thr Glu Ile Cys
325 330 335

Ser Gln Leu

<210> 57
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 57
Val Val Arg Lys Pro Val Ile Ala Leu
1 5

<210> 58
<211> 9
<212> PRT

<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 58
Leu Leu Ser Glu Lys Lys Lys Ile Ser
1 5

<210> 59
<211> 10
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 59
Ala Pro Ala Ser Lys Pro Arg Pro Arg Leu
1 5 10

<210> 60
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 60
Arg Tyr Gly Gln Leu Ser Glu Lys Phe
1 5

<210> 61
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 61
Val Tyr Ile Ser Asn Val Ser Lys Leu
1 5

<210> 62
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 62
Leu Pro Thr Lys Glu Thr Pro Ser Phe
1 5

<210> 63
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 63
Gly Glu Ala Pro Pro Pro Pro Pro Ala
1 5

<210> 64
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 64
Leu Glu Glu Ile Ser Lys Gln Glu Ile
1 5

<210> 65
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 65
Ile Tyr Asn His Ile Thr Val Lys Ile
1 5

<210> 66
<211> 160
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 66
Val Asp Leu Glu Pro Thr Val Ile Gly Glu Leu Thr Ser Val Thr Gln
1 5 10 15

Val Arg Ser Gln Gly Ala Gly Thr Gly Gly Leu Ser Trp Gly Gly Ser
            20 25 30

Ala Gly His Ser Pro Thr Leu Pro Pro Arg Ser Leu Ser Leu Leu Leu
        35 40 45

Leu Pro His His Val Leu Gln Met Lys Phe Ala Leu Ala Leu Thr Ala
    50 55 60

Ser Ser Ser Thr Leu Ser Asn Ser Ser Gln Ala Arg Lys Met Leu Pro
65 70 75 80

Ile Thr Met Pro Glu Gly Thr Thr Pro Leu Ala Arg Arg Ser Leu Thr
                85 90 95

Ser Cys Trp Thr Glu Phe Ala Ser Trp Leu Thr Ser Ala Pro Val Phe

100 105 110

Arg Ala Ser Trp Phe Ser Thr Ala Leu Val Gly Glu Leu Val Leu Gly
115 120 125

Ser Pro Arg Cys Ser Trp Asn Val Ser Gln Leu Ile Met Ala Arg Ser
130 135 140

Pro Ser Trp Ser Ser Pro Phe Thr Arg Arg Pro Arg Phe Pro Gln Leu
145 150 155 160

<210> 67
<211> 16
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 67
Ala Pro Pro Arg Ser His Pro Ser Ile Lys Arg Gly Leu Ser Ser Leu
1 5 10 15

<210> 68
<211> 28
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 68
Met Val Arg Arg Ala Arg Trp Pro Gly Gly Arg Gly Glu Ala Arg Lys
1 5 10 15

Ala Pro Arg Thr Ala Pro Gly Val Arg Pro Pro Phe
20 25

<210> 69
<211> 199
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 69
Trp Val Asn Cys Leu Phe Val Ser Gly Arg Ala Ala Ala Gly Gly Gly
1 5 10 15

Gly Gly Gly Ala Val Pro Pro Tyr Leu Glu Leu Ala Gly Pro Pro Phe
20 25 30

Leu Leu Leu Thr Leu Ile Arg Ile Gly Leu Gly Arg Arg Ser Gly Arg
35 40 45

Ala Gly Gly Arg Ala Gly Thr Gln Cys Gly Gly Glu Arg Gly Pro Gly
50 55 60

Phe Ala Ala Phe Arg Pro Leu Arg Pro Phe Arg Arg Leu Arg Val Cys
65 70 75 80

Ala Val Cys Val Arg Gly Ser Ala Leu Gly Arg Ser Val Gly Leu Pro
85 90 95

Arg Gly Gly Ala Ala Gly Ala Pro Phe Ser Ser Ser Pro Ala Pro His
100 105 110

Pro Arg Arg Val Leu Cys Arg Cys Leu Leu Phe Leu Phe Phe Ser Cys
115 120 125

His Asp Arg Arg Gly Asp Ser Gln Pro Tyr Gln Val Pro Ala Glu Ala
130 135 140

Gly Val Glu Gly Leu Glu Gly Ala Gly Gly Gly Arg Glu Gly Leu Leu
145 150 155 160

Leu Glu Arg Arg Pro Gln Lys Ser Ile Gln Ala Leu Arg Cys Asn Thr
165 170 175

Ser Glu Thr Ser Thr Ala Asp Pro Leu Lys Ile Pro Gly Leu Val Pro
180 185 190

Leu Ala Leu Ser Ser Lys Val
195

<210> 70
<211> 101
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 70
Met Pro Leu Pro Val Gln Val Phe Asn Leu Gln Val Thr Ser Arg Gly
1 5 10 15

Arg Pro Gly Pro Pro Arg Pro Arg Ala Pro Arg His Trp Gly Arg Ala
20 25 30

Glu Val Glu Gln Gly Arg Gly Ala Cys Ala Arg Ser Arg Ser Gly Thr
35 40 45

Leu Arg Ala Gly Pro Pro Arg Ala Ala Arg Val Gly Gly Cys Arg Ala
50 55 60

Glu Gly Ala Ser Pro Pro Trp Leu Arg Ala Ala Ile Gly Gly Arg Arg
65 70 75 80

Ala Ala Pro Ala Pro Pro Pro Leu Pro Ala Ala His Gly Arg Gly Ser
85 90 95

Arg Pro Pro Arg Arg

100

<210> 71
<211> 162
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 71
Gln Pro Ala Gln Pro Arg Thr Gly Ala Pro Ala Arg Arg Pro Arg Pro
1 5 10 15

Arg Pro Ser Phe Pro Val Ser Leu Arg Ser Ala Ala Pro Pro Thr Gly
20 25 30

Thr Ala Gly Gly Thr Gly Arg Phe Val Leu Arg Pro Gly Glu Ser Gly
35 40 45

Ala Gly Gly Gly Gly Asp Ala Trp Asp Thr Gly Leu Gln Ala Arg Arg
50 55 60

Gly Thr Ala Ala Gly Thr Ser Gly Ala Pro Asn Arg Ser Gln Leu Ser
65 70 75 80

Ser Leu Thr Phe Pro Ala Gln Leu Arg Arg Ile Gly Val Ser Gly Arg
85 90 95

Lys Pro Gly Ala Gly Gly Arg Leu Gly Pro Gly Ser Arg Thr Cys Ala
100 105 110

Pro Arg Cys Leu Pro Arg Ala Arg Arg Gly Pro Gly Ala His Pro Arg
115 120 125

Gly Gly Arg Cys Pro Pro Ala Glu Thr Ala Leu Phe Arg Glu Ala Glu
130 135 140

Glu Gly Thr Gln Lys Tyr Ser Leu Pro Ser Asp Pro Ala Gly Gln Ala
145 150 155 160

Ala Phe

<210> 72
<211> 39
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 72
Phe Arg Leu His Thr Gly Pro Val Ser Pro Val Gly Gly Arg Arg Gln
1 5 10 15

Met Gly Arg Pro Lys His Gly Asp Gly Phe Ser Leu Gln Val Cys Ser

20 25 30

Phe Ile Met Glu Gln Asn Gly
35

<210> 73
<211> 71
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 73
Gly Val Val Glu Ile Thr Gly Glu Pro Pro Cys Ser Cys Arg Gly Glu
1 5 10 15

Glu Glu Ala Ser Arg Ala Gly Arg Ala Gly Gly Val Arg Leu Lys Arg
20 25 30

Gly Ser Arg Gly Pro Gly Glu Leu Asn Val Gly Pro Ala Pro Gly Lys
35 40 45

Thr Gly Leu Leu Ile Pro Leu Leu Arg Asn Trp Glu Cys Gly Ser Leu
50 55 60

Leu Arg Ala Leu Ser Ala Leu
65 70

<210> 74
<211> 14
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 74
Lys Met Gly Phe Pro Glu Ala Ala Arg Lys Gly Asn Ser Leu
1 5 10

<210> 75
<211> 17
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 75
Leu Glu Ala Arg Ile Lys Glu Lys Ile Glu Glu Leu Gln Gln Ala Leu
1 5 10 15

Ile

<210> 76
<211> 16
<212> PRT

<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 76
Glu Ile Lys Lys Arg Phe Arg Gln Phe Lys Gln Ala Val Tyr Lys Gln
1 5 10 15

<210> 77
<211> 16
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 77
Ala His Glu Ser Ala Ala Met Ala Glu Thr Leu Gln His Val Pro Ser
1 5 10 15

<210> 78
<211> 16
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 78
Asn Arg Pro Ser Val Gln Ala Ala Leu Lys Leu Lys Gln Val Gly Val
1 5 10 15

<210> 79
<211> 19
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 79
Lys Thr Asp Asp Leu Lys Lys Arg His Ile Thr Phe Thr Leu Gly Cys
1 5 10 15

Gly Ile Cys

<210> 80
<211> 16
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 80
Met Lys Leu Asp Glu Asp Val Lys Arg Asn Asp Ile Ala Met Ala Ile
1 5 10 15

<210> 81

<211> 26
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 81
Asn Ser Ile Ser Gln Ile Pro Ser Asp His Ile Leu Thr Pro Ala Leu
1 5 10 15

Phe Ile Thr Phe Met Thr Ile Leu Asp Leu
20 25

<210> 82
<211> 24
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 82
Thr Val Phe Ser Thr Ser Ser Leu Lys Leu Asn Gln Pro Gln Lys Tyr
1 5 10 15

Leu Lys Met Lys Ser Trp Pro Cys
20

<210> 83
<211> 24
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 83
Ala Glu Glu Asp Arg Arg Lys Lys Val Ile Thr Ser Cys Leu Leu Asn
1 5 10 15

Phe Asn Leu Ser Lys Ala Gln Ser
20

<210> 84
<211> 34
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 84
Arg Ser Phe Ser Thr Ser Ala Gln Val Gly Gln Thr Arg Gly Gly Leu
1 5 10 15

Gln Ala Glu Ala Pro Arg Pro Gly Pro Arg Ala Ser Pro Val Arg Gly
20 25 30

Gln Leu

<210> 85
<211> 16
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 85
Arg Gly Tyr Val Val Arg Lys Pro Val Ile Ala Leu Ser Val Lys Ile
1 5 10 15

<210> 86
<211> 86
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 86
Val Asp Met Asp Phe Gly Thr Gly Gly Gln Gly Ala Gly Pro Val Gly
1 5 10 15

Arg Gly Lys Asp Trp Ser Cys Thr Leu Ala Val His Leu Leu Ser Glu
20 25 30

Lys Lys Lys Ile Ser Phe Ser Gln Ile Asp Arg Ala Trp Gly Gly Ser
35 40 45

Gln Gly Thr Val Leu Asp Lys Trp Gly Pro Gly Val Val Ser Glu Leu
50 55 60

His Pro Ser Ala Lys Glu Val Ser Val Gly Arg Asn Ser Val Glu Ser
65 70 75 80

Leu Met Thr Trp Ala Ser
85

<210> 87
<211> 66
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 87
Glu Lys Gly Ser His Glu Glu Glu Val Arg Val Pro Ala Leu Ser Trp
1 5 10 15

Gly Arg Pro Arg Ala Pro Ala Pro Ala Ser Lys Pro Arg Pro Arg Leu
20 25 30

Asp Leu Asn Cys Leu Trp Leu Arg Pro Gln Pro Ile Phe Leu Trp Lys
35 40 45

Leu Arg Pro Arg Pro Val Pro Ala Ala Thr Pro Leu Thr Gly Pro Leu
    50   55   60

Pro Leu
65

<210> 88
<211> 17
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 88
Arg Tyr Gly Gln Leu Ser Glu Lys Phe Asn Arg Arg Lys Val Met Asp
1   5   10   15

Ser

<210> 89
<211> 15
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 89
Met Val Tyr Ile Ser Asn Val Ser Lys Leu Cys Phe Ser Lys Met
1   5   10   15

<210> 90
<211> 48
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 90
Asn Thr Leu Pro Thr Lys Glu Thr Pro Ser Phe Leu Leu Asn Pro His
1   5   10   15

Thr Ser Trp Val Pro Arg Pro His Arg Glu Ala Pro Arg Leu Arg Val
            20   25   30

Gly Val Ala Ala Pro Leu Gln Arg Pro Leu Pro Ala Leu His Ser His
        35   40   45

<210> 91
<211> 58
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Polipéptido sintético"

<400> 91
Phe Gly Asp Ile Tyr Leu Gly Glu Ala Pro Pro Pro Pro Pro Ala Ala
1 5 10 15

Arg Arg Pro Gly Pro Cys Gly Cys Gln Asp Gln Ala Arg Ser Arg Lys
20 25 30

Glu Val Val Ala Pro Ala Gly Ser Pro Arg Lys Ser Arg His Arg Arg
35 40 45

Ile Val Ala Arg Thr Gln Arg Pro Leu Gly
50 55

<210> 92
<211> 17
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 92
Gly Ser Ala Ser Asp Leu Leu Glu Glu Ile Ser Lys Gln Glu Ile Ser
1 5 10 15

Phe

<210> 93
<211> 16
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 93
Gln Leu Ile Tyr Asn His Ile Thr Val Lys Ile Asn Leu Gln Gly Asp
1 5 10 15

<210> 94
<211> 10
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 94
Arg Pro Arg Pro Ser Phe Pro Val Ser Leu
1 5 10

<210> 95
<211> 10
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 95
Arg Pro Lys His Gly Asp Gly Phe Ser Leu
1 5 10

<210> 96
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 96
Gly Pro Ala Pro Gly Lys Thr Gly Leu
1 5

<210> 97
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 97
Glu Ala Ala Arg Lys Gly Asn Ser Leu
1 5

<210> 98
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 98
Arg Ile Lys Glu Lys Ile Glu Glu Leu
1 5

<210> 99
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 99
Glu Ile Lys Lys Arg Phe Arg Gln Phe
1 5

<210> 100
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 100
His Glu Ser Ala Ala Met Ala Glu Thr

1 5

<210> 101
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 101
Ala Leu Lys Leu Lys Gln Val Gly Val
1 5

<210> 102
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 102
Asp Leu Lys Lys Arg His Ile Thr Phe
1 5

<210> 103
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 103
Asp Val Lys Arg Asn Asp Ile Ala Met
1 5

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

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 104
Ile Pro Ser Asp His Ile Leu Thr Pro Ala
1 5 10

<210> 105
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 105
Thr Val Phe Ser Thr Ser Ser Leu Lys
1 5

<210> 106
<211> 8
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 106
Ile Thr Ser Cys Leu Leu Asn Phe
1 5

<210> 107
<211> 9
<212> PRT
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Péptido sintético"

<400> 107
Arg Ala Ser Pro Val Arg Gly Gln Leu
1 5

<210> 108
<211> 19
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Primer sintético"

<400> 108
cacaccagat cggcatcaa 19

<210> 109
<211> 21
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Primer sintético"

<400> 109
cgatgatgtg tccgtgtatg t 21

<210> 110
<211> 23
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Sonda sintética"

<400> 110
atcctgccac accagatgac cac 23

<210> 111
<211> 26
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Primer sintético"

<400> 111
ctgcttcgga tttactagaa gagata 26

<210> 112
<211> 20
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Primer sintético"

<400> 112
gcgttcccac aaaggaattg 20

<210> 113
<211> 24
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Sonda sintética"

<400> 113
tgctgacttt ggctctgctt ccat 24

<210> 114
<211> 20
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Primer sintético"

<400> 114
actctcttcc gcatcgctgt 20

<210> 115
<211> 20
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Primer sintético"

<400> 115
ccgacgggtt tccgatccaa 20

<210> 116
<211> 18
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Sonda sintética"

<400> 116
ctgttgggct cgcggttg 18

<210> 117
<211> 20
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Primer sintético"

<400> 117
tggcatcaga ttgcaaagac 20

<210> 118
<211> 20
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Primer sintético"

<400> 118
acgccgggtg atgtatctat 20

<210> 119
<211> 20
<212> ADN
<213> Secuencia Artificial

<220>
<221> source
<223> /nota="Descripción de Secuencia Artificial: Sonda sintética"

<400> 119
cgaaacgcac ccgtcagacg 20