

LISTADO DE SECUENCIAS

<110> Immatics Biotechnologies GmbH

<120> RECEPTORES DE LINFOCITOS T E INMUNOTERAPIAS BASADAS EN EL USO DE LOS MISMOS CONTRA CÁNCERES POSITIVOS PARA PRAME

<130> 1017-11 PCT

<150> US 62/475,329

<151> 2017-03-23

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<151> 2017-03-23

<160> 204

<170> PatentIn version 3.5

<210> 1

<211> 6

<212> PRT

<213> Homo sapiens

<400> 1

Ser Ser Asn Phe Tyr Ala

1 5

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Met Thr Leu

1

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<211> 11

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Cys Ala Leu Tyr Asn Asn Asn Asp Met Arg Phe

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

Leu His Val Gln Glu Gly Asp Ser Thr Asn Phe Thr Cys Ser Phe Pro
35 40 45

Ser Ser Asn Phe Tyr Ala Leu His Trp Tyr Arg Trp Glu Thr Ala Lys
50 55 60

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

Lys Gly Arg Ile Ser Ala Thr Leu Asn Thr Lys Glu Gly Tyr Ser Tyr
85 90 95

Leu Tyr Ile Lys Gly Ser Gln Pro Glu Asp Ser Ala Thr Tyr Leu Cys
100 105 110

Ala Leu Tyr Asn Asn Asn Asp Met Arg Phe Gly Ala Gly Thr Arg Leu
115 120 125

Thr Val Lys Pro
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<213> Homo sapiens

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Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu Arg Asp Ser Lys
1 5 10 15

Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe Asp Ser Gln Thr
20 25 30

Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile Thr Asp Lys Thr
35 40 45

Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn Ser Ala Val Ala
50 55 60

Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala Phe Asn Asn Ser
65 70 75 80

Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu Ser Ser Cys Asp
85 90 95

Val Lys Leu Val Glu Lys Ser Phe Glu Thr Asp Thr Asn Leu Asn Phe
100 105 110

Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
115 120 125

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
130 135 140

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

Leu His Val Gln Glu Gly Asp Ser Thr Asn Phe Thr Cys Ser Phe Pro
35 40 45

Ser Ser Asn Phe Tyr Ala Leu His Trp Tyr Arg Trp Glu Thr Ala Lys
50 55 60

Ser Pro Glu Ala Leu Phe Val Met Thr Leu Asn Gly Asp Glu Lys Lys

65

70

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Lys Gly Arg Ile Ser Ala Thr Leu Asn Thr Lys Glu Gly Tyr Ser Tyr
 85 90 95

Leu Tyr Ile Lys Gly Ser Gln Pro Glu Asp Ser Ala Thr Tyr Leu Cys
 100 105 110

Ala Leu Tyr Asn Asn Asn Asp Met Arg Phe Gly Ala Gly Thr Arg Leu
 115 120 125

Thr Val Lys Pro Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu
 130 135 140

Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe
 145 150 155 160

Asp Ser Gln Thr Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile
 165 170 175

Thr Asp Lys Thr Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn
 180 185 190

Ser Ala Val Ala Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala
 195 200 205

Phe Asn Asn Ser Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu
 210 215 220

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

Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu
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Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser
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Ser

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

Glu Met Gly Gln Glu Val Thr Leu Arg Cys Lys Pro Ile Ser Gly His
35 40 45

Asn Ser Leu Phe Trp Tyr Arg Gln Thr Met Met Arg Gly Leu Glu Leu

50

55

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Leu Ile Tyr Phe Asn Asn Asn Val Pro Ile Asp Asp Ser Gly Met Pro
65 70 75 80

Glu Asp Arg Phe Ser Ala Lys Met Pro Asn Ala Ser Phe Ser Thr Leu
85 90 95

Lys Ile Gln Pro Ser Glu Pro Arg Asp Ser Ala Val Tyr Phe Cys Ala
100 105 110

Ser Ser Pro Gly Ser Thr Asp Thr Gln Tyr Phe Gly Pro Gly Thr Arg
115 120 125

Leu Thr Val Leu
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<213> Homo sapiens

<400> 11

Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala Val Phe Glu Pro
1 5 10 15

Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val Cys Leu
20 25 30

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

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

Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu
65 70 75 80

Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys
85 90 95

Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp
100 105 110

Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg
115 120 125

Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln Gly Val Leu Ser
130 135 140

Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
145 150 155 160

Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp
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Ser Arg Gly

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Met Asp Ser Trp Thr Phe Cys Cys Val Ser Leu Cys Ile Leu Val Ala
1 5 10 15

Lys His Thr Asp Ala Gly Val Ile Gln Ser Pro Arg His Glu Val Thr
20 25 30

Glu Met Gly Gln Glu Val Thr Leu Arg Cys Lys Pro Ile Ser Gly His
35 40 45

Asn Ser Leu Phe Trp Tyr Arg Gln Thr Met Met Arg Gly Leu Glu Leu
50 55 60

Leu Ile Tyr Phe Asn Asn Asn Val Pro Ile Asp Asp Ser Gly Met Pro
65 70 75 80

Glu Asp Arg Phe Ser Ala Lys Met Pro Asn Ala Ser Phe Ser Thr Leu
85 90 95

Lys Ile Gln Pro Ser Glu Pro Arg Asp Ser Ala Val Tyr Phe Cys Ala
100 105 110

Ser Ser Pro Gly Ser Thr Asp Thr Gln Tyr Phe Gly Pro Gly Thr Arg
115 120 125

Leu Thr Val Leu Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala
130 135 140

Val Phe Glu Pro Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr
145 150 155 160

Leu Val Cys Leu Ala Thr Gly Phe Tyr Pro Asp His Val Glu Leu Ser
165 170 175

Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro
180 185 190

Gln Pro Leu Lys Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu
195 200 205

Ser Ser Arg Leu Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn
210 215 220

His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu
225 230 235 240

Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu
245 250 255

Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln
260 265 270

Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala
275 280 285

Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val
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Lys Arg Lys Asp Ser Arg Gly

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Asp Arg Gly Ser Gln Ser
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Ile Tyr
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Cys Ala Ala Val Ile Ser Asn Phe Gly Asn Glu Lys Leu Thr Phe
1 5 10 15

<210> 16
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<213> Homo sapiens

<400> 16

Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu Ser
1 5 10 15

Trp Val Trp Ser Gln Gln Lys Glu Val Glu Gln Asn Ser Gly Pro Leu
20 25 30

Ser Val Pro Glu Gly Ala Ile Ala Ser Leu Asn Cys Thr Tyr Ser Asp
35 40 45

Arg Gly Ser Gln Ser Phe Phe Trp Tyr Arg Gln Tyr Ser Gly Lys Ser
50 55 60

Pro Glu Leu Ile Met Phe Ile Tyr Ser Asn Gly Asp Lys Glu Asp Gly
65 70 75 80

Arg Phe Thr Ala Gln Leu Asn Lys Ala Ser Gln Tyr Val Ser Leu Leu
85 90 95

Ile Arg Asp Ser Gln Pro Ser Asp Ser Ala Thr Tyr Leu Cys Ala Ala
100 105 110

Val Ile Ser Asn Phe Gly Asn Glu Lys Leu Thr Phe Gly Thr Gly Thr
115 120 125

Arg Leu Thr Ile Ile Pro
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Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu Arg Asp Ser Lys
1 5 10 15

Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe Asp Ser Gln Thr
20 25 30

Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile Thr Asp Lys Thr
35 40 45

Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn Ser Ala Val Ala
50 55 60

Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala Phe Asn Asn Ser
65 70 75 80

Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu Ser Ser Cys Asp
85 90 95

Val Lys Leu Val Glu Lys Ser Phe Glu Thr Asp Thr Asn Leu Asn Phe
100 105 110

Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
115 120 125

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
130 135 140

<210> 18
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<213> Homo sapiens

<400> 18

Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu Ser
1 5 10 15

Trp Val Trp Ser Gln Gln Lys Glu Val Glu Gln Asn Ser Gly Pro Leu
20 25 30

Ser Val Pro Glu Gly Ala Ile Ala Ser Leu Asn Cys Thr Tyr Ser Asp
35 40 45

Arg Gly Ser Gln Ser Phe Phe Trp Tyr Arg Gln Tyr Ser Gly Lys Ser
50 55 60

Pro Glu Leu Ile Met Phe Ile Tyr Ser Asn Gly Asp Lys Glu Asp Gly
65 70 75 80

Arg Phe Thr Ala Gln Leu Asn Lys Ala Ser Gln Tyr Val Ser Leu Leu
85 90 95

Ile Arg Asp Ser Gln Pro Ser Asp Ser Ala Thr Tyr Leu Cys Ala Ala
100 105 110

Val Ile Ser Asn Phe Gly Asn Glu Lys Leu Thr Phe Gly Thr Gly Thr
115 120 125

Arg Leu Thr Ile Ile Pro Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr

130

135

140

Gln Leu Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu Phe Thr
 145 150 155 160

Asp Phe Asp Ser Gln Thr Asn Val Ser Gln Ser Lys Asp Ser Asp Val
 165 170 175

Tyr Ile Thr Asp Lys Thr Val Leu Asp Met Arg Ser Met Asp Phe Lys
 180 185 190

Ser Asn Ser Ala Val Ala Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala
 195 200 205

Asn Ala Phe Asn Asn Ser Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser
 210 215 220

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

Asp Thr Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe Arg Ile
 245 250 255

Leu Leu Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu Arg Leu
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Trp Ser Ser
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<210> 19
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Ser Gly His Arg Ser
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Tyr Phe Ser Glu Thr Gln
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<211> 14

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<213> Homo sapiens

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Cys Ala Ser Ser Pro Trp Asp Ser Pro Asn Glu Gln Tyr Phe
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<210> 22

<211> 132

<212> PRT

<213> Homo sapiens

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Met Gly Ser Arg Leu Leu Cys Trp Val Leu Leu Cys Leu Leu Gly Ala
1 5 10 15

Gly Pro Val Lys Ala Gly Val Thr Gln Thr Pro Arg Tyr Leu Ile Lys
20 25 30

Thr Arg Gly Gln Gln Val Thr Leu Ser Cys Ser Pro Ile Ser Gly His
35 40 45

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

Leu Phe Glu Tyr Phe Ser Glu Thr Gln Arg Asn Lys Gly Asn Phe Pro
65 70 75 80

Gly Arg Phe Ser Gly Arg Gln Phe Ser Asn Ser Arg Ser Glu Met Asn
85 90 95

Val Ser Thr Leu Glu Leu Gly Asp Ser Ala Leu Tyr Leu Cys Ala Ser
100 105 110

Ser Pro Trp Asp Ser Pro Asn Glu Gln Tyr Phe Gly Pro Gly Thr Arg

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120

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Leu Thr Val Thr
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<400> 23

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

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

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

Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu
65 70 75 80

Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys
85 90 95

Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp
100 105 110

Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg
115 120 125

Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln Gly Val Leu Ser
130 135 140

Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
145 150 155 160

Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp
165 170 175

Ser Arg Gly

<210> 24
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<213> Homo sapiens

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Met Gly Ser Arg Leu Leu Cys Trp Val Leu Leu Cys Leu Leu Gly Ala
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Gly Pro Val Lys Ala Gly Val Thr Gln Thr Pro Arg Tyr Leu Ile Lys
20 25 30

Thr Arg Gly Gln Gln Val Thr Leu Ser Cys Ser Pro Ile Ser Gly His
35 40 45

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

Leu Phe Glu Tyr Phe Ser Glu Thr Gln Arg Asn Lys Gly Asn Phe Pro
65 70 75 80

Gly Arg Phe Ser Gly Arg Gln Phe Ser Asn Ser Arg Ser Glu Met Asn
85 90 95

Val Ser Thr Leu Glu Leu Gly Asp Ser Ala Leu Tyr Leu Cys Ala Ser
100 105 110

Ser Pro Trp Asp Ser Pro Asn Glu Gln Tyr Phe Gly Pro Gly Thr Arg
115 120 125

Leu Thr Val Thr Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala
130 135 140

Val Phe Glu Pro Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr
145 150 155 160

Leu Val Cys Leu Ala Thr Gly Phe Tyr Pro Asp His Val Glu Leu Ser
165 170 175

Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro
180 185 190

Gln Pro Leu Lys Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu
195 200 205

Ser Ser Arg Leu Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn
210 215 220

His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu
225 230 235 240

Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu
245 250 255

Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln
260 265 270

Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala
275 280 285

Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val
290 295 300

Lys Arg Lys Asp Ser Arg Gly
305 310

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Asn Ser Ala Phe Gln Tyr
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Thr Tyr
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<210> 27
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Cys Ala Met Ser Glu Ala Ala Gly Asn Lys Leu Thr Phe
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<210> 28
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<213> Homo sapiens

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Met Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu
1 5 10 15

Ser Trp Val Trp Ser Gln Gln Lys Glu Val Glu Gln Asp Pro Gly Pro
20 25 30

Leu Ser Val Pro Glu Gly Ala Ile Val Ser Leu Asn Cys Thr Tyr Ser
35 40 45

Asn Ser Ala Phe Gln Tyr Phe Met Trp Tyr Arg Gln Tyr Ser Arg Lys
50 55 60

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

Gly Arg Phe Thr Ala Gln Val Asp Lys Ser Ser Lys Tyr Ile Ser Leu
85 90 95

Phe Ile Arg Asp Ser Gln Pro Ser Asp Ser Ala Thr Tyr Leu Cys Ala
100 105 110

Met Ser Glu Ala Ala Gly Asn Lys Leu Thr Phe Gly Gly Gly Thr Arg
115 120 125

Val Leu Val Lys Pro
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<400> 29

Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu Arg Asp Ser Lys
1 5 10 15

Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe Asp Ser Gln Thr
20 25 30

Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile Thr Asp Lys Thr
35 40 45

Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn Ser Ala Val Ala
50 55 60

Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala Phe Asn Asn Ser
65 70 75 80

Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu Ser Ser Cys Asp
85 90 95

Val Lys Leu Val Glu Lys Ser Phe Glu Thr Asp Thr Asn Leu Asn Phe
100 105 110

Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
115 120 125

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
130 135 140

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<213> Homo sapiens

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Met Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu
1 5 10 15

Ser Trp Val Trp Ser Gln Gln Lys Glu Val Glu Gln Asp Pro Gly Pro
20 25 30

Leu Ser Val Pro Glu Gly Ala Ile Val Ser Leu Asn Cys Thr Tyr Ser
35 40 45

Asn Ser Ala Phe Gln Tyr Phe Met Trp Tyr Arg Gln Tyr Ser Arg Lys
50 55 60

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

Gly Arg Phe Thr Ala Gln Val Asp Lys Ser Ser Lys Tyr Ile Ser Leu
85 90 95

Phe Ile Arg Asp Ser Gln Pro Ser Asp Ser Ala Thr Tyr Leu Cys Ala
100 105 110

Met Ser Glu Ala Ala Gly Asn Lys Leu Thr Phe Gly Gly Gly Thr Arg
115 120 125

Val Leu Val Lys Pro Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln
130 135 140

Leu Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp
145 150 155 160

Phe Asp Ser Gln Thr Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr
165 170 175

Ile Thr Asp Lys Thr Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser
180 185 190

Asn Ser Ala Val Ala Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn

195

200

205

Ala Phe Asn Asn Ser Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro
 210 215 220

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

Thr Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu
 245 250 255

Leu Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp
 260 265 270

Ser Ser

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Ser Gly His Ala Thr
 1 5

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Phe Gln Asn Asn Gly Val
 1 5

<210> 33
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Cys Ala Ser Ser Tyr Thr Asn Gln Gly Glu Ala Phe Phe
 1 5 10

<210> 34
<211> 132
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<213> Homo sapiens

<400> 34

Met Gly Thr Arg Leu Leu Cys Trp Ala Ala Leu Cys Leu Leu Gly Ala
1 5 10 15

Glu Leu Thr Glu Ala Gly Val Ala Gln Ser Pro Arg Tyr Lys Ile Ile
20 25 30

Glu Lys Arg Gln Ser Val Ala Phe Trp Cys Asn Pro Ile Ser Gly His
35 40 45

Ala Thr Leu Tyr Trp Tyr Gln Gln Ile Leu Gly Gln Gly Pro Lys Leu
50 55 60

Leu Ile Gln Phe Gln Asn Asn Gly Val Val Asp Asp Ser Gln Leu Pro
65 70 75 80

Lys Asp Arg Phe Ser Ala Glu Arg Leu Lys Gly Val Asp Ser Thr Leu
85 90 95

Lys Ile Gln Pro Ala Lys Leu Glu Asp Ser Ala Val Tyr Leu Cys Ala
100 105 110

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

Leu Thr Val Val
130

<210> 35
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<213> Homo sapiens

<400> 35

Glu Asp Leu Asn Lys Val Phe Pro Pro Glu Val Ala Val Phe Glu Pro
1 5 10 15

Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val Cys Leu
20 25 30

Ala Thr Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn
35 40 45

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

Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu
65 70 75 80

Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys
85 90 95

Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp
100 105 110

Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg
115 120 125

Ala Asp Cys Gly Phe Thr Ser Val Ser Tyr Gln Gln Gly Val Leu Ser
130 135 140

Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
145 150 155 160

Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp
165 170 175

Phe

<210> 36
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Met Gly Thr Arg Leu Leu Cys Trp Ala Ala Leu Cys Leu Leu Gly Ala

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Glu	Lys	Arg	Gln	Ser	Val	Ala	Phe	Trp	Cys	Asn	Pro	Ile	Ser	Gly	His		
		35					40					45					
Ala	Thr	Leu	Tyr	Trp	Tyr	Gln	Gln	Ile	Leu	Gly	Gln	Gly	Pro	Lys	Leu		
	50					55					60						
Leu	Ile	Gln	Phe	Gln	Asn	Asn	Gly	Val	Val	Asp	Asp	Ser	Gln	Leu	Pro		
65					70					75					80		
Lys	Asp	Arg	Phe	Ser	Ala	Glu	Arg	Leu	Lys	Gly	Val	Asp	Ser	Thr	Leu		
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Lys	Ile	Gln	Pro	Ala	Lys	Leu	Glu	Asp	Ser	Ala	Val	Tyr	Leu	Cys	Ala		
			100					105					110				
Ser	Ser	Tyr	Thr	Asn	Gln	Gly	Glu	Ala	Phe	Phe	Gly	Gln	Gly	Thr	Arg		
		115					120					125					
Leu	Thr	Val	Val	Glu	Asp	Leu	Asn	Lys	Val	Phe	Pro	Pro	Glu	Val	Ala		
	130					135					140						
Val	Phe	Glu	Pro	Ser	Glu	Ala	Glu	Ile	Ser	His	Thr	Gln	Lys	Ala	Thr		
145					150					155					160		
Leu	Val	Cys	Leu	Ala	Thr	Gly	Phe	Phe	Pro	Asp	His	Val	Glu	Leu	Ser		
				165					170					175			
Trp	Trp	Val	Asn	Gly	Lys	Glu	Val	His	Ser	Gly	Val	Ser	Thr	Asp	Pro		
			180					185					190				
Gln	Pro	Leu	Lys	Glu	Gln	Pro	Ala	Leu	Asn	Asp	Ser	Arg	Tyr	Cys	Leu		
		195					200					205					
Ser	Ser	Arg	Leu	Arg	Val	Ser	Ala	Thr	Phe	Trp	Gln	Asn	Pro	Arg	Asn		
	210					215					220						

His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu
225 230 235 240

Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu
245 250 255

Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Val Ser Tyr Gln Gln
260 265 270

Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala
275 280 285

Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val
290 295 300

Lys Arg Lys Asp Phe
305

<210> 37
<211> 6
<212> PRT
<213> Homo sapiens

<400> 37

Asp Arg Gly Ser Gln Ser
1 5

<210> 38
<211> 2
<212> PRT
<213> Homo sapiens

<400> 38

Ile Tyr
1

<210> 39
<211> 13
<212> PRT
<213> Homo sapiens

<400> 39

Cys Ala Val Leu Asn Gln Ala Gly Thr Ala Leu Ile Phe
1 5 10

<210> 40
<211> 132
<212> PRT
<213> Homo sapiens

<400> 40

Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu Ser
1 5 10 15

Trp Val Trp Ser Gln Gln Lys Glu Val Glu Gln Asn Ser Gly Pro Leu
20 25 30

Ser Val Pro Glu Gly Ala Ile Ala Ser Leu Asn Cys Thr Tyr Ser Asp
35 40 45

Arg Gly Ser Gln Ser Phe Phe Trp Tyr Arg Gln Tyr Ser Gly Lys Ser
50 55 60

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

Arg Phe Thr Ala Gln Leu Asn Lys Ala Ser Gln Tyr Val Ser Leu Leu
85 90 95

Ile Arg Asp Ser Gln Pro Ser Asp Ser Ala Thr Tyr Leu Cys Ala Val
100 105 110

Leu Asn Gln Ala Gly Thr Ala Leu Ile Phe Gly Lys Gly Thr Thr Leu
115 120 125

Ser Val Ser Ser
130

<210> 41
<211> 141
<212> PRT
<213> Homo sapiens

<400> 41

Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu Arg Asp Ser Lys
1 5 10 15

Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe Asp Ser Gln Thr
20 25 30

Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile Thr Asp Lys Thr
35 40 45

Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn Ser Ala Val Ala
50 55 60

Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala Phe Asn Asn Ser
65 70 75 80

Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu Ser Ser Cys Asp
85 90 95

Val Lys Leu Val Glu Lys Ser Phe Glu Thr Asp Thr Asn Leu Asn Phe
100 105 110

Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
115 120 125

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
130 135 140

<210> 42
<211> 273
<212> PRT
<213> Homo sapiens

<400> 42

Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu Ser
1 5 10 15

Trp Val Trp Ser Gln Gln Lys Glu Val Glu Gln Asn Ser Gly Pro Leu
20 25 30

Ser Val Pro Glu Gly Ala Ile Ala Ser Leu Asn Cys Thr Tyr Ser Asp
35 40 45

Arg Gly Ser Gln Ser Phe Phe Trp Tyr Arg Gln Tyr Ser Gly Lys Ser
50 55 60

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

Arg Phe Thr Ala Gln Leu Asn Lys Ala Ser Gln Tyr Val Ser Leu Leu
85 90 95

Ile Arg Asp Ser Gln Pro Ser Asp Ser Ala Thr Tyr Leu Cys Ala Val
100 105 110

Leu Asn Gln Ala Gly Thr Ala Leu Ile Phe Gly Lys Gly Thr Thr Leu
115 120 125

Ser Val Ser Ser Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu
130 135 140

Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe
145 150 155 160

Asp Ser Gln Thr Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile
165 170 175

Thr Asp Lys Thr Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn
180 185 190

Ser Ala Val Ala Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala
195 200 205

Phe Asn Asn Ser Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu
210 215 220

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

Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu
245 250 255

Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser

260

265

270

Ser

<210> 43
 <211> 5
 <212> PRT
 <213> Homo sapiens

<400> 43

Ser Gly Asp Leu Ser
 1 5

<210> 44
 <211> 6
 <212> PRT
 <213> Homo sapiens

<400> 44

Tyr Tyr Asn Gly Glu Glu
 1 5

<210> 45
 <211> 17
 <212> PRT
 <213> Homo sapiens

<400> 45

Cys Ala Ser Ser Ala Glu Thr Gly Pro Trp Leu Gly Asn Glu Gln Phe
 1 5 10 15

Phe

<210> 46
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 46

Met Gly Phe Arg Leu Leu Cys Cys Val Ala Phe Cys Leu Leu Gly Ala
 1 5 10 15

Gly Pro Val Asp Ser Gly Val Thr Gln Thr Pro Lys His Leu Ile Thr
20 25 30

Ala Thr Gly Gln Arg Val Thr Leu Arg Cys Ser Pro Arg Ser Gly Asp
35 40 45

Leu Ser Val Tyr Trp Tyr Gln Gln Ser Leu Asp Gln Gly Leu Gln Phe
50 55 60

Leu Ile Gln Tyr Tyr Asn Gly Glu Glu Arg Ala Lys Gly Asn Ile Leu
65 70 75 80

Glu Arg Phe Ser Ala Gln Gln Phe Pro Asp Leu His Ser Glu Leu Asn
85 90 95

Leu Ser Ser Leu Glu Leu Gly Asp Ser Ala Leu Tyr Phe Cys Ala Ser
100 105 110

Ser Ala Glu Thr Gly Pro Trp Leu Gly Asn Glu Gln Phe Phe Gly Pro
115 120 125

Gly Thr Arg Leu Thr Val Leu
130 135

<210> 47
<211> 179
<212> PRT
<213> Homo sapiens

<400> 47

Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala Val Phe Glu Pro
1 5 10 15

Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val Cys Leu
20 25 30

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

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

Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu
65 70 75 80

Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys
85 90 95

Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp
100 105 110

Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg
115 120 125

Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln Gly Val Leu Ser
130 135 140

Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
145 150 155 160

Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp
165 170 175

Ser Arg Gly

<210> 48
<211> 314
<212> PRT
<213> Homo sapiens

<400> 48

Met Gly Phe Arg Leu Leu Cys Cys Val Ala Phe Cys Leu Leu Gly Ala
1 5 10 15

Gly Pro Val Asp Ser Gly Val Thr Gln Thr Pro Lys His Leu Ile Thr
20 25 30

Ala Thr Gly Gln Arg Val Thr Leu Arg Cys Ser Pro Arg Ser Gly Asp
35 40 45

Leu Ser Val Tyr Trp Tyr Gln Gln Ser Leu Asp Gln Gly Leu Gln Phe

50

55

60

Leu Ile Gln Tyr Tyr Asn Gly Glu Glu Arg Ala Lys Gly Asn Ile Leu
65 70 75 80

Glu Arg Phe Ser Ala Gln Gln Phe Pro Asp Leu His Ser Glu Leu Asn
85 90 95

Leu Ser Ser Leu Glu Leu Gly Asp Ser Ala Leu Tyr Phe Cys Ala Ser
100 105 110

Ser Ala Glu Thr Gly Pro Trp Leu Gly Asn Glu Gln Phe Phe Gly Pro
115 120 125

Gly Thr Arg Leu Thr Val Leu Glu Asp Leu Lys Asn Val Phe Pro Pro
130 135 140

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

Lys Ala Thr Leu Val Cys Leu Ala Thr Gly Phe Tyr Pro Asp His Val
165 170 175

Glu Leu Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser
180 185 190

Thr Asp Pro Gln Pro Leu Lys Glu Gln Pro Ala Leu Asn Asp Ser Arg
195 200 205

Tyr Cys Leu Ser Ser Arg Leu Arg Val Ser Ala Thr Phe Trp Gln Asn
210 215 220

Pro Arg Asn His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu
225 230 235 240

Asn Asp Glu Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val
245 250 255

Ser Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Glu Ser
260 265 270

Tyr Gln Gln Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu
275 280 285

Gly Lys Ala Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met
290 295 300

Ala Met Val Lys Arg Lys Asp Ser Arg Gly
305 310

<210> 49
<211> 7
<212> PRT
<213> Homo sapiens

<400> 49

Thr Ser Glu Ser Asp Tyr Tyr
1 5

<210> 50
<211> 4
<212> PRT
<213> Homo sapiens

<400> 50

Gln Glu Ala Tyr
1

<210> 51
<211> 15
<212> PRT
<213> Homo sapiens

<400> 51

Cys Ala Tyr Arg Trp Ala Gln Gly Gly Ser Glu Lys Leu Val Phe
1 5 10 15

<210> 52
<211> 136
<212> PRT
<213> Homo sapiens

<400> 52

Met Ala Cys Pro Gly Phe Leu Trp Ala Leu Val Ile Ser Thr Cys Leu

1	5	10	15
Glu Phe Ser Met Ala Gln Thr Val Thr Gln Ser Gln Pro Glu Met Ser	20	25	30
Val Gln Glu Ala Glu Thr Val Thr Leu Ser Cys Thr Tyr Asp Thr Ser	35	40	45
Glu Ser Asp Tyr Tyr Leu Phe Trp Tyr Lys Gln Pro Pro Ser Arg Gln	50	55	60
Met Ile Leu Val Ile Arg Gln Glu Ala Tyr Lys Gln Gln Asn Ala Thr	65	70	75
Glu Asn Arg Phe Ser Val Asn Phe Gln Lys Ala Ala Lys Ser Phe Ser	85	90	95
Leu Lys Ile Ser Asp Ser Gln Leu Gly Asp Ala Ala Met Tyr Phe Cys	100	105	110
Ala Tyr Arg Trp Ala Gln Gly Gly Ser Glu Lys Leu Val Phe Gly Lys	115	120	125
Gly Thr Lys Leu Thr Val Asn Pro	130	135	

<210> 53
 <211> 141
 <212> PRT
 <213> Homo sapiens

<400> 53

Tyr Ile Gln Lys Pro Asp Pro Ala Val Tyr Gln Leu Arg Asp Ser Lys	1	5	10	15
Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe Asp Ser Gln Thr	20	25	30	
Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile Thr Asp Lys Thr	35	40	45	

Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn Ser Ala Val Ala
50 55 60

Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala Phe Asn Asn Ser
65 70 75 80

Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu Ser Ser Cys Asp
85 90 95

Val Lys Leu Val Glu Lys Ser Phe Glu Thr Asp Thr Asn Leu Asn Phe
100 105 110

Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
115 120 125

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
130 135 140

<210> 54
<211> 277
<212> PRT
<213> Homo sapiens

<400> 54

Met Ala Cys Pro Gly Phe Leu Trp Ala Leu Val Ile Ser Thr Cys Leu
1 5 10 15

Glu Phe Ser Met Ala Gln Thr Val Thr Gln Ser Gln Pro Glu Met Ser
20 25 30

Val Gln Glu Ala Glu Thr Val Thr Leu Ser Cys Thr Tyr Asp Thr Ser
35 40 45

Glu Ser Asp Tyr Tyr Leu Phe Trp Tyr Lys Gln Pro Pro Ser Arg Gln
50 55 60

Met Ile Leu Val Ile Arg Gln Glu Ala Tyr Lys Gln Gln Asn Ala Thr
65 70 75 80

Glu Asn Arg Phe Ser Val Asn Phe Gln Lys Ala Ala Lys Ser Phe Ser
85 90 95

Leu Lys Ile Ser Asp Ser Gln Leu Gly Asp Ala Ala Met Tyr Phe Cys
100 105 110

Ala Tyr Arg Trp Ala Gln Gly Gly Ser Glu Lys Leu Val Phe Gly Lys
115 120 125

Gly Thr Lys Leu Thr Val Asn Pro Tyr Ile Gln Lys Pro Asp Pro Ala
130 135 140

Val Tyr Gln Leu Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu
145 150 155 160

Phe Thr Asp Phe Asp Ser Gln Thr Asn Val Ser Gln Ser Lys Asp Ser
165 170 175

Asp Val Tyr Ile Thr Asp Lys Thr Val Leu Asp Met Arg Ser Met Asp
180 185 190

Phe Lys Ser Asn Ser Ala Val Ala Trp Ser Asn Lys Ser Asp Phe Ala
195 200 205

Cys Ala Asn Ala Phe Asn Asn Ser Ile Ile Pro Glu Asp Thr Phe Phe
210 215 220

Pro Ser Pro Glu Ser Ser Cys Asp Val Lys Leu Val Glu Lys Ser Phe
225 230 235 240

Glu Thr Asp Thr Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe
245 250 255

Arg Ile Leu Leu Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu
260 265 270

Arg Leu Trp Ser Ser
275

<210> 55
<211> 5
<212> PRT
<213> Homo sapiens

<400> 55

Met Gly His Asp Lys
1 5

<210> 56

<211> 6

<212> PRT

<213> Homo sapiens

<400> 56

Ser Tyr Gly Val Asn Ser
1 5

<210> 57

<211> 16

<212> PRT

<213> Homo sapiens

<400> 57

Cys Ala Thr Glu Leu Trp Ser Ser Gly Gly Thr Gly Glu Leu Phe Phe
1 5 10 15

<210> 58

<211> 134

<212> PRT

<213> Homo sapiens

<400> 58

Met Thr Ile Arg Leu Leu Cys Tyr Met Gly Phe Tyr Phe Leu Gly Ala
1 5 10 15

Gly Leu Met Glu Ala Asp Ile Tyr Gln Thr Pro Arg Tyr Leu Val Ile
20 25 30

Gly Thr Gly Lys Lys Ile Thr Leu Glu Cys Ser Gln Thr Met Gly His
35 40 45

Asp Lys Met Tyr Trp Tyr Gln Gln Asp Pro Gly Met Glu Leu His Leu
50 55 60

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

Ser Glu Ser Thr Val Ser Arg Ile Arg Thr Glu His Phe Pro Leu Thr
85 90 95

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

Glu Leu Trp Ser Ser Gly Gly Thr Gly Glu Leu Phe Phe Gly Glu Gly
115 120 125

Ser Arg Leu Thr Val Leu
130

<210> 59
<211> 179
<212> PRT
<213> Homo sapiens

<400> 59

Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala Val Phe Glu Pro
1 5 10 15

Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val Cys Leu
20 25 30

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

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

Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu
65 70 75 80

Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys
85 90 95

Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp
100 105 110

Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg
115 120 125

Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln Gly Val Leu Ser
130 135 140

Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
145 150 155 160

Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp
165 170 175

Ser Arg Gly

<210> 60
<211> 313
<212> PRT
<213> Homo sapiens

<400> 60

Met Thr Ile Arg Leu Leu Cys Tyr Met Gly Phe Tyr Phe Leu Gly Ala
1 5 10 15

Gly Leu Met Glu Ala Asp Ile Tyr Gln Thr Pro Arg Tyr Leu Val Ile
20 25 30

Gly Thr Gly Lys Lys Ile Thr Leu Glu Cys Ser Gln Thr Met Gly His
35 40 45

Asp Lys Met Tyr Trp Tyr Gln Gln Asp Pro Gly Met Glu Leu His Leu
50 55 60

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

Ser Glu Ser Thr Val Ser Arg Ile Arg Thr Glu His Phe Pro Leu Thr
85 90 95

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

Glu Leu Trp Ser Ser Gly Gly Thr Gly Glu Leu Phe Phe Gly Glu Gly

115

120

125

Ser Arg Leu Thr Val Leu Glu Asp Leu Lys Asn Val Phe Pro Pro Glu
 130 135 140

Val Ala Val Phe Glu Pro Ser Glu Ala Glu Ile Ser His Thr Gln Lys
 145 150 155 160

Ala Thr Leu Val Cys Leu Ala Thr Gly Phe Tyr Pro Asp His Val Glu
 165 170 175

Leu Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr
 180 185 190

Asp Pro Gln Pro Leu Lys Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr
 195 200 205

Cys Leu Ser Ser Arg Leu Arg Val Ser Ala Thr Phe Trp Gln Asn Pro
 210 215 220

Arg Asn His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn
 225 230 235 240

Asp Glu Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser
 245 250 255

Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr
 260 265 270

Gln Gln Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly
 275 280 285

Lys Ala Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met Ala
 290 295 300

Met Val Lys Arg Lys Asp Ser Arg Gly
 305 310

<210> 61

<211> 6

<212> PRT

<213> Homo sapiens

<400> 61

Asp Arg Gly Ser Gln Ser
1 5

<210> 62

<211> 2

<212> PRT

<213> Homo sapiens

<400> 62

Ile Tyr
1

<210> 63

<211> 13

<212> PRT

<213> Homo sapiens

<400> 63

Cys Ala Val Gly Pro Ser Gly Thr Tyr Lys Tyr Ile Phe
1 5 10

<210> 64

<211> 132

<212> PRT

<213> Homo sapiens

<400> 64

Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu Ser
1 5 10 15

Trp Val Trp Ser Gln Gln Lys Glu Val Glu Gln Asn Ser Gly Pro Leu
20 25 30

Ser Val Pro Glu Gly Ala Ile Ala Ser Leu Asn Cys Thr Tyr Ser Asp
35 40 45

Arg Gly Ser Gln Ser Phe Phe Trp Tyr Arg Gln Tyr Ser Gly Lys Ser
50 55 60

Pro Glu Leu Ile Met Ser Ile Tyr Ser Asn Gly Asp Lys Glu Asp Gly

Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
115 120 125

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
130 135 140

<210> 66
<211> 273
<212> PRT
<213> Homo sapiens

<400> 66

Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu Ser
1 5 10 15

Trp Val Trp Ser Gln Gln Lys Glu Val Glu Gln Asn Ser Gly Pro Leu
20 25 30

Ser Val Pro Glu Gly Ala Ile Ala Ser Leu Asn Cys Thr Tyr Ser Asp
35 40 45

Arg Gly Ser Gln Ser Phe Phe Trp Tyr Arg Gln Tyr Ser Gly Lys Ser
50 55 60

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

Arg Phe Thr Ala Gln Leu Asn Lys Ala Ser Gln Tyr Val Ser Leu Leu
85 90 95

Ile Arg Asp Ser Gln Pro Ser Asp Ser Ala Thr Tyr Leu Cys Ala Val
100 105 110

Gly Pro Ser Gly Thr Tyr Lys Tyr Ile Phe Gly Thr Gly Thr Arg Leu
115 120 125

Lys Val Leu Ala Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu
130 135 140

Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe
145 150 155 160

Asp Ser Gln Thr Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile
165 170 175

Thr Asp Lys Thr Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn
180 185 190

Ser Ala Val Ala Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala
195 200 205

Phe Asn Asn Ser Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu
210 215 220

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

Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu
245 250 255

Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser
260 265 270

Ser

<210> 67
<211> 5
<212> PRT
<213> Homo sapiens

<400> 67

Met Asn His Glu Tyr
1 5

<210> 68
<211> 6
<212> PRT
<213> Homo sapiens

<400> 68

Ser Met Asn Val Glu Val
1 5

<210> 69
<211> 14
<212> PRT
<213> Homo sapiens

<400> 69

Cys Ala Ser Ser Pro Gly Gly Ser Gly Asn Glu Gln Phe Phe
1 5 10

<210> 70
<211> 132
<212> PRT
<213> Homo sapiens

<400> 70

Met Gly Pro Gln Leu Leu Gly Tyr Val Val Leu Cys Leu Leu Gly Ala
1 5 10 15

Gly Pro Leu Glu Ala Gln Val Thr Gln Asn Pro Arg Tyr Leu Ile Thr
20 25 30

Val Thr Gly Lys Lys Leu Thr Val Thr Cys Ser Gln Asn Met Asn His
35 40 45

Glu Tyr Met Ser Trp Tyr Arg Gln Asp Pro Gly Leu Gly Leu Arg Gln
50 55 60

Ile Tyr Tyr Ser Met Asn Val Glu Val Thr Asp Lys Gly Asp Val Pro
65 70 75 80

Glu Gly Tyr Lys Val Ser Arg Lys Glu Lys Arg Asn Phe Pro Leu Ile
85 90 95

Leu Glu Ser Pro Ser Pro Asn Gln Thr Ser Leu Tyr Phe Cys Ala Ser
100 105 110

Ser Pro Gly Gly Ser Gly Asn Glu Gln Phe Phe Gly Pro Gly Thr Arg
115 120 125

Leu Thr Val Leu
130

<210> 71
<211> 179
<212> PRT
<213> Homo sapiens

<400> 71

Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala Val Phe Glu Pro
1 5 10 15

Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val Cys Leu
20 25 30

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

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

Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu
65 70 75 80

Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys
85 90 95

Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp
100 105 110

Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg
115 120 125

Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln Gly Val Leu Ser
130 135 140

Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
145 150 155 160

Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp
165 170 175

Ser Arg Gly

<210> 72
<211> 311
<212> PRT
<213> Homo sapiens

<400> 72

Met Gly Pro Gln Leu Leu Gly Tyr Val Val Leu Cys Leu Leu Gly Ala
1 5 10 15

Gly Pro Leu Glu Ala Gln Val Thr Gln Asn Pro Arg Tyr Leu Ile Thr
20 25 30

Val Thr Gly Lys Lys Leu Thr Val Thr Cys Ser Gln Asn Met Asn His
35 40 45

Glu Tyr Met Ser Trp Tyr Arg Gln Asp Pro Gly Leu Gly Leu Arg Gln
50 55 60

Ile Tyr Tyr Ser Met Asn Val Glu Val Thr Asp Lys Gly Asp Val Pro
65 70 75 80

Glu Gly Tyr Lys Val Ser Arg Lys Glu Lys Arg Asn Phe Pro Leu Ile
85 90 95

Leu Glu Ser Pro Ser Pro Asn Gln Thr Ser Leu Tyr Phe Cys Ala Ser
100 105 110

Ser Pro Gly Gly Ser Gly Asn Glu Gln Phe Phe Gly Pro Gly Thr Arg
115 120 125

Leu Thr Val Leu Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala
130 135 140

Val Phe Glu Pro Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr
145 150 155 160

Leu Val Cys Leu Ala Thr Gly Phe Tyr Pro Asp His Val Glu Leu Ser
165 170 175

Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro

180

185

190

Gln Pro Leu Lys Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu
 195 200 205

Ser Ser Arg Leu Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn
 210 215 220

His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu
 225 230 235 240

Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu
 245 250 255

Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln
 260 265 270

Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala
 275 280 285

Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val
 290 295 300

Lys Arg Lys Asp Ser Arg Gly
 305 310

<210> 73
 <211> 6
 <212> PRT
 <213> Homo sapiens

<400> 73

Asp Arg Gly Ser Gln Ser
 1 5

<210> 74
 <211> 2
 <212> PRT
 <213> Homo sapiens

<400> 74

Ile Tyr

1

<210> 75
<211> 14
<212> PRT
<213> Homo sapiens

<400> 75

Cys Ala Val Val Ser Gly Gly Gly Ala Asp Gly Leu Thr Phe
1 5 10

<210> 76
<211> 133
<212> PRT
<213> Homo sapiens

<400> 76

Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu Ser
1 5 10 15

Trp Val Trp Ser Gln Gln Lys Glu Val Glu Gln Asn Ser Gly Pro Leu
20 25 30

Ser Val Pro Glu Gly Ala Ile Ala Ser Leu Asn Cys Thr Tyr Ser Asp
35 40 45

Arg Gly Ser Gln Ser Phe Phe Trp Tyr Arg Gln Tyr Ser Gly Lys Ser
50 55 60

Pro Glu Leu Ile Met Phe Ile Tyr Ser Asn Gly Asp Lys Glu Asp Gly
65 70 75 80

Arg Phe Thr Ala Gln Leu Asn Lys Ala Ser Gln Tyr Val Ser Leu Leu
85 90 95

Ile Arg Asp Ser Gln Pro Ser Asp Ser Ala Thr Tyr Leu Cys Ala Val
100 105 110

Val Ser Gly Gly Gly Ala Asp Gly Leu Thr Phe Gly Lys Gly Thr His
115 120 125

Leu Ile Ile Gln Pro

130

<210> 77
<211> 141
<212> PRT
<213> Homo sapiens

<400> 77

Tyr Ile Gln Lys Pro Asp Pro Ala Val Tyr Gln Leu Arg Asp Ser Lys
1 5 10 15

Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe Asp Ser Gln Thr
20 25 30

Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile Thr Asp Lys Thr
35 40 45

Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn Ser Ala Val Ala
50 55 60

Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala Phe Asn Asn Ser
65 70 75 80

Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu Ser Ser Cys Asp
85 90 95

Val Lys Leu Val Glu Lys Ser Phe Glu Thr Asp Thr Asn Leu Asn Phe
100 105 110

Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
115 120 125

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
130 135 140

<210> 78
<211> 274
<212> PRT
<213> Homo sapiens

<400> 78

Met Lys Ser Leu Arg Val Leu Leu Val Ile Leu Trp Leu Gln Leu Ser

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

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

Thr Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu
245 250 255

Leu Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp
260 265 270

Ser Ser

<210> 79
<211> 5
<212> PRT
<213> Homo sapiens

<400> 79

Pro Arg His Asp Thr
1 5

<210> 80
<211> 6
<212> PRT
<213> Homo sapiens

<400> 80

Phe Tyr Glu Lys Met Gln
1 5

<210> 81
<211> 14
<212> PRT
<213> Homo sapiens

<400> 81

Cys Ala Ser Ser Leu Gly Arg Gly Gly Gln Pro Gln His Phe
1 5 10

<210> 82
<211> 142
<212> PRT
<213> Homo sapiens

<400> 82

Met Leu Ser Pro Asp Leu Pro Asp Ser Ala Trp Asn Thr Arg Leu Leu
1 5 10 15

Cys His Val Met Leu Cys Leu Leu Gly Ala Val Ser Val Ala Ala Gly
20 25 30

Val Ile Gln Ser Pro Arg His Leu Ile Lys Glu Lys Arg Glu Thr Ala
35 40 45

Thr Leu Lys Cys Tyr Pro Ile Pro Arg His Asp Thr Val Tyr Trp Tyr
50 55 60

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

Lys Met Gln Ser Asp Lys Gly Ser Ile Pro Asp Arg Phe Ser Ala Gln
85 90 95

Gln Phe Ser Asp Tyr His Ser Glu Leu Asn Met Ser Ser Leu Glu Leu
100 105 110

Gly Asp Ser Ala Leu Tyr Phe Cys Ala Ser Ser Leu Gly Arg Gly Gly
115 120 125

Gln Pro Gln His Phe Gly Asp Gly Thr Arg Leu Ser Ile Leu
130 135 140

<210> 83

<211> 177

<212> PRT

<213> Homo sapiens

<400> 83

Glu Asp Leu Asn Lys Val Phe Pro Pro Glu Val Ala Val Phe Glu Pro
1 5 10 15

Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val Cys Leu
20 25 30

Ala Thr Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn
35 40 45

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

Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu
65 70 75 80

Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys
85 90 95

Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp
100 105 110

Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg
115 120 125

Ala Asp Cys Gly Phe Thr Ser Val Ser Tyr Gln Gln Gly Val Leu Ser
130 135 140

Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
145 150 155 160

Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp
165 170 175

Phe

<210> 84
<211> 319
<212> PRT
<213> Homo sapiens

<400> 84

Met Leu Ser Pro Asp Leu Pro Asp Ser Ala Trp Asn Thr Arg Leu Leu
1 5 10 15

Cys His Val Met Leu Cys Leu Leu Gly Ala Val Ser Val Ala Ala Gly
20 25 30

Val Ile Gln Ser Pro Arg His Leu Ile Lys Glu Lys Arg Glu Thr Ala
35 40 45

Thr Leu Lys Cys Tyr Pro Ile Pro Arg His Asp Thr Val Tyr Trp Tyr
50 55 60

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

Lys Met Gln Ser Asp Lys Gly Ser Ile Pro Asp Arg Phe Ser Ala Gln
85 90 95

Gln Phe Ser Asp Tyr His Ser Glu Leu Asn Met Ser Ser Leu Glu Leu
100 105 110

Gly Asp Ser Ala Leu Tyr Phe Cys Ala Ser Ser Leu Gly Arg Gly Gly
115 120 125

Gln Pro Gln His Phe Gly Asp Gly Thr Arg Leu Ser Ile Leu Glu Asp
130 135 140

Leu Asn Lys Val Phe Pro Pro Glu Val Ala Val Phe Glu Pro Ser Glu
145 150 155 160

Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val Cys Leu Ala Thr
165 170 175

Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn Gly Lys
180 185 190

Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Pro Leu Lys Glu Gln
195 200 205

Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu Arg Val
210 215 220

Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys Gln Val
225 230 235 240

Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp Arg Ala

245

250

255

Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg Ala Asp
260 265 270

Cys Gly Phe Thr Ser Val Ser Tyr Gln Gln Gly Val Leu Ser Ala Thr
275 280 285

Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu
290 295 300

Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp Phe
305 310 315

<210> 85
<211> 6
<212> PRT
<213> Homo sapiens

<400> 85

Asp Ser Ala Ile Tyr Asn
1 5

<210> 86
<211> 3
<212> PRT
<213> Homo sapiens

<400> 86

Ile Gln Ser
1

<210> 87
<211> 15
<212> PRT
<213> Homo sapiens

<400> 87

Cys Ala Val Arg Pro Thr Ser Gly Gly Ser Tyr Ile Pro Thr Phe
1 5 10 15

<210> 88
<211> 133

<212> PRT
<213> Homo sapiens

<400> 88

Met Glu Thr Leu Leu Gly Leu Leu Ile Leu Trp Leu Gln Leu Gln Trp
1 5 10 15

Val Ser Ser Lys Gln Glu Val Thr Gln Ile Pro Ala Ala Leu Ser Val
20 25 30

Pro Glu Gly Glu Asn Leu Val Leu Asn Cys Ser Phe Thr Asp Ser Ala
35 40 45

Ile Tyr Asn Leu Gln Trp Phe Arg Gln Asp Pro Gly Lys Gly Leu Thr
50 55 60

Ser Leu Leu Leu Ile Gln Ser Ser Gln Arg Glu Gln Thr Ser Gly Arg
65 70 75 80

Leu Asn Ala Ser Leu Asp Lys Ser Ser Gly Arg Ser Thr Leu Tyr Ile
85 90 95

Ala Ala Ser Gln Pro Gly Asp Ser Ala Thr Tyr Leu Cys Ala Val Arg
100 105 110

Pro Thr Ser Gly Gly Ser Tyr Ile Pro Thr Phe Gly Arg Gly Thr Ser
115 120 125

Leu Ile Val His Pro
130

<210> 89
<211> 141
<212> PRT
<213> Homo sapiens

<400> 89

Tyr Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu Arg Asp Ser Lys
1 5 10 15

Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe Asp Ser Gln Thr
20 25 30

Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile Thr Asp Lys Thr
35 40 45

Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn Ser Ala Val Ala
50 55 60

Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala Phe Asn Asn Ser
65 70 75 80

Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu Ser Ser Cys Asp
85 90 95

Val Lys Leu Val Glu Lys Ser Phe Glu Thr Asp Thr Asn Leu Asn Phe
100 105 110

Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
115 120 125

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
130 135 140

<210> 90
<211> 274
<212> PRT
<213> Homo sapiens

<400> 90

Met Glu Thr Leu Leu Gly Leu Leu Ile Leu Trp Leu Gln Leu Gln Trp
1 5 10 15

Val Ser Ser Lys Gln Glu Val Thr Gln Ile Pro Ala Ala Leu Ser Val
20 25 30

Pro Glu Gly Glu Asn Leu Val Leu Asn Cys Ser Phe Thr Asp Ser Ala
35 40 45

Ile Tyr Asn Leu Gln Trp Phe Arg Gln Asp Pro Gly Lys Gly Leu Thr
50 55 60

Ser Leu Leu Leu Ile Gln Ser Ser Gln Arg Glu Gln Thr Ser Gly Arg

65				70				75				80				
Leu	Asn	Ala	Ser	Leu	Asp	Lys	Ser	Ser	Gly	Arg	Ser	Thr	Leu	Tyr	Ile	
				85					90					95		
Ala	Ala	Ser	Gln	Pro	Gly	Asp	Ser	Ala	Thr	Tyr	Leu	Cys	Ala	Val	Arg	
				100					105					110		
Pro	Thr	Ser	Gly	Gly	Ser	Tyr	Ile	Pro	Thr	Phe	Gly	Arg	Gly	Thr	Ser	
				115					120					125		
Leu	Ile	Val	His	Pro	Tyr	Ile	Gln	Asn	Pro	Asp	Pro	Ala	Val	Tyr	Gln	
				130					135					140		
Leu	Arg	Asp	Ser	Lys	Ser	Ser	Asp	Lys	Ser	Val	Cys	Leu	Phe	Thr	Asp	
				145					150					155		
Phe	Asp	Ser	Gln	Thr	Asn	Val	Ser	Gln	Ser	Lys	Asp	Ser	Asp	Val	Tyr	
				165					170					175		
Ile	Thr	Asp	Lys	Thr	Val	Leu	Asp	Met	Arg	Ser	Met	Asp	Phe	Lys	Ser	
				180					185					190		
Asn	Ser	Ala	Val	Ala	Trp	Ser	Asn	Lys	Ser	Asp	Phe	Ala	Cys	Ala	Asn	
				195					200					205		
Ala	Phe	Asn	Asn	Ser	Ile	Ile	Pro	Glu	Asp	Thr	Phe	Phe	Pro	Ser	Pro	
				210					215					220		
Glu	Ser	Ser	Cys	Asp	Val	Lys	Leu	Val	Glu	Lys	Ser	Phe	Glu	Thr	Asp	
				225					230					235		
Thr	Asn	Leu	Asn	Phe	Gln	Asn	Leu	Ser	Val	Ile	Gly	Phe	Arg	Ile	Leu	
				245					250					255		
Leu	Leu	Lys	Val	Ala	Gly	Phe	Asn	Leu	Leu	Met	Thr	Leu	Arg	Leu	Trp	
				260					265					270		
Ser	Ser															

<210> 91
<211> 5
<212> PRT
<213> Homo sapiens

<400> 91

Met Asn His Glu Tyr
1 5

<210> 92
<211> 6
<212> PRT
<213> Homo sapiens

<400> 92

Ser Val Gly Ala Gly Ile
1 5

<210> 93
<211> 14
<212> PRT
<213> Homo sapiens

<400> 93

Cys Ala Ser Ser Tyr Val Gly Asn Thr Gly Glu Leu Phe Phe
1 5 10

<210> 94
<211> 132
<212> PRT
<213> Homo sapiens

<400> 94

Met Ser Ile Gly Leu Leu Cys Cys Ala Ala Leu Ser Leu Leu Trp Ala
1 5 10 15

Gly Pro Val Asn Ala Gly Val Thr Gln Thr Pro Lys Phe Gln Val Leu
20 25 30

Lys Thr Gly Gln Ser Met Thr Leu Gln Cys Ala Gln Asp Met Asn His
35 40 45

Glu Tyr Met Ser Trp Tyr Arg Gln Asp Pro Gly Met Gly Leu Arg Leu

50

55

60

Ile His Tyr Ser Val Gly Ala Gly Ile Thr Asp Gln Gly Glu Val Pro
65 70 75 80

Asn Gly Tyr Asn Val Ser Arg Ser Thr Thr Glu Asp Phe Pro Leu Arg
85 90 95

Leu Leu Ser Ala Ala Pro Ser Gln Thr Ser Val Tyr Phe Cys Ala Ser
100 105 110

Ser Tyr Val Gly Asn Thr Gly Glu Leu Phe Phe Gly Glu Gly Ser Arg
115 120 125

Leu Thr Val Leu
130

<210> 95
<211> 179
<212> PRT
<213> Homo sapiens

<400> 95

Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala Val Phe Glu Pro
1 5 10 15

Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val Cys Leu
20 25 30

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

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

Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu
65 70 75 80

Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys
85 90 95

Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp
100 105 110

Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg
115 120 125

Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln Gly Val Leu Ser
130 135 140

Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
145 150 155 160

Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp
165 170 175

Ser Arg Gly

<210> 96
<211> 311
<212> PRT
<213> Homo sapiens

<400> 96

Met Ser Ile Gly Leu Leu Cys Cys Ala Ala Leu Ser Leu Leu Trp Ala
1 5 10 15

Gly Pro Val Asn Ala Gly Val Thr Gln Thr Pro Lys Phe Gln Val Leu
20 25 30

Lys Thr Gly Gln Ser Met Thr Leu Gln Cys Ala Gln Asp Met Asn His
35 40 45

Glu Tyr Met Ser Trp Tyr Arg Gln Asp Pro Gly Met Gly Leu Arg Leu
50 55 60

Ile His Tyr Ser Val Gly Ala Gly Ile Thr Asp Gln Gly Glu Val Pro
65 70 75 80

Asn Gly Tyr Asn Val Ser Arg Ser Thr Thr Glu Asp Phe Pro Leu Arg
85 90 95

Leu Leu Ser Ala Ala Pro Ser Gln Thr Ser Val Tyr Phe Cys Ala Ser
100 105 110

Ser Tyr Val Gly Asn Thr Gly Glu Leu Phe Phe Gly Glu Gly Ser Arg
115 120 125

Leu Thr Val Leu Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala
130 135 140

Val Phe Glu Pro Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr
145 150 155 160

Leu Val Cys Leu Ala Thr Gly Phe Tyr Pro Asp His Val Glu Leu Ser
165 170 175

Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro
180 185 190

Gln Pro Leu Lys Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu
195 200 205

Ser Ser Arg Leu Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn
210 215 220

His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu
225 230 235 240

Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu
245 250 255

Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln
260 265 270

Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala
275 280 285

Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val
290 295 300

Lys Arg Lys Asp Ser Arg Gly

305

310

<210> 97
<211> 9
<212> PRT
<213> Homo sapiens

<400> 97

Ser Leu Leu Gln His Leu Ile Gly Leu
1 5

<210> 98
<211> 9
<212> PRT
<213> Homo sapiens

<400> 98

Ala Leu Leu Gln His Leu Ile Gly Leu
1 5

<210> 99
<211> 9
<212> PRT
<213> Homo sapiens

<400> 99

Ser Ala Leu Gln His Leu Ile Gly Leu
1 5

<210> 100
<211> 9
<212> PRT
<213> Homo sapiens

<400> 100

Ser Leu Ala Gln His Leu Ile Gly Leu
1 5

<210> 101
<211> 9
<212> PRT
<213> Homo sapiens

<400> 101

Ser Leu Leu Ala His Leu Ile Gly Leu
1 5

<210> 102
<211> 9
<212> PRT
<213> Homo sapiens

<400> 102

Ser Leu Leu Gln Ala Leu Ile Gly Leu
1 5

<210> 103
<211> 9
<212> PRT
<213> Homo sapiens

<400> 103

Ser Leu Leu Gln His Ala Ile Gly Leu
1 5

<210> 104
<211> 9
<212> PRT
<213> Homo sapiens

<400> 104

Ser Leu Leu Gln His Leu Ala Gly Leu
1 5

<210> 105
<211> 9
<212> PRT
<213> Homo sapiens

<400> 105

Ser Leu Leu Gln His Leu Ile Ala Leu
1 5

<210> 106
<211> 9
<212> PRT
<213> Homo sapiens

<400> 106

Ser Leu Leu Gln His Leu Ile Gly Ala
1 5

<210> 107
<211> 9
<212> PRT
<213> Homo sapiens

<400> 107

Thr Leu Leu Gln His Leu Ile Gly Leu
1 5

<210> 108
<211> 9
<212> PRT
<213> Homo sapiens

<400> 108

Ser Thr Leu Gln His Leu Ile Gly Leu
1 5

<210> 109
<211> 9
<212> PRT
<213> Homo sapiens

<400> 109

Ser Leu Thr Gln His Leu Ile Gly Leu
1 5

<210> 110
<211> 9
<212> PRT
<213> Homo sapiens

<400> 110

Ser Leu Leu Thr His Leu Ile Gly Leu
1 5

<210> 111
<211> 9
<212> PRT
<213> Homo sapiens

<400> 111

Ser Leu Leu Gln Thr Leu Ile Gly Leu
1 5

<210> 112

<211> 9

<212> PRT

<213> Homo sapiens

<400> 112

Ser Leu Leu Gln His Thr Ile Gly Leu
1 5

<210> 113

<211> 9

<212> PRT

<213> Homo sapiens

<400> 113

Ser Leu Leu Gln His Leu Thr Gly Leu
1 5

<210> 114

<211> 9

<212> PRT

<213> Homo sapiens

<400> 114

Ser Leu Leu Gln His Leu Ile Thr Leu
1 5

<210> 115

<211> 9

<212> PRT

<213> Homo sapiens

<400> 115

Ser Leu Leu Gln His Leu Ile Gly Thr
1 5

<210> 116

<211> 9

<212> PRT

<213> Homo sapiens

<400> 116

Ser Ile Leu Gln Thr Leu Ile Leu Val
1 5

<210> 117

<211> 9

<212> PRT

<213> Homo sapiens

<400> 117

Ser Leu Ile Glu His Leu Gln Gly Leu
1 5

<210> 118

<211> 9

<212> PRT

<213> Homo sapiens

<400> 118

Ser Leu Ile Gln His Leu Glu Glu Ile
1 5

<210> 119

<211> 9

<212> PRT

<213> Homo sapiens

<400> 119

Ser Leu Leu Lys Asn Leu Ile Tyr Leu
1 5

<210> 120

<211> 9

<212> PRT

<213> Homo sapiens

<400> 120

Ser Leu Leu Asn His Leu Pro Tyr Leu
1 5

<210> 121

<211> 9

<212> PRT

<213> Homo sapiens

<400> 121

Ser Leu Leu Gln His Val Leu Leu Leu
1 5

<210> 122

<211> 9

<212> PRT

<213> Homo sapiens

<400> 122

Ser Leu Leu Gln Lys Gln Ile Met Leu
1 5

<210> 123

<211> 9

<212> PRT

<213> Homo sapiens

<400> 123

Ser Leu Ser Gln Glu Leu Val Gly Val
1 5

<210> 124

<211> 9

<212> PRT

<213> Homo sapiens

<400> 124

Ser Val Leu Gly Ala Leu Ile Gly Val
1 5

<210> 125

<211> 9

<212> PRT

<213> Homo sapiens

<400> 125

Val Leu Leu His His Gln Ile Gly Leu
1 5

<210> 126

<211> 9

<212> PRT
<213> Homo sapiens

<400> 126

Ser Leu Leu Met Trp Ile Thr Gln Val
1 5

<210> 127
<211> 6
<212> PRT
<213> Homo sapiens

<400> 127

Ser Ser Asn Phe Tyr Ala
1 5

<210> 128
<211> 3
<212> PRT
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<400> 128

Met Thr Leu
1

<210> 129
<211> 11
<212> PRT
<213> Homo sapiens

<400> 129

Cys Ala Leu Tyr Asn Asn Asn Asp Met Arg Phe
1 5 10

<210> 130
<211> 132
<212> PRT
<213> Homo sapiens

<400> 130

Met Glu Lys Asn Pro Leu Ala Ala Pro Leu Leu Ile Leu Trp Phe His
1 5 10 15

Leu Asp Cys Val Ser Ser Ile Leu Asn Val Glu Gln Ser Pro Gln Ser

20

25

30

Leu His Val Gln Glu Gly Asp Ser Thr Asn Phe Thr Cys Ser Phe Pro
 35 40 45

Ser Ser Asn Phe Tyr Ala Leu His Trp Tyr Arg Lys Glu Thr Ala Lys
 50 55 60

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

Lys Gly Arg Ile Ser Ala Thr Leu Asn Thr Lys Glu Gly Tyr Ser Tyr
 85 90 95

Leu Tyr Ile Lys Gly Ser Gln Pro Glu Asp Ser Ala Thr Tyr Leu Cys
 100 105 110

Ala Leu Tyr Asn Asn Asn Asp Met Arg Phe Gly Ala Gly Thr Arg Leu
 115 120 125

Thr Val Lys Pro
 130

<210> 131
 <211> 141
 <212> PRT
 <213> Homo sapiens

<400> 131

Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu Arg Asp Ser Lys
 1 5 10 15

Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe Asp Ser Gln Thr
 20 25 30

Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile Thr Asp Lys Thr
 35 40 45

Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn Ser Ala Val Ala
 50 55 60

Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala Phe Asn Asn Ser
65 70 75 80

Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu Ser Ser Cys Asp
85 90 95

Val Lys Leu Val Glu Lys Ser Phe Glu Thr Asp Thr Asn Leu Asn Phe
100 105 110

Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
115 120 125

Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser Ser
130 135 140

<210> 132
<211> 273
<212> PRT
<213> Homo sapiens

<400> 132

Met Glu Lys Asn Pro Leu Ala Ala Pro Leu Leu Ile Leu Trp Phe His
1 5 10 15

Leu Asp Cys Val Ser Ser Ile Leu Asn Val Glu Gln Ser Pro Gln Ser
20 25 30

Leu His Val Gln Glu Gly Asp Ser Thr Asn Phe Thr Cys Ser Phe Pro
35 40 45

Ser Ser Asn Phe Tyr Ala Leu His Trp Tyr Arg Lys Glu Thr Ala Lys
50 55 60

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

Lys Gly Arg Ile Ser Ala Thr Leu Asn Thr Lys Glu Gly Tyr Ser Tyr
85 90 95

Leu Tyr Ile Lys Gly Ser Gln Pro Glu Asp Ser Ala Thr Tyr Leu Cys
100 105 110

Ala Leu Tyr Asn Asn Asn Asp Met Arg Phe Gly Ala Gly Thr Arg Leu
115 120 125

Thr Val Lys Pro Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu
130 135 140

Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp Phe
145 150 155 160

Asp Ser Gln Thr Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile
165 170 175

Thr Asp Lys Thr Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser Asn
180 185 190

Ser Ala Val Ala Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn Ala
195 200 205

Phe Asn Asn Ser Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro Glu
210 215 220

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

Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu Leu
245 250 255

Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp Ser
260 265 270

Ser

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

Glu Met Gly Gln Glu Val Thr Leu Arg Cys Lys Pro Ile Ser Gly His
35 40 45

Asn Ser Leu Phe Trp Tyr Arg Glu Thr Met Met Arg Gly Leu Glu Leu
50 55 60

Leu Ile Tyr Phe Asn Asn Asn Val Pro Ile Asp Asp Ser Gly Met Pro
65 70 75 80

Glu Asp Arg Phe Ser Ala Lys Met Pro Asn Ala Ser Phe Ser Thr Leu
85 90 95

Lys Ile Gln Pro Ser Glu Pro Arg Asp Ser Ala Val Tyr Phe Cys Ala
100 105 110

Ser Ser Pro Gly Ser Thr Asp Thr Gln Tyr Phe Gly Pro Gly Thr Arg
115 120 125

Leu Thr Val Leu
130

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

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

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

Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu
65 70 75 80

Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys
85 90 95

Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp
100 105 110

Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg
115 120 125

Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln Gly Val Leu Ser
130 135 140

Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala
145 150 155 160

Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp
165 170 175

Ser Arg Gly

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

Glu Met Gly Gln Glu Val Thr Leu Arg Cys Lys Pro Ile Ser Gly His
35 40 45

Asn Ser Leu Phe Trp Tyr Arg Glu Thr Met Met Arg Gly Leu Glu Leu
50 55 60

Leu Ile Tyr Phe Asn Asn Asn Val Pro Ile Asp Asp Ser Gly Met Pro
65 70 75 80

Glu Asp Arg Phe Ser Ala Lys Met Pro Asn Ala Ser Phe Ser Thr Leu
85 90 95

Lys Ile Gln Pro Ser Glu Pro Arg Asp Ser Ala Val Tyr Phe Cys Ala
100 105 110

Ser Ser Pro Gly Ser Thr Asp Thr Gln Tyr Phe Gly Pro Gly Thr Arg
115 120 125

Leu Thr Val Leu Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala

130

135

140

Val Phe Glu Pro Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr
145 150 155 160

Leu Val Cys Leu Ala Thr Gly Phe Tyr Pro Asp His Val Glu Leu Ser
165 170 175

Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro
180 185 190

Gln Pro Leu Lys Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu
195 200 205

Ser Ser Arg Leu Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn
210 215 220

His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu
225 230 235 240

Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu
245 250 255

Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr Gln Gln
260 265 270

Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala
275 280 285

Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val
290 295 300

Lys Arg Lys Asp Ser Arg Gly
305 310

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Leu Leu Leu Val His Leu Ile Pro Val
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Ile Ile Leu Arg His Leu Ile Glu Ile
1 5

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Lys Ile Leu Leu His Leu Ile His Ile
1 5

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Lys Val Leu Pro His Leu Ile Pro Leu
1 5

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Ser Ala Leu Val His Leu Ile Pro Val
1 5

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Asn Ala Leu Val His Leu Ile Glu Val
1 5

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Val Ala Leu Gly His Leu Ile Gly Ile
1 5

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Asn Ala Leu Val His Leu Ile Glu Ile
1 5

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Trp Ala Leu Gly His Leu Ile Gly Ile
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Gln Ala Leu Glu His Leu Ile Tyr Ile
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Ile Ser Leu Ala His Leu Ile Leu Val
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Glu Thr Leu Asp His Leu Ile Ser Leu
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Ala Leu Leu Ser His Leu Ile Cys Arg
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Lys Glu Leu Arg His Leu Ile Glu Val
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Ile Ala Leu Val His Leu Ile Met Val
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Cys Trp Leu Cys His Leu Ile Lys Leu
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Gly Lys Leu Thr His Leu Ile Pro Val
1 5

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His Leu Leu Met His Leu Ile Gly Ser
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Thr Gln Leu Asp His Leu Ile Pro Gly
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Gln Asp Leu Trp His Leu Ile Lys Leu
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Ile Ala Leu Lys His Leu Ile Pro Thr
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Ile Ala Leu Lys His Leu Ile Leu Thr
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Leu Gln Leu Ile His Leu Ile Asn Val
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Ser Gln Leu Val His Leu Ile Tyr Val
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Cys Leu Leu Pro His Leu Ile Gln His
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Met Val Leu Val His Leu Ile His Ser
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Ser Asp Leu Phe His Leu Ile Gly Val
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Lys Leu Leu Phe His Leu Ile Gln Ser
1 5

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Lys Leu Leu Leu His Leu Ile Gln Ser
1 5

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Ser Phe Leu Val His Leu Ile Gly Leu
1 5

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Tyr Gly Leu Lys His Leu Ile Ser Val
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Ser Glu Leu Pro His Leu Ile Gly Ile
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Tyr Ala Leu Ser His Leu Ile His Ala
1 5

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Thr Leu Leu Gly His Leu Ile Ser Lys
1 5

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Ser Gln Leu Ser His Leu Ile Ala Met
1 5

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Phe Phe Leu Val His Leu Ile Cys Met
1 5

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Val Ser Leu His His Leu Ile Asn Ala
1 5

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Ile Met Leu Ile His Leu Ile Arg Leu
1 5

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Ile Thr Leu Ile His Leu Ile Arg Leu
1 5

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Ser Glu Leu Phe His Leu Ile Pro Leu
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Ser Val Leu Phe His Leu Ile Pro Leu
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Ala Gln Leu Ala His Leu Ile Leu Ser
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Phe Leu Leu Gly His Leu Ile Pro Arg
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Met Leu Leu Gly His Leu Ile Phe Phe
1 5

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Val Leu Leu Phe His Leu Ile Glu Glu
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Val Phe Leu Arg His Leu Ile Thr Leu
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Thr Leu Leu Asp His Leu Ile Phe Lys
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Ser Val Leu Val His Leu Ile Pro Ala
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Ala Lys Leu Glu His Leu Ile Tyr Leu
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Ser Leu Leu Pro His Leu Ile Leu Ser

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Ser Ile Leu Gly His Leu Ile Cys Ser
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Gln Ser Leu Glu His Leu Ile Tyr Ile
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Tyr Ile Leu Asn His Leu Ile Asn Pro
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Tyr Lys Leu Leu His Leu Ile Trp Ile
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Lys Leu Leu Cys His Leu Ile Glu His
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Ala Leu Leu Asp His Leu Ile Thr His
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Phe Met Leu Ser His Leu Ile Gln His
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Met Thr Leu Asn Gly Asp Glu
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Ile Tyr Ser Asn Gly Asp
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Thr Tyr Ser Ser Gly Asn
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Ile Tyr Ser Asn Gly Asp
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Ile Tyr Ser Asn Gly Asp
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Ile Tyr Ser Asn Gly Asp
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Ile Gln Ser Ser Gln Arg Glu
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Met Thr Leu Asn Gly Asp Glu
1 5

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1