

7233091_1
SEQUENCE LISTING

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 LI, Li

<120> INTERLEUKIN-2 MUTEINS FOR THE EXPANSION OF T-REGULATORY CELLS

<130> A-1935-WO-PCT

<140> PCT/US16/30843
 <141> 2016-05-04

<150> 62/146,136
 <151> 2015-04-10

<160> 308

<170> PatentIn version 3.5

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

<400> 1

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
 1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
 20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
 35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
 50 55 60

Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
 65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
 85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
 100 105 110

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Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile
 115 120 125

Ile Ser Thr Leu Thr
 130

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

<220>
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 <222> (125)..(125)
 <223> wherein X is C, S, V, or A

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Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
 1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
 20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
 35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
 50 55 60

Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
 65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
 85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
 100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Xaa Gln Ser Ile
 115 120 125

Ile Ser Thr Leu Thr
 130

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

<400> 3

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
 1 5 10 15

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Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

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

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

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 4
<211> 226
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<400> 4

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

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Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

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

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

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly
225

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Gly Gly Gly Gly Ser
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<211> 5
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<213> Artificial Sequence

<220>
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<400> 6

Gly Gly Asn Gly Thr
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<210> 7
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 7

Tyr Gly Asn Gly Thr
1 5

<210> 8
<211> 133
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<400> 8

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Glu Ala Leu Asn Leu Ala Pro Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asp Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

7233091_1

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile
 115 120 125

Ile Ser Thr Leu Thr
 130

<210> 9
 <211> 133
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 9

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
 1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Ser Tyr Lys
 20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
 35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
 50 55 60

Pro Leu Glu Glu Ala Leu Asn Leu Ala Pro Ser Lys Asn Phe His Leu
 65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asp Ile Asn Val Ile Val Leu Glu Leu
 85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
 100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile
 115 120 125

Ile Ser Thr Leu Thr
 130

<210> 10
 <211> 133
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 10

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
 1 5 10 15

7233091_1

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Arg Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Glu Ala Leu Asn Leu Ala Pro Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asp Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile
115 120 125

Ile Ser Thr Leu Thr
130

<210> 11
<211> 133
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<400> 11

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Ala Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Glu Ala Leu Asn Leu Ala Pro Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asp Ile Asn Val Ile Val Leu Glu Leu
85 90 95

7233091_1

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
 100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile
 115 120 125

Ile Ser Thr Leu Thr
 130

<210> 12
 <211> 133
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 12

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
 1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
 20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Glu
 35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
 50 55 60

Pro Leu Glu Glu Ala Leu Asn Leu Ala Pro Ser Lys Asn Phe His Leu
 65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asp Ile Asn Val Ile Val Leu Glu Leu
 85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
 100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile
 115 120 125

Ile Ser Thr Leu Thr
 130

<210> 13
 <211> 133
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 13

7233091_1

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Asp Ala Leu Asn Leu Ala Pro Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asp Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile
115 120 125

Ile Ser Thr Leu Thr
130

<210> 14

<211> 133

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Polypeptide

<400> 14

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Glu Ala Leu Arg Leu Ala Pro Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asp Ile Asn Val Ile Val Leu Glu Leu
85 90 95

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Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
 100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile
 115 120 125

Ile Ser Thr Leu Thr
 130

<210> 15
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 15

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
 1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
 20 25 30

Asn Pro Arg Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Glu
 35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
 50 55 60

Pro Leu Glu Asp Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
 65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asp Ile Asn Val Ile Val Leu Glu Leu
 85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
 100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile
 115 120 125

Ile Ser Thr Leu Thr
 130

<210> 16
 <211> 364
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 16

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

7233091_1

Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln
275 280 285

Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala
290 295 300

Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile
305 310 315 320

Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys
325 330 335

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

Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr Leu Thr
355 360

<210> 17

<211> 364

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Polypeptide

<400> 17

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gly Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

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

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

7233091_1

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220

Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys
 225 230 235 240

Thr Gln Leu Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu
 245 250 255

Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr
 260 265 270

Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln
 275 280 285

Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Ala Leu Asn Leu Ala
 290 295 300

Pro Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile
 305 310 315 320

Asn Lys Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys
 325 330 335

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

Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr Leu Thr
 355 360

<210> 18

<211> 364

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Polypeptide

<400> 18

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

7233091_1

Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln
275 280 285

Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala
290 295 300

Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile
305 310 315 320

Asn Lys Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys
325 330 335

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

Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr Leu Thr
355 360

<210> 19

<211> 364

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Polypeptide

<400> 19

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gly Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

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

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

7233091_1

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220

Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys
 225 230 235 240

Thr Gln Leu Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu
 245 250 255

Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr
 260 265 270

Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln
 275 280 285

Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Ala Leu Asn Leu Ala
 290 295 300

Pro Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asp Ile
 305 310 315 320

Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys
 325 330 335

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

Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr Leu Thr
 355 360

<210> 20

<211> 364

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Polypeptide

<400> 20

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gly Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

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

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

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys
225 230 235 240

Thr Gln Leu Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu
245 250 255

Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr
260 265 270

7233091_1

Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln
275 280 285

Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala
290 295 300

Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asp Ile
305 310 315 320

Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys
325 330 335

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

Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr Leu Thr
355 360

<210> 21
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<400> 21

His His His His His His
1 5

<210> 22
<211> 42
<212> PRT
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<220>
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<400> 22

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser
1 5 10 15

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
20 25 30

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn
35 40

<210> 23
<211> 30
<212> PRT
<213> Artificial Sequence

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<400> 23

Thr Gln Lys Ser Leu Ser Leu Ser Ser Ser Thr Lys Lys Thr Gln Leu
1 5 10 15

Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn
20 25 30

<210> 24

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Polypeptide

<400> 24

Thr Gln Lys Ser Leu Ser Leu Ser Ser Thr Lys Lys Thr Gln Leu Gln
1 5 10 15

Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn
20 25

<210> 25

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Polypeptide

<400> 25

Thr Gln Lys Ser Leu Ser Leu Ser Thr Lys Lys Thr Gln Leu Gln Leu
1 5 10 15

Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn
20 25

<210> 26

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Polypeptide

<400> 26

Thr Gln Lys Ser Leu Ser Leu Ser Lys Lys Thr Gln Leu Gln Leu Glu
1 5 10 15

His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn
20 25

<210> 27

<211> 26

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<212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 27

Thr Gln Lys Ser Leu Ser Leu Ser Lys Thr Gln Leu Gln Leu Glu His
 1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn
 20 25

<210> 28
 <211> 25
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 28

Thr Gln Lys Ser Leu Ser Leu Ser Thr Gln Leu Gln Leu Glu His Leu
 1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn
 20 25

<210> 29
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 29

Thr Gln Lys Ser Leu Ser Leu Ser Gln Leu Gln Leu Glu His Leu Leu
 1 5 10 15

Leu Asp Leu Gln Met Ile Leu Asn
 20

<210> 30
 <211> 23
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 30

Thr Gln Lys Ser Leu Ser Leu Gln Leu Gln Leu Glu His Leu Leu Leu
 1 5 10 15

Asp Leu Gln Met Ile Leu Asn
 20

<210> 31
 <211> 29
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 31

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser
 1 5 10 15

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln
 20 25

<210> 32
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 32

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala
 1 5 10 15

Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln
 20 25

<210> 33
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 33

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Ala Ala Pro Thr Ser Ser
 1 5 10 15

Ser Thr Lys Lys Thr Gln Leu Gln
 20

<210> 34
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Polypeptide

<400> 34

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Ala Ala Pro Ala Ser Ser
 1 5 10 15

Ser Thr Lys Lys Thr Gln Leu Gln
20

<210> 35
 <211> 28
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic Polypeptide
 <400> 35

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala
1 5 10 15

Pro Asn Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln
20 25

<210> 36
 <211> 28
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic Polypeptide
 <400> 36

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala
1 5 10 15

Pro Asn Ser Thr Ser Thr Lys Lys Thr Gln Leu Gln
20 25

<210> 37
 <211> 28
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic Polypeptide
 <400> 37

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Asn Gly Thr Ala
1 5 10 15

Pro Ala Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln
20 25

<210> 38
 <211> 28
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic Polypeptide

7233091_1

<400> 38

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Tyr Gly Asn Gly Thr Ala
 1 5 10 15

Pro Ala Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln
 20 25

<210> 39

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic polypeptide

<400> 39

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

7233091_1

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Gly Gln Leu Glu His Leu Leu Leu
 260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 40
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 40

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

7233091_1

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

7233091_1

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 41
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 41

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

7233091_1

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140
 Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175
 Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190
 Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205
 Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220
 Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240
 Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255
 Ser Ser Ser Thr Lys Lys Thr Gln Gln Gln Leu Glu His Leu Leu Leu
 260 265 270
 Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285
 Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300
 Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320
 Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335
 Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350
 Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365
 Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380
 Leu Thr
 385

7233091_1

<210> 42
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 42

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

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Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly₂₅₀ Gly Gly Ser Ala Pro Thr₂₅₅

Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Ser₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu

Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys

Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr

Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀

Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg

Asp Leu Ile Ser₃₄₀ Asn Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser

Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr₃₆₀ Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val

Glu Phe₃₇₀ Leu Asn Arg Trp Ile₃₇₅ Thr Phe Ala Gln Ser₃₈₀ Ile Ile Ser Thr

Leu Thr₃₈₅

<210> 43

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 43

Met Asp Met Arg Val₅ Pro Ala Gln Leu Leu₁₀ Gly Leu Leu Leu₁₅ Trp

Leu Arg Gly Ala₂₀ Arg Cys Asp Lys Thr₂₅ His Thr Cys Pro Pro₃₀ Cys Pro

Ala Pro Glu₃₅ Leu Leu Gly Gly₄₀ Pro Ser Val Phe Leu Phe₄₅ Pro Pro Lys

Pro Lys₅₀ Asp Thr Leu Met Ile₅₅ Ser Arg Thr Pro Glu₆₀ Val Thr Cys Val

7233091_1

Val₆₅ Val Asp Val Ser₇₀ His₇₀ Glu Asp Pro Glu₇₅ Val₇₅ Lys Phe Asn Trp Tyr₈₀
 Val Asp Gly Val₈₅ Glu₈₅ Val His Asn Ala Lys₉₀ Thr Lys Pro Arg Glu₉₅ Glu₉₅
 Gln Tyr Gly Ser₁₀₀ Thr Tyr Arg Val₁₀₅ Val₁₀₅ Ser Val Leu Thr Val₁₁₀ Leu His₁₁₀
 Gln Asp Trp₁₁₅ Leu Asn Gly Lys₁₂₀ Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys₁₂₅
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln₁₄₀
 Pro₁₄₅ Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro₁₇₅
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn₁₉₀
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val Leu₂₀₀ Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu₂₀₅
 Tyr Ser₂₁₀ Lys Leu Thr Val Asp₂₁₅ Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val₂₂₀
 Phe₂₂₅ Ser Cys Ser Val Met₂₃₀ His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly₂₅₀ Gly Gly Gly Ser Ala Pro Thr₂₅₅
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gly Leu Glu His Leu₂₇₀ Leu Leu₂₇₀
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys₂₈₅
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr₃₀₀
 Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀
 Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg₃₃₅

7233091_1

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 44
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 44

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

7233091_1

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Ala His Leu Leu Leu
 260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 45
 <211> 386
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic polypeptide

<400> 45

7233091_1

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

7233091_1

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 46
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 46

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

7233091_1

Gln Asp Trp₁₁₅ Leu Asn Gly Lys Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln
 Pro Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val Leu₂₀₀ Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val Asp₂₁₅ Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe Ser₂₂₅ Cys Ser Val Met₂₃₀ His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly Gly₂₅₀ Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Ser His Leu₂₇₀ Leu Leu
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr
 Glu Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀
 Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg
 Asp Leu Ile Ser₃₄₀ Asn Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser
 Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val
 Glu Phe₃₇₀ Leu Asn Arg Trp Ile₃₇₅ Thr Phe Ala Gln Ser₃₈₀ Ile Ile Ser Thr

Leu Thr
385

<210> 47
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 47

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

7233091_1

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu Ala Leu Leu Leu
 260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 48
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 48

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

7233091_1

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

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Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210>	49
<211>	386
<212>	PRT
<213>	Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 49

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
130 135 140

7233091_1

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu Gly Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 50
<211> 386
<212> PRT
<213> Artificial sequence

<220>

<223> synthetic polypeptide

<400> 50

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255

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Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu Lys Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 51
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 51

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

7233091_1

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

7233091_1

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 52
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 52

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

7233091_1

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu Asn Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 53

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 53

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

7233091_1

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

7233091_1

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 54
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 54

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

7233091_1

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140
 Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175
 Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190
 Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205
 Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220
 Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240
 Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255
 Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu Ser Leu Leu Leu
 260 265 270
 Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285
 Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300
 Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320
 Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335
 Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350
 Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365
 Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380
 Leu Thr
 385

<210> 55
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 55

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

7233091_1

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu Thr Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 56
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 56

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

7233091_1

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

7233091_1

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 57
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 57

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

7233091_1

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu Tyr Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 58

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 58

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

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Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 59
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 59

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser₁₀₀ Thr Tyr Arg Val₁₀₅ Ser Val₁₁₀ Leu Thr Val₁₁₀ Leu His
 Gln Asp Trp₁₁₅ Leu Asn Gly Lys Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln
 Pro₁₄₅ Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val₂₀₀ Leu Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val₂₁₅ Asp Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe₂₂₅ Ser Cys Ser Val₂₃₀ Met His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser₂₄₅ Leu Ser Pro Gly Gly₂₅₀ Gly Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Asp
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr
 Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀
 Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg
 Asp Leu Ile Ser₃₄₀ Asn Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser
 Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr₃₆₀ Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val

7233091_1

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 60
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 60

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

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Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Glu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 61
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptides

<400> 61

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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Ala Pro Glu₃₅ Leu Leu Gly Gly Pro₄₀ Ser Val Phe Leu₄₅ Phe Pro Pro Lys
 Pro Lys₅₀ Asp Thr Leu Met Ile₅₅ Ser Arg Thr Pro Glu₆₀ Val Thr Cys Val
 Val₆₅ Val Asp Val Ser His₇₀ Glu Asp Pro Glu₇₅ Val Lys Phe Asn Trp Tyr₈₀
 Val Asp Gly Val Glu₈₅ Val His Asn Ala Lys₉₀ Thr Lys Pro Arg Glu₉₅ Glu
 Gln Tyr Gly Ser₁₀₀ Thr Tyr Arg Val Val₁₀₅ Ser Val Leu Thr Val₁₁₀ Leu His
 Gln Asp Trp₁₁₅ Leu Asn Gly Lys Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln
 Pro₁₄₅ Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val Leu₂₀₀ Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val Asp₂₁₅ Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe₂₂₅ Ser Cys Ser Val Met₂₃₀ His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly Gly₂₅₀ Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Gly
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr

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Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 62
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 62

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
130 135 140

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Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175
 Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190
 Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205
 Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220
 Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240
 Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255
 Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Asn
 260 265 270
 Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285
 Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300
 Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320
 Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335
 Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350
 Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365
 Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380
 Leu Thr
 385

<210> 63
 <211> 386

<212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 63

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

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Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly Gly₂₅₀ Gly Gly Ser Ala Pro Thr₂₅₅

Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Arg

Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys

Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr

Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀

Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg

Asp Leu Ile Ser₃₄₀ Asn Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser

Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr₃₆₀ Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val

Glu Phe₃₇₀ Leu Asn Arg Trp Ile₃₇₅ Thr Phe Ala Gln Ser₃₈₀ Ile Ile Ser Thr

Leu Thr₃₈₅

<210> 64
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 64

Met Asp Met Arg Val₅ Pro Ala Gln Leu₁₀ Leu Gly Leu Leu Leu₁₅ Trp

Leu Arg Gly₂₀ Ala Arg Cys Asp Lys Thr₂₅ His Thr Cys Pro₃₀ Pro Cys Pro

Ala Pro Glu₃₅ Leu Leu Gly Gly₄₀ Pro Ser Val Phe Leu₄₅ Phe Pro Pro Lys

Pro Lys₅₀ Asp Thr Leu Met Ile₅₅ Ser Arg Thr Pro Glu₆₀ Val Thr Cys Val

Val₆₅ Val Asp Val Ser His₇₀ Glu Asp Pro Glu₇₅ Val Lys Phe Asn Trp Tyr₈₀

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

7233091_1

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 65
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 65

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

7233091_1

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Thr
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 66

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 66

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

7233091_1

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

7233091_1

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 67

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 67

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

7233091_1

Gln Asp Trp₁₁₅ Leu Asn Gly Lys Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln
 Pro₁₄₅ Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val Leu₂₀₀ Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val Asp₂₁₅ Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe₂₂₅ Ser Cys Ser Val Met₂₃₀ His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly Gly₂₅₀ Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu
 Ala Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr
 Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀
 Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg
 Asp Leu Ile Ser₃₄₀ Asn Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser
 Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr₃₆₀ Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val
 Glu Phe₃₇₀ Leu Asn Arg Trp Ile₃₇₅ Thr Phe Ala Gln Ser₃₈₀ Ile Ile Ser Thr

Leu Thr
385

<210> 68
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 68

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

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Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
260 265 270

Glu Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 69
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 69

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

7233091_1

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

7233091_1

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 70

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 70

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
145 150 155 160

7233091_1

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
 260 265 270

Gly Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 71
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 71

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

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Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu

Trp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys

Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr

Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu₃₁₅ Leu Lys Pro Leu₃₂₀ Glu

Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg

Asp Leu Ile Ser₃₄₀ Asn Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser

Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr₃₆₀ Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val

Glu Phe₃₇₀ Leu Asn Arg Trp Ile₃₇₅ Thr Phe Ala Gln Ser₃₈₀ Ile Ile Ser Thr

Leu Thr₃₈₅

<210> 72

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 72

Met Asp Met Arg Val₅ Pro Ala Gln Leu₁₀ Gly Leu Leu Leu₁₅ Trp

Leu Arg Gly Ala₂₀ Arg Cys Asp Lys Thr₂₅ His Thr Cys Pro₃₀ Pro Cys Pro

Ala Pro Glu₃₅ Leu Leu Gly Gly₄₀ Pro Ser Val Phe Leu₄₅ Phe Pro Pro Lys

Pro Lys₅₀ Asp Thr Leu Met Ile₅₅ Ser Arg Thr Pro₆₀ Glu Val Thr Cys Val

Val Val Asp Val Ser His₇₀ Glu Asp Pro Glu Val₇₅ Lys Phe Asn Trp Tyr₈₀

Val Asp Gly Val Glu₈₅ Val His Asn Ala Lys₉₀ Thr Lys Pro Arg Glu₉₅ Glu

7233091_1

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

7233091_1

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 73
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 73

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

7233091_1

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Ala Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 74

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 74

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

7233091_1

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

7233091_1

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Gly Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 75

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 75

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

7233091_1

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140
 Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175
 Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190
 Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205
 Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220
 Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240
 Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255
 Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
 260 265 270
 Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285
 Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300
 Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320
 Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Ser Pro Arg
 325 330 335
 Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350
 Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365
 Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380
 Leu Thr
 385

7233091_1

<210> 76
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 76

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

7233091_1

Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly Gly₂₅₀ Gly Gly Ser Ala Pro Thr₂₅₅

Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu

Asp Leu Gln Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys

Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr

Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀

Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Thr Pro₃₃₅ Arg

Asp Leu Ile Ser₃₄₀ Asn Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser

Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr₃₆₀ Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val

Glu Phe₃₇₀ Leu Asn Arg Trp Ile₃₇₅ Thr Phe Ala Gln Ser₃₈₀ Ile Ile Ser Thr

Leu Thr₃₈₅

<210> 77

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 77

Met Asp Met Arg Val₅ Pro Ala Gln Leu Leu₁₀ Gly Leu Leu Leu₁₅ Trp

Leu Arg Gly Ala₂₀ Arg Cys Asp Lys Thr₂₅ His Thr Cys Pro Pro₃₀ Cys Pro

Ala Pro Glu₃₅ Leu Leu Gly Gly₄₀ Pro Ser Val Phe Leu Phe₄₅ Pro Pro Lys

Pro Lys₅₀ Asp Thr Leu Met Ile₅₅ Ser Arg Thr Pro Glu₆₀ Val Thr Cys Val

7233091_1

Val₆₅ Val Asp Val Ser₇₀ His₇₀ Glu Asp Pro Glu₇₅ Val₇₅ Lys Phe Asn Trp Tyr₈₀
 Val Asp Gly Val₈₅ Glu₈₅ Val His Asn Ala Lys₉₀ Thr Lys Pro Arg Glu₉₅ Glu₉₅
 Gln Tyr Gly Ser₁₀₀ Thr Tyr Arg Val₁₀₅ Val₁₀₅ Ser Val Leu Thr Val₁₁₀ Leu His
 Gln Asp Trp₁₁₅ Leu Asn Gly Lys₁₂₀ Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln
 Pro₁₄₅ Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val Leu₂₀₀ Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val Asp₂₁₅ Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe Ser Cys Ser Val₂₃₀ Met₂₃₀ His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly₂₅₀ Gly₂₅₀ Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr
 Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀
 Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg

7233091_1

Ala Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 78
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 78

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

7233091_1

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
 260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Glu Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 79
 <211> 386
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic polypeptide

<400> 79

7233091_1

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

7233091_1

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Gly Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 80
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 80

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

7233091_1

Gln Asp Trp₁₁₅ Leu Asn Gly Lys Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln
 Pro Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val Leu₂₀₀ Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val Asp₂₁₅ Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe Ser₂₂₅ Cys Ser Val Met₂₃₀ His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly Gly₂₅₀ Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr
 Glu Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀
 Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg
 Ile Leu Ile Ser₃₄₀ Asn Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser
 Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr₃₆₀ Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val
 Glu Phe₃₇₀ Leu Asn Arg Trp Ile₃₇₅ Thr Phe Ala Gln Ser₃₈₀ Ile Ile Ser Thr

Leu Thr
385

<210> 81
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 81

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

7233091_1

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
 260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Met Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 82
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 82

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

7233091_1

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

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Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Gln Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210>	83
<211>	386
<212>	PRT
<213>	Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 83

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
130 135 140

7233091_1

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175
 Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190
 Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205
 Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215
 Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240
 Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255
 Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
 260 265 270
 Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285
 Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300
 Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320
 Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335
 Arg Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350
 Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365
 Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380
 Leu Thr
 385

<210> 84
 <211> 386
 <212> PRT
 <213> Artificial sequence

<220>

<223> synthetic polypeptide

<400> 84

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255

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Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Ser Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 85
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 85

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

7233091_1

Val Asp Gly Val Glu₈₅ Val His Asn Ala Lys₉₀ Thr Lys Pro Arg Glu₉₅ Glu
 Gln Tyr Gly Ser₁₀₀ Thr Tyr Arg Val Val₁₀₅ Ser Val Leu Thr Val₁₁₀ Leu His
 Gln Asp Trp₁₁₅ Leu Asn Gly Lys Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln
 Pro Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val Leu₂₀₀ Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val Asp₂₁₅ Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe Ser Cys Ser Val Met₂₃₀ His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly Gly₂₅₀ Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr
 Glu Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀
 Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg
 Thr Leu Ile Ser₃₄₀ Asn Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser

7233091_1

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 86
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 86

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

7233091_1

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Arg Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 87

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 87

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

7233091_1

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

7233091_1

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Asp Leu Ile Ser Ala Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 88
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 88

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

7233091_1

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140
 Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175
 Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190
 Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205
 Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220
 Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240
 Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255
 Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
 260 265 270
 Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285
 Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300
 Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320
 Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335
 Asp Leu Ile Ser Glu Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350
 Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365
 Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380
 Leu Thr
 385

<210> 89
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 89

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

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Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Phe Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 90
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> sythetic polypeptide

<400> 90

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

7233091_1

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

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Asp Leu Ile Ser Gly Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 91
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 91

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

7233091_1

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Met Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 92

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 92

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

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Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Ser Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 93
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 93

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser₁₀₀ Thr Tyr Arg Val₁₀₅ Ser Val₁₁₀ Leu Thr Val₁₁₀ Leu His
 Gln Asp Trp₁₁₅ Leu Asn Gly Lys Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln
 Pro₁₄₅ Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val₂₀₀ Leu Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val₂₁₅ Asp Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe₂₂₅ Ser Cys Ser Val₂₃₀ Met His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser₂₄₅ Leu Ser Pro Gly Gly₂₅₀ Gly Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr
 Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀
 Glu Val Leu Asn Leu₃₂₅ Ala Gln Ser Lys Asn₃₃₀ Phe His Leu Arg Pro₃₃₅ Arg
 Asp Leu Ile Ser₃₄₀ Val Ile Asn Val Ile₃₄₅ Val Leu Glu Leu Lys₃₅₀ Gly Ser
 Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr₃₆₀ Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val

7233091_1

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 94
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 94

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

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Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Trp Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 95
<211> 386
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 95

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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Ala Pro Glu₃₅ Leu Leu Gly Gly Pro₄₀ Ser Val Phe Leu₄₅ Phe Pro Pro Lys
 Pro Lys₅₀ Asp Thr Leu Met Ile₅₅ Ser Arg Thr Pro Glu₆₀ Val Thr Cys Val
 Val₆₅ Val Asp Val Ser His₇₀ Glu Asp Pro Glu₇₅ Val Lys Phe Asn Trp Tyr₈₀
 Val Asp Gly Val Glu₈₅ Val His Asn Ala Lys₉₀ Thr Lys Pro Arg Glu₉₅ Glu
 Gln Tyr Gly Ser₁₀₀ Thr Tyr Arg Val Val₁₀₅ Ser Val Leu Thr Val₁₁₀ Leu His
 Gln Asp Trp₁₁₅ Leu Asn Gly Lys Glu₁₂₀ Tyr Lys Cys Lys Val₁₂₅ Ser Asn Lys
 Ala Leu₁₃₀ Pro Ala Pro Ile Glu₁₃₅ Lys Thr Ile Ser Lys₁₄₀ Ala Lys Gly Gln
 Pro₁₄₅ Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val Leu₂₀₀ Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val Asp₂₁₅ Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe₂₂₅ Ser Cys Ser Val Met₂₃₀ His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly Gly₂₅₀ Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr

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Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Asp Ile Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
370 375 380

Leu Thr
385

<210> 96

<211> 386

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 96

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
130 135 140

7233091_1

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175
 Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190
 Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205
 Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220
 Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240
 Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255
 Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
 260 265 270
 Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285
 Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300
 Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320
 Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335
 Asp Leu Ile Ser Asn Ile Asn Glu Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350
 Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365
 Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380
 Leu Thr
 385

<210> 97
 <211> 386

<212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 97

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 225 230 235 240

7233091_1

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
 245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
 260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
 305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
 325 330 335

Asp Leu Ile Ser Asn Ile Asn Gly Ile Val Leu Glu Leu Lys Gly Ser
 340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 98
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 98

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

7233091_1

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

7233091_1

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
 355 360 365

Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile Ile Ser Thr
 370 375 380

Leu Thr
 385

<210> 99
 <211> 386
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 99

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
 1 5 10 15

Leu Arg Gly Ala Arg Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 20 25 30

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 65 70 75 80

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 85 90 95

Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 100 105 110

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 130 135 140

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 165 170 175

7233091_1

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
180 185 190

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
195 200 205

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
210 215 220

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
225 230 235 240

Lys Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Ala Pro Thr
245 250 255

Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu
260 265 270

Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
275 280 285

Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Lys Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
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Leu Thr
385

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 Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
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 Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
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 85 90 95
 Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
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 Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 115 120 125
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 Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 145 150 155 160
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
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 Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
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 Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys
 275 280 285

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Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
290 295 300

Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu
305 310 315 320

Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg
325 330 335

Asp Leu Ile Ser Asn Ile Asn Val Arg Val Leu Glu Leu Lys Gly Ser
340 345 350

Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val
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Leu Thr
385

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<213> Artificial Sequence

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35 40 45

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
50 55 60

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
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Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
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Gln Tyr Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
100 105 110

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 Pro₁₄₅ Arg Glu Pro Gln Val₁₅₀ Tyr Thr Leu Pro Pro₁₅₅ Ser Arg Glu Glu Met₁₆₀
 Thr Lys Asn Gln Val₁₆₅ Ser Leu Thr Cys Leu₁₇₀ Val Lys Gly Phe Tyr₁₇₅ Pro
 Ser Asp Ile Ala₁₈₀ Val Glu Trp Glu Ser₁₈₅ Asn Gly Gln Pro Glu₁₉₀ Asn Asn
 Tyr Lys Thr₁₉₅ Thr Pro Pro Val Leu₂₀₀ Asp Ser Asp Gly Ser₂₀₅ Phe Phe Leu
 Tyr Ser₂₁₀ Lys Leu Thr Val Asp₂₁₅ Lys Ser Arg Trp Gln₂₂₀ Gln Gly Asn Val
 Phe₂₂₅ Ser Cys Ser Val Met₂₃₀ His Glu Ala Leu His₂₃₅ Asn His Tyr Thr Gln₂₄₀
 Lys Ser Leu Ser Leu₂₄₅ Ser Pro Gly Gly Gly₂₅₀ Gly Gly Ser Ala Pro₂₅₅ Thr
 Ser Ser Ser Thr₂₆₀ Lys Lys Thr Gln Leu₂₆₅ Gln Leu Glu His Leu₂₇₀ Leu Leu
 Asp Leu Gln₂₇₅ Met Ile Leu Asn Gly₂₈₀ Ile Asn Asn Tyr Lys₂₈₅ Asn Pro Lys
 Leu Thr₂₉₀ Arg Met Leu Thr Phe₂₉₅ Lys Phe Tyr Met Pro₃₀₀ Lys Lys Ala Thr
 Glu₃₀₅ Leu Lys His Leu Gln₃₁₀ Cys Leu Glu Glu Glu₃₁₅ Leu Lys Pro Leu Glu₃₂₀
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 Glu Thr Thr₃₅₅ Phe Met Cys Glu Tyr₃₆₀ Ala Asp Glu Thr Ala₃₆₅ Thr Ile Val
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Leu Thr
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<211> 1158

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic polynucleotide

<400> 111

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7233091_1

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gaggttttga atttggtca atccaagaat tttcacttgc ggccacggga cttgatctcc     1020
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<212> DNA
<213> Artificial Sequence

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<220>
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gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacggcagc      300
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atcaataatt acaagaatcc aaagttgact cggatgttga cttttaagtt ttacatgcca      900
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<210> 113
<211> 1158
<212> DNA
<213> Artificial Sequence

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<220>
<223> synthetic polynucleotide

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<212> DNA
<213> Artificial Sequence

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<220>
<223> synthetic polynucleotide

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accaagaacc aggtcagcct gacctgcctg gtcaaaggct tctatcccag cgacatcgcc      540
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<220>
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tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccttgag      180
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gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatcccg ggaggagatg      480
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aagaaggcta ctgagttgaa gcacttgcaa tgtttgagg aggagttgaa gccattggag      960
gaggttttga atttggctca atccaagaat tttcacttgc ggccacggga cttgatctcc      1020
aatatcaatg tgaaggtttt ggagttgaag ggttccgaga ctacttttat gtgtgagtac      1080
gctgacgaga ctgctactat cgttgagttt ttgaatcggg ggatcacttt tgctcaatcc      1140
atcatctcca ctttgact                                                    1158

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<210> 163
<211> 1158
<212> DNA
<213> Artificial Sequence

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<220>

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<223> synthetic polynucleotide

<400> 163

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agatgcgaca	aaactcacac	atgcccaccg	tgcccagcac	ctgaactcct	ggggggaccg	120
tcagtcttcc	tcttcccccc	aaaacccaag	gacaccctca	tgatctcccg	gacccttgag	180
gtcacatgcg	tggtggtgga	cgtgagccac	gaagaccctg	aggtcaagtt	caactggtac	240
gtggacggcg	tggaggtgca	taatgccaag	acaaagccgc	gggaggagca	gtacggcagc	300
acgtaccgtg	tggtcagcgt	cctcaccgtc	ctgcaccagg	actggctgaa	tggcaaggag	360
tacaagtgca	aggtctccaa	caaagccctc	ccagccccc	tcgagaaaac	catctccaaa	420
gccaaagggc	agccccgaga	accacaggtg	tacaccctgc	ccccatcccg	ggaggagatg	480
accaagaacc	aggtcagcct	gacctgcctg	gtcaaaggct	tctatcccag	cgacatcgcc	540
gtggagtggg	agagcaatgg	gcagccggag	aacaactaca	agaccacgcc	tcccgctgctg	600
gactccgacg	gctccttctt	cctctatagc	aagctcaccg	tggacaagag	caggtggcag	660
caggggaacg	tcttctcatg	ctccgtgatg	catgaggctc	tgcaacaacca	ctacacgcag	720
aagagcctct	ccctgtctcc	gggtggaggt	ggtggaagcg	ctccaacttc	ctcctccact	780
aagaagactc	aattgcaatt	ggagcacttg	ttgttggtgact	tgcaaatgat	cttgaatggt	840
atcaataatt	acaagaatcc	aaagttgact	cggatgttga	cttttaagtt	ttacatgcca	900
aagaaggcta	ctgagttgaa	gcacttgcaa	tgtttgaggag	aggagttgaa	gccattggag	960
gaggttttga	atttggtcga	atccaagaat	tttcacttgc	ggccacggga	cttgatctcc	1020
aatatcaatg	tgagagtttt	ggagttgaag	ggttccgaga	ctacttttat	gtgtgagtac	1080
gctgacgaga	ctgctactat	cgttgagttt	ttgaatcggt	ggatcacttt	tgctcaatcc	1140
atcatctcca	ctttgact					1158

<210> 164

<211> 1158

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic polynucleotide

<400> 164

atggacatga	gagtgctgc	acagctgctg	ggcctgctgc	tgctgtggct	gagaggcgcc	60
agatgcgaca	aaactcacac	atgcccaccg	tgcccagcac	ctgaactcct	ggggggaccg	120
tcagtcttcc	tcttcccccc	aaaacccaag	gacaccctca	tgatctcccg	gacccttgag	180
gtcacatgcg	tggtggtgga	cgtgagccac	gaagaccctg	aggtcaagtt	caactggtac	240
gtggacggcg	tggaggtgca	taatgccaag	acaaagccgc	gggaggagca	gtacggcagc	300
acgtaccgtg	tggtcagcgt	cctcaccgtc	ctgcaccagg	actggctgaa	tggcaaggag	360
tacaagtgca	aggtctccaa	caaagccctc	ccagccccc	tcgagaaaac	catctccaaa	420
gccaaagggc	agccccgaga	accacaggtg	tacaccctgc	ccccatcccg	ggaggagatg	480

7233091_1

accaagaacc aggtcagcct gacctgcctg gtcaaaggct tctatcccag cgacatcgcc 540
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 gactccgacg gtccttctt cctctatagc aagctcaccg tggacaagag caggtggcag 660
 caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 720
 aagagcctct ccctgtctcc ggggtggaggt ggtggaagcg ctccaacttc ctctccact 780
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 aagaaggcta ctgagttgaa gcacttgcaa tgtttggagg aggagttgaa gccattggag 960
 gaggttttga atttggctca atccaagaat tttcacttgc ggccacggga cttgatctcc 1020
 aatatcaatg tgatcgtttt ggggttgaag ggttccgaga ctacttttat gtgtgagtac 1080
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<210> 165
 <211> 114
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 165

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser
 20 25 30

Asp Glu Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
 35 40 45

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

Pro Asp Arg Phe Ser Gly Thr Gly Ser Asp Thr Asp Phe Thr Leu Lys
 65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
 85 90 95

Arg Ile Glu Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
 100 105 110

Lys Arg

7233091_1

<210> 166
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 166

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Phe Ser Ser Ser
 20 25 30

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
 65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
 85 90 95

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

<210> 167
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 167

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser His His Leu Ile His Ser
 20 25 30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Thr Gly Ser Gly Thr Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

7233091_1

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

Thr Gln Phe Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

<210> 168
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 168

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Asn Leu Val Gln Ser
20 25 30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu His Gln Arg Pro Gly Gln Pro
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe Cys Met Gln Thr
85 90 95

Thr Gln Phe Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

<210> 169
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 169

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ile Leu Val Asn Ser
20 25 30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu His Gln Arg Pro Gly Gln Pro
35 40 45

7233091_1

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

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

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

Thr Gln Phe Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105 110

<210> 170

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 170

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Arg Ser
 20 25 30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu His Gln Arg Pro Gly Gln Pro
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

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

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

Thr Gln Phe Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105 110

<210> 171

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 171

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

7233091_1

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser His Ser Leu Val His Ser
20 25 30

Asp Gly His Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
35 40 45

Pro Arg Leu Leu Leu Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

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

Thr Gln Phe Pro Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

<210> 172

<211> 113

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 172

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

Glu Pro Ala Ser Met Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Phe Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

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

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg

<210> 173

<211> 113

7233091_1

<212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 173

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
 20 25 30

Asn Gly Phe Asn Tyr Leu Asp Trp Phe Leu Gln Lys Pro Gly Gln Ser
 35 40 45

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

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
 85 90 95

Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

Arg

<210> 174
 <211> 113
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 174

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
 20 25 30

Asn Gly Phe Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
 35 40 45

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

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

7233091_1

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg

<210> 175
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 175

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Asn Ile
20 25 30

Asp Gly Ser Thr His Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

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

Thr Gln Phe Pro Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
100 105 110

<210> 176
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 176

Glu Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Gln Ser
20 25 30

7233091_1

Asp Gly Ile Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

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

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

Thr Gln Phe Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105 110

<210> 177
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 177

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Asn Ser
 20 25 30

Asp Gly Asn Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Pro
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
 85 90 95

Thr Gln Phe Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105 110

<210> 178
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

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<400> 178

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser His Asn Leu Val Arg Ser
20 25 30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

Ser Arg Val Gly Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Thr Gln Phe Pro Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
100 105 110

<210> 179

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 179

Asn Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Gln Thr
20 25 30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
35 40 45

Pro Arg Pro Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Val
85 90 95

Thr Gln Phe Pro Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
100 105 110

7233091_1

<210> 180
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 180

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser His Asn Leu Ile His Ser
 20 25 30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu His Gln Arg Pro Gly Gln Pro
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

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

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

Ser Gln Phe Pro Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
 100 105 110

<210> 181
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 181

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser His Asn Leu Leu His Ser
 20 25 30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
 35 40 45

Pro Arg Leu Leu Ile Tyr Glu Ile Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

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

7233091_1

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Val
85 90 95

Thr Gln Phe Pro Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

<210> 182
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 182

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95

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

<210> 183
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 183

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

7233091_1

Ile His Gly Pro Phe Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
 65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Asn Ser Ser
 85 90 95

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

<210> 184

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 184

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 Thr Ile Ser Ser Tyr
 20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser His Tyr Ile Pro Arg
 85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105

<210> 185

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 185

Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
 1 5 10 15

7233091_1

Thr Ala Arg Ile Ala Cys Ser Gly Asp Ala Leu Pro Arg Lys Phe Ala
 20 25 30

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

Glu Asp Ser Arg Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
 50 55 60

Ser Ser Gly Thr Met Ala Thr Leu Thr Ile Ser Gly Ala Gln Val Glu
 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Phe Ser Thr Asp Ser Ser Ala Asn His
 85 90 95

Arg Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
 100 105

<210> 186

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 186

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 Ile Arg Asn Asp
 20 25 30

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

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

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

Glu Asp Phe Thr Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Leu
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
 100 105

<210> 187

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 187

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

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Ile Ser Tyr Pro Trp
 85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105

<210> 188

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 188

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 Ile Arg Asp Asp
 20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Ile Ser Tyr Pro Trp
 85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105

7233091_1

<210> 189
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 189

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 Ile Arg Asp Asp
 20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Gly Tyr Pro Trp
 85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105

<210> 190
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 190

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

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

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

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

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

7233091_1

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

Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Arg Arg
 100 105

<210> 191
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 191

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 Ile Glu His Asp
 20 25 30

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

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

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

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

Ser Phe Gly Gln Gly Thr Gln Leu Glu Ile Lys Arg
 100 105

<210> 192
 <211> 114
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 192

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Thr Gln Ser Leu Leu Asp Gly
 20 25 30

Asp Asp Gly Asn Thr Leu Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
 35 40 45

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

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Arg Leu Glu Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
100 105 110

Lys Arg

<210> 193

<211> 114

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 193

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser
20 25 30

Asp Glu Gly Asn Thr Phe Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

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

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Arg Ile Glu Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
100 105 110

Lys Arg

<210> 194

<211> 108

<212> PRT

<213> Artificial Sequence

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<220>

<223> synthetic polypeptide

<400> 194

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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
 20 25 30

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

Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Glu Asn Leu Pro Phe
 85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
 100 105

<210> 195

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 195

Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
 1 5 10 15

Thr Ala Arg Ile Thr Cys Ser Gly Asp Ala Leu Pro Arg Gln Tyr Ala
 20 25 30

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

Lys Asp Ser Glu Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
 50 55 60

Ser Ser Gly Thr Thr Val Thr Leu Thr Ile Ser Gly Val Gln Ala Glu
 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Ala Asp Ser Ser Gly Thr Tyr
 85 90 95

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Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105

<210> 196
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 196

Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Ser Gly Asp Ala Leu Pro Arg Lys Tyr Ala
20 25 30

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

Glu Asp Ser Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Ser Ser Gly Thr Met Ala Thr Leu Thr Ile Ser Gly Ala Gln Val Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Tyr Ser Thr Asp Ser Ser Gly Asn His
85 90 95

Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105

<210> 197
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 197

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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Asp Asp Asn Leu Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
100 105

<210> 198

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 198

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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Ile Ala Thr Phe Tyr Cys Gln Gln Tyr Asp Asn Leu Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
100 105

<210> 199

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 199

Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Ser Gly Asp Ala Leu Pro Arg Lys Phe Ala
20 25 30

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

Glu Asp Arg Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
 50 55 60

Ser Ser Gly Thr Met Ala Thr Leu Thr Ile Ser Gly Ala Gln Val Glu
 65 70 75 80

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

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
 100 105

<210> 200
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 200

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

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

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

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

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Thr
 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Leu Ser Phe Pro Trp
 85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Glu Val Lys Arg
 100 105

<210> 201
 <211> 342
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 201
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atctcctgca ggtctagtca gaggcctctta gatagtgatg agggaaacac ctatttggac 120
 tgggtacctgc agaagccagg gcagtctcca cagctcctga tctatacgct ttcctatcgg 180
 gcctctggag tcccagacag gttcagtggc actgggctcag acactgattt cacactgaaa 240
 atcagcaggg tggaggctga ggatgttgga gtttattact gcatgcaacg tatagagttt 300
 cctctcactt tcggcggagg gaccaaggtg gagatcaaac ga 342

<210> 202
 <211> 327
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 202
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 cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180
 gacaggttcg gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
 cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcacctct cactttcggc 300
 ggagggacca aggtggagat caaacga 327

<210> 203
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 203
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 cttcagcaga ggccaggcca gcctccaaga ctcttaattt ataagatttc taaccggttc 180
 tctgggggtcc cagacagatt cactggcagt gggacagga cagatttcac actgaaaatc 240
 agcaggggtg aagctgggga tgtcgggggtt tattactgca tgcaaactac acaatttccg 300
 acgttcggcc aagggaacaa ggtggaaatc aaacga 336

<210> 204
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 204
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 atctcctgca ggtccagtca aaacctcggt caaagtgatg gaaacaccta cttgagttgg 120

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cttcaccaga ggccaggcca gcctccaaga ctcctaattt ataagatttc taaccggttc 180
tctgggggtcc cagacagatt cagtggcagt ggggcagga cagatttcac actgaaaatc 240
agcaggggtg aagctgagga tgtcgggggt tatttctgca tgcaaactac acaatttccg 300
acgttcggcc aagggaacaa ggtggaaatc aaacga 336

<210> 205
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 205
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cttcaccaga ggccaggcca gcctccaaga ctcctaattt ataagatttc taaccggttc 180
tctgggggtcc cagacagatt cagtggcagt ggggcagga cagatttcac actgaaaatc 240
agcaggggtg aagctgagga tgtcgggggt tattactgca tgcaaactac acaatttccg 300
acgttcggcc aagggaacaa ggtggaaatc aaacga 336

<210> 206
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 206
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cttcaccaga ggccaggcca gcctccaaga ctcctaattt ataagatttc taaccggttc 180
tctgggggtcc cagacagatt cagtggcagt ggggcagga cagatttcac actgaaaatc 240
agcaggggtg aagctgagga tgtcgggggt tattactgca tgcaaactac acaatttccg 300
acgttcggcc aagggaacaa ggtggaaatc aaacga 336

<210> 207
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
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<400> 207
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atctcctgca ggtctagtca cagcctcgta cacagtgatg gacacaccta cttgagttgg 120
cttcagcaga ggccaggcca gcctccaaga ctcctacttt ataagatttc taaccggttc 180

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tctggggtcc cagacagatt cagtggcagt ggggcagga cagatttcac actgaaaatc 240
 agcaggggtg aagctgagga tgtcgggggtt tattactgca tgcaaaactac acaatttccc 300
 actttcggcg gagggaccaa ggtggagatc aaacga 336

<210> 208
 <211> 339
 <212> DNA
 <213> Artificial Sequence

<220>
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 tacctgcaga agccaggga gtctccacag gtctgatcc atttgggttc tgatcgggcc 180
 tccggggtcc ctgacagggt cagtggcagt ggatcaggca cagattttac attgaaaatc 240
 agcagagtgg aggctgagga tgttgaatt tattactgca tgcaagctct acaaactcct 300
 ctactttcg gcggaggga caaggtggag atcaaacga 339

<210> 209
 <211> 339
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 209
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 ttcctgcaga agccaggga gtctccacag cccctgatct atttgggttc tgatcgggcc 180
 tccggggtcc ctgacagggt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
 agcagagtgg aggctgagga tgttgggggtt tattactgca tgcaagctct acaaactccg 300
 ctactttcg gcggaggga caaggtggag atcaaacga 339

<210> 210
 <211> 339
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 210
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 tacctgcaga agccaggga gtctccacag ctctgatct atttgggttc tgatcgggcc 180
 tccggggtcc ctgacagggt cagtggcagt ggatcaggca cagattttac actgaaaatc 240

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agcagagtgg aggctgagga tgttgggggtt tattactgca tgcaagctct acaaactccg 300
ctcacttttcg gcggagggac caaggtggag atcaaacga 339

<210> 211
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
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<400> 211
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cttcagcaga ggccaggcca gcctccaaga ctctaattt ataagatttc taaccggttc 180
tctgggggtcc cagacagatt cagtggcagt ggggcagga cagatttcac actgaagatc 240
agcaggggtg aagctgagga tgtcgggggtt tattactgca tgcaaactac acaattcccc 300
accttcggcc aaggacacg actggagatt aaacga 336

<210> 212
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<212> DNA
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<220>
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<400> 212
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cttcagcaga ggccaggcca gcctccaaga ctctaattt ataagatttc taaccggttc 180
tctgggggtcc cagacagatt cagtggcagt ggggcagga cagatttcac actgaaaatc 240
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<210> 213
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<220>
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<400> 213
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cttcagcaga ggccaggcca gcctccaaga ctctaattt ataagatttc taaccggttc 180
tctgggggtcc cagacagatt cagtggcagt ggggcagga cagatttcac actgaaaatc 240
agcaggggtg aagctgagga tgtcgggggtt tattactgca tgcaagctac acaatttccg 300

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acgttcggcc aagggaacaa ggtggaaatc aaacga 336

<210> 214
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 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 214
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 cttcagcaga ggccaggcca gcctccaaga ctctaatatt ataagatttc taaccggttc 180
 tctgggggtcc cagacagatt cagtggcagt ggggcaggga cagatttcac actgaaaatc 240
 agcaggggtg gagctgagga tgtcgggggt tattactgca tgcaagctac acaatttccc 300
 accttcggcc aagggaacg actggagatt aaacga 336

<210> 215
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 <212> DNA
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<400> 215
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 cttcagcaga ggccaggcca gcctccaaga cccctaatatt ataagatttc taaccggttt 180
 tctgggggtcc cagacagatt cagtggcagt ggggcaggga cagatttcac actgaaaatc 240
 agcaggggtg aagctgagga tgtcgggggt tattactgca tgcaagtaac acaatttccc 300
 accttcggcc aagggaacg actggagatt aaacga 336

<210> 216
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 <212> DNA
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<220>
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<400> 216
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 cttcaccaga ggccaggcca gcctccaaga ctctaatatt ataagatttc taaccggttc 180
 tctgggggtcc cggacagatt cagtggcagt ggggcaggga cagatttcac actgaaaatc 240
 agcaggggtg aagctgagga tgtcgggggt tattactgca tgcaaaacttc acagtttccc 300
 actttcggcg gagggacaa ggtggagatc aaacga 336

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 <212> DNA
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<220>
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<400> 217
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 cttcagcaga ggccaggcca gcctccaaga ctcttaattt atgagatttc taaccggttc 180
 tctgggggtcc cagacagatt cagtggcagt ggggcaggga cagatttcac actgaaaatc 240
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 actttcggcg gcgggaccaa ggtggagatc aaacga 336

<210> 218
 <211> 327
 <212> DNA
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<220>
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<400> 218
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 gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240
 cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcaccgct cactttcggc 300
 ggagggacca aggtggagat caaacga 327

<210> 219
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 219
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 cctggccagg ctcccaggct cctcatccat ggtccattca gcagggccac tggcatccca 180
 gacaggttca gtggcagtgg gtctgggaca gatttcactc tcaccatcag cagactggag 240
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 caagggacac gactggagat taaacga 327

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<210> 220
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 220
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 gggaaagccc ctaaggtcct gatctatgct gcatccagtt tccaaagtgg ggtcccatca 180
 aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
 gaagattttg caacttacta ctgtcaacag agtcactata tccctcggac gttcggccaa 300
 gggaccaagg tggaaatcaa acga 324

<210> 221
 <211> 327
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 221
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 caggccccctg tgctggatc ctctgaggac agcagacgac cctccgggat ccctgagaga 180
 ttctctggct ccagctcagg gacaatggcc accttgacta tcagtggggc ccaggtggag 240
 gatgaagctg actactactg tttctcaaca gacagcagtg ctaatcatag ggtattcggc 300
 ggagggacca agctgaccgt cctaggt 327

<210> 222
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 222
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 gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
 aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcggcag cctgcagcct 240
 gaagatttta caacttatta ctgtctacag cataatagtt acccgctcac tttcggcgga 300
 gggaccaagg tgagatcaa acga 324

<210> 223
 <211> 324

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<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 223
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gggaaagccc ctaagcgcct gatctatatt gcaaccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag catattagtt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa acga 324

<210> 224
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 224
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gggaaagccc ctaagcgcct gatctatggt gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag catattagtt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa acga 324

<210> 225
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 225
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattaga gatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatggt gtatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagag ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatgggt acccgtggac gttcggccaa 300
gggaccaagg tggaaatcaa acga 324

<210> 226
<211> 324
<212> DNA
<213> Artificial Sequence

7233091_1

<220>

<223> nucleic acid

<400> 226

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc	60
atcacttgcc gggcaagtca gggcattgga gatgatttag gctggtatca gcagaagcca	120
ggaaaagccc ctacgagcct gatctattct gcatccagtt tgccaagtgg ggtcccatca	180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct	240
gaagattttg caacttatta ctgtctacag cataatagtt accctcgcag ttttggccag	300
gggaccaagc tggagatcag acga	324

<210> 227

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleic acid

<400> 227

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc	60
atcacttgcc gggcaagtca ggacattgaa catgatttag gctggtatca gcagaaacca	120
gggaaagccc ctaagcgcct gatctatgct gcatccactt tgccaagtgg ggtcccatca	180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct	240
gaagattttg caacttatta ctgtctacag cataatagtt tccctcgcag ttttggccag	300
gggaccagc tggagatcaa acga	324

<210> 228

<211> 342

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleic acid

<400> 228

gatattgtga tgaccagac tccactctcc ctgcccgtca cccctggaga gccggcctcc	60
atctcctgca ggtctactca gagcctcttg gatggtgatg atggaaacac ccttttggac	120
tggtacctgc agaagccagg gcagtctcca cagctcctga tctatacgct ttcctatcgg	180
gcctctggag tcccagacag gttcagtggc agtggggtcag gcactgattt cacactgaaa	240
atcagcaggg tggaggctga ggatgttgga gtttattact gcatgcaacg tttagagttt	300
cctctcactt tcggcggagg gaccaaggtg gagatcaaac ga	342

<210> 229

<211> 342

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleic acid

<400> 229

gacattgtga tgaccagac tccactctcc ttgcccgta cccctggaga gccggcctcc	60
atctcctgca ggtctagtca gagcctcttg gatagtgatg aaggaaacac ctttttggat	120
tggtacctgc agaagccagg gcagcctcca cagctcctga tctatacgct ttcctatcgg	180
gcctctggag tcccagacag gttcagtggc agtggggtcag gcactgattt cacactgaaa	240
atcagcaggg tggaggctga ggatgttgga gtttattact gcatgcaacg tatagagttt	300
cctctcactt tcggcggagg gaccaaggtg gagatcaaac ga	342

<210> 230

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleic acid

<400> 230

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc	60
atcacttgcc aggcgagtca ggacattagc aactatntaa attggtatca gcagaaacca	120
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggaaacagg ggtcccatca	180
aggttcagtg gaagtggatc tgagacagat tttactttca ccatcagcag cctgcagcct	240
gaagatattg caacatatta ctgtcaacag tatgaaaatc tcccattcac tttcggccct	300
gggaccaaag tggatatcaa acga	324

<210> 231

<211> 327

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleic acid

<400> 231

tcctatgagc tgacacagcc accctcgggtg tcagtgtccc caggacagac ggccaggatc	60
acctgctctg gagatgcatt gccaaggcaa tatgcttatt ggtaccagca gaagccaggc	120
caggccccta tgctgggtgat atataaagac agtgagaggc cctcagggat ccctgagcga	180
ttctctggct ccagctcagg gacaacagtc acgttgacca tcagtggagt ccaggcagaa	240
gacgaggctg actattactg tcaatcagca gacagcagtg gtacttatgt ggtattcggc	300
ggagggacca agctgaccgt cctaggt	327

<210> 232

<211> 327

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleic acid

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<400> 232
 tcctatgagc tgacacagcc accctcggtg tcagtgtccc caggacaaac ggccaggatc 60
 acctgctctg gagatgcatt gccaagaaaa tatgcttatt ggtaccagca gaagtcaggc 120
 caggccccctg tgctgggtcat ctatgaggac agcaaacgac cctccgggat ccctgagaga 180
 ttctctggct ccagctcagg gacaatggcc accttgacta tcagtggggc ccaggtggag 240
 gacgaagctg actactactg ttactcaaca gacagcagtg gtaatcatta tgtcttcgga 300
 actgggacca aggtcacctg cctaggt 327

<210> 233
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 233
 gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
 atcacttgcc aggcgagtc ggacattagc aactatttaa attggtatca gcagaaacca 120
 gggaaagccc ctaagttcct gatctacgat gcatccaatt tggaaacagg ggtcccatca 180
 aggttcagtg gaagtggatc tgggacagat ttttttttca ccatcagcaa cctgcagcct 240
 gaagatattg caacatattt ctgtcaacag gatgataatc tcccattcac tttcggccct 300
 gggaccaaag tggatatcaa acga 324

<210> 234
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 234
 gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
 atcacttgcc aggcgagtc ggacattagc aactatttaa attggtatca gcagaaacca 120
 gggaaagccc ctaaactcct gatctacgat gcatccaatt tggaaacagg ggtcccatca 180
 aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagcag cctgcagcct 240
 gaagatattg caacatttta ctgtcaacag tatgataatc tcccattcac tttcggccct 300
 gggaccaaag tggatatcaa acga 324

<210> 235
 <211> 327
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 235
 tcctatgagc tgacacagcc accctcggtg tcagtgtccc caggacaaac ggccaggatc 60

7233091_1

acctgctctg gagatgcatt gccaaagaaa ttgcttatt ggtaccagca gaagtcaggc 120
 cagggccctg tgctgggtcat ctatgaggac aggaaacgac cctccgggat ccctgagaga 180
 ttctctggct ccagctcagg gacaatggcc accttgacta tcagtggggc ccaggtggag 240
 gatgaagctg actactactg ttactcaaca gaccgcagtg gtgatcatgt ggtattcggc 300
 ggagggacca agctgaccgt cctaggt 327

<210> 236
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 236
 gacatccaga tgaccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
 atcacttgtc gggcgagtca ggggtattagc aactggttag tctgggtatca gcagaaacca 120
 gggaaacccc ctaaactcct gatctatgct gcatccagtt tgcaaaatgg ggtcccatca 180
 agattcagcg gcagtggatc tgggacagat ttactctca ccatcagcag cctgcagact 240
 gaagattttg caacttacta ttgtcaacag gctctcagtt tcccgtggac gttcggccca 300
 gggaccaagg tggaagtcaa acga 324

<210> 237
 <211> 121
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 237
 Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
 1 5 10 15
 Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Arg Phe Thr Ser Tyr
 20 25 30
 Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
 35 40 45
 Gly Ile Ile His Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
 50 55 60
 Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
 65 70 75 80
 Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Ile Tyr Tyr Cys
 85 90 95

7233091_1

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

Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 238
 <211> 118
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 238

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
 1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Arg Phe Thr Ser Tyr
 20 25 30

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

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
 50 55 60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Ala Ala Tyr
 65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
 85 90 95

Ala Arg Gln Gln Val Ala Gly Met Leu Asp Tyr Trp Gly Gln Gly Thr
 100 105 110

Leu Val Thr Val Ser Ser
 115

<210> 239
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 239

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

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

7233091_1

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

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

Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 240
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 240

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asn Glu Tyr 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 His Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Glu Glu Trp Phe Gly Glu Ala Asp Tyr Gly Met Asp Val Trp
 100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 241
 <211> 122

7233091_1

<212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 241

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asn Glu Tyr Tyr Ala Asp Ser Val
 50 55 60

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

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

Ala Arg Asp Asp Trp Phe Gly Glu Ala Asp Tyr Gly Met Asp Val Trp
 100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 242
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 242

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

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

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

Thr Val Ile Trp Asn Asp Gly Ser Asn Glu Tyr Tyr Ala Asp Ser Val
 50 55 60

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

7233091_1

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

Ala Arg Glu Asp Trp Leu Gly Glu Ala Asp Tyr Gly Met Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 243
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 243

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr 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 Arg Glu Glu Trp Glu Leu Glu Asp Tyr Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 244
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 244

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

7233091_1

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Val 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 Arg Gly Ala Val Ala Gly Thr Gly Arg Asp Tyr Tyr Tyr Tyr Gly
100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 245

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 245

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr His Gly 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 Lys Gly Ala Val Ala Gly Thr Gly Arg Asp Tyr Tyr Tyr Tyr Gly
100 105 110

7233091_1

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 246
 <211> 126
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 246

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Asn 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 His Cys
 85 90 95

Ala Lys Gly Thr Val Ala Gly Thr Gly Arg Asp Tyr Tyr Tyr Tyr Gly
 100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 247
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 247

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

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

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

7233091_1

Ala Val Ile Trp Phe Asp Gly Ser Asn Lys Tyr Tyr Val 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 Arg Asp Asp Phe Trp Ser Asp Tyr Pro Phe Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 248

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 248

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

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

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

Ala Val Ile Ser Asp Asp Gly Ser Asn Lys Tyr 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 Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 249

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 249

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

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

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

Ala Val Ile Trp Asn Asp Gly Ser Ile Lys Tyr 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 Arg Asp Gly Glu Gln Trp Arg Gly Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 250

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 250

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Ile Lys Tyr 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

7233091_1

Ala Arg Asp Gln Glu Gln Trp Leu Ala Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Leu Val Thr Val Ser Ser
 115

<210> 251
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 251

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
 50 55 60

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

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

Ala Arg Asp Asn Trp Gly Ser Asp Ala Phe Asp Ile Trp Gly Gln Gly
 100 105 110

Thr Met Val Thr Val Ser Ser
 115

<210> 252
 <211> 126
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 252

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

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

7233091_1

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

Ala Val Ile Trp Tyr Asp Gly Ile Asn Lys Tyr 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 Arg Gly Ser Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Gly Glu Asp
 100 105 110

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

<210> 253

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 253

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ile Asn Lys Tyr 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 Arg Gly Ser Tyr Tyr Asp Ser Ser Gly Tyr Tyr Phe Gly Glu Asp
 100 105 110

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

7233091_1

<210> 254
 <211> 118
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 254

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

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

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

Ser Tyr Ile Ser Ser Ser Gly Ser Ile Ile Phe Tyr Ala Asp Ser Val
 50 55 60

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

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

Val Arg Arg Ile Ser Ile Thr Pro Phe Asp Tyr Trp Gly Gln Gly Thr
 100 105 110

Leu Val Thr Val Ser Ser
 115

<210> 255
 <211> 126
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 255

Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
 1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
 20 25 30

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

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

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Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Val Arg Ile Pro Arg Trp Leu Gln Pro Pro Tyr Tyr Tyr Tyr Gly
100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 256
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 256

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
20 25 30

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

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Asn Thr His Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Ile Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Asp Trp Gly Arg Asp Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser
115

<210> 257
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 257

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
20 25 30

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

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asp Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Gly Ile Ile Ser Gly Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

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

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 258
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 258

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Val Ser Ser Gly
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Asn Thr Tyr Tyr Ser Gly Ser Thr Asn Tyr Lys Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Gly Arg Asp Arg Gly Arg Ala Val Gly Pro Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 259
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 259

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

Asp Ile Asn Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Met Asn Pro Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

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

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

Leu Val Thr Val Ser Ser
115

<210> 260
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 260

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

Asp Ile Asn Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
35 40 45

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Gly Trp Met Asn Pro Asn Ser Gly Asn Thr Gly Tyr Val Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

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

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

Leu Val Thr Val Ser Ser
115

<210> 261
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 261

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

Asp Ile Asn Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Met Asn Pro Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

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

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

Leu Val Thr Val Ser Ser
115

<210> 262
<211> 118
<212> PRT
<213> Artificial Sequence

7233091_1

<220>

<223> synthetic polypeptide

<400> 262

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

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

Asp Ile Asn Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Met Asn Pro Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80

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

Ala Arg Gly Arg Gln Trp Leu Gly Phe Asp Tyr Trp Gly Gln Gly Thr
 100 105 110

Leu Val Thr Val Ser Ser
 115

<210> 263

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 263

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

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

Asp Ile Asn Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Met Asn Pro Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile Asn Thr Ala Tyr
 65 70 75 80

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

Ala Arg Gly Arg Gln Trp Leu Gly Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210>	264
<211>	121
<212>	PRT
<213>	Artificial Sequence

$\langle 211 \rangle$	121
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<212> PRT

<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<223> synthetic polypeptide

<400> 264

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Ser Gln
20 25 30

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

Gly Ile Ile Phe Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

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

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210>	265
<211>	121
<212>	PRT
<213>	Artificial Sequence

$\langle 211 \rangle$ 121

<212> PRT

<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<223> synthetic polypeptide

<400> 265

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

7233091_1

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

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

Gly Thr Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Phe Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

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

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 266
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic polypeptide

<400> 266

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Asp Tyr
20 25 30

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

Gly Ile Ile Tyr Pro Tyr Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

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

Leu Arg Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg His Arg Gly Gly Arg Ser Tyr Tyr Tyr Gly Met Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

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<210> 267
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 267

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
 1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Thr Ser Tyr
 20 25 30

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

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Thr Tyr Ser Pro Ser Phe
 50 55 60

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

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
 85 90 95

Ala Arg Glu Gly Phe Gly Glu Ser Ile His Tyr Gly Leu Asp Val Trp
 100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 268
 <211> 121
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide

<400> 268

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
 1 5 10 15

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

Trp Ile Gly Trp Val Arg Gln Met Ser Gly Lys Gly Leu Glu Trp Met
 35 40 45

Gly Ile Ile Tyr Pro Gly Asp Ser Glu Thr Arg Tyr Ser Pro Ser Phe
 50 55 60

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Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg His Gly Gly Gly Trp Ser Gly Trp Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 269

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 269

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Arg Phe Thr Asn Tyr
20 25 30

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

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Lys Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg His Gly Gly Tyr Ser Gly Arg Ser Tyr Tyr Tyr Gly Met Asp
100 105 110

Val Trp Gly Gln Gly Thr Ala Val Thr Val Ser Ser
115 120

<210> 270

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

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<400> 270

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Arg Phe Thr Ser Tyr
20 25 30

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

Gly Ile Ile Phe Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Thr Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Ile Tyr Tyr Cys
85 90 95

Ala Arg His Gly His Gly Ser Ser Ser Gly Arg Thr Tyr Tyr Tyr Gly
100 105 110

Leu Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 271

<211> 116

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic polypeptide

<400> 271

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

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

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

Gly Ile Ile Tyr Pro Gly Asp Ser Asp Thr Arg Tyr Ser Pro Ser Phe
50 55 60

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

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Ile Tyr Tyr Cys
85 90 95

7233091_1

Ala Arg Asp Thr Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val
 100 105 110

Thr Val Ser Ser
 115

<210> 272
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetic polypeptide
 <400> 272

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Phe Tyr Val 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 Arg Pro Gly Ser Asp Tyr Tyr Phe Tyr Tyr Gly Met Asp Val Trp
 100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 273
 <211> 363
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 273
 gaggtgcagt tgggtgcagtc tggagcagag gtgaaaaagc cgggggagtc tctgaagatc 60
 tcctgtaagg gttctggata caggtttacc agctactgga tcggctgggt gcgccagatg 120
 cccgggaaag gcctggagtg gatggggatc atccatcctg gtgactctga taccagatac 180
 agcccgtcct tccaaggcca ggtcaccatc tcagccgaca agtccatcag caccgcctac 240
 ctgcagtgga gcagcctgaa ggcctcggac actgccatat attactgtac gagacagggt 300

7233091_1

agaagcttct actactacgg tatggacgtc tggggccaag ggaccacggt caccgtctcc 360
tca 363

<210> 274
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 274
gaggtgcagc tgggtgcagtc tggagcagag gtgaaaaagc ccggggagtc tctgaagatc 60
tcctgtaagg gttctggata caggtttacc agctactgga tcggctgggt gcgccagatg 120
cccgggaaag gcctggagtg gatggggatc atctatcctg gtgactctga taccagatac 180
agcccgctcct tccaaggcca ggtcaccatc tcagccgaca agtccatcag cgccgcctac 240
ctgcagtgga gcagcctgaa ggcctcggac accgccatgt attactgtgc gagacaacaa 300
gtggctggta tgttggacta ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 275
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 275
caggtgcagc tgggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt atttatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtgacagtt atatggtatg atggaagtaa tgaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatac acagcctgag agccgaggac acggctgtgt attactgtgc gagagaggac 300
ttcgactccc actacggtat ggacgtctgg ggccaagga ccacggtcac cgtctcctca 360

<210> 276
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 276
caggtgcagc tgggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa tgaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctacaaatgc acagcctgag agccgaggac acggctgtgt attattgtgc gagagaagaa 300

7233091_1

tggttcgggg aggcggacta cggtatggac gtctggggcc aaggaccac ggtcaccgtc 360
tcctca 366

<210> 277
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 277
caggtgcagc tggtggagtc tgggggaggc gtggtccagc caggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa tgaatattat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgttt 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatgat 300
tggttcgggg aggcggacta cggtatggac gtctggggcc aaggaccac ggtcaccgtc 360
tcctca 366

<210> 278
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 278
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtgacagtt atatggaatg atggaagtaa tgaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgttt 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagaagat 300
tggttcgggg aggcggacta cggtatggac gtctggggcc aaggaccac ggtcaccgtc 360
tcctca 366

<210> 279
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 279
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa taaatactat 180

7233091_1

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagaagag 300
 tgggagctag aggactacgg tatggacgtc tggggccaag ggaccacggt caccgtctcc 360
 tca 363

<210> 280
 <211> 378
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 280
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 tcctgtgcag cgtctggatt caccttcagt agttatggca tgtactgggt ccgccaggct 120
 ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa taaatactat 180
 gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagaggagca 300
 gtggctggta cgggacggga ctactactac tacggtatgg acgtctgggg ccaagggacc 360
 acggtcaccg tctcctca 378

<210> 281
 <211> 378
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 281
 caggtgcagt tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
 tcctgtgcag cgtctggatt cacgttcagt agttatggca tgtactgggt ccgccaggct 120
 ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa taaataccat 180
 ggagactccg tgaagggccg attcaccatc tccagagaca attccaagaa tacgctgtat 240
 ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gaaaggagca 300
 gtggctggta cgggacggga ctactactac tacggtatgg acgtctgggg ccaagggacc 360
 acggtcaccg tctcctca 378

<210> 282
 <211> 378
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 282
 caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc ccagagactc 60

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tcctgtgcag cgtctggatt cacctttagt agttatggca tgtactgggt ccgccaggct      120
ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa taaaaactat      180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa tacgttgtat      240
ctgcaaatga acagcctgag agccgaggac acggctgtgt atcactgtgc gaaaggaaca      300
gtggctggta cgggacggga ctactactac tacggtatgg acgtctgggg ccaagggacc      360
acggtcaccg tctcttca                                     378

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<210> 283
<211> 360
<212> DNA
<213> Artificial Sequence

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<220>
<223> nucleic acid

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<400> 283
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ccaggcaagg ggctggagtg ggtggcagtt atttggtttg atggaagtaa taaatactat      180
gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa tacgctgtat      240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gcgggacgat      300
ttttggagtg attatccttt tgactactgg ggccagggaa ccctgggtcac cgtctcctca      360

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<210> 284
<211> 360
<212> DNA
<213> Artificial Sequence

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<220>
<223> nucleic acid

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<400> 284
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ccaggcaagg ggctggagtg ggtggcagtt atatcagatg atggaagtaa taaatactat      180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat      240
ctgcaaatga acagcctgag acctgaggac acggctgtgt attactgtgc gagagatctc      300
tatagcagtg cctggccctt tgactactgg ggccagggaa ccctgggtcac cgtctcctca      360

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<210> 285
<211> 357
<212> DNA
<213> Artificial Sequence

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<220>
<223> nucleic acid

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<400> 285
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ccaggcaagg	ggctggagtg	ggtggcagtt	atatggaatg	atggaagtat	taaatactat	180
gcagactccg	tgaagggccg	attcaccatc	tccagagaca	attccaagaa	cacgctgtat	240
ctgcaaatga	acagcctgag	agccgaggac	acggctgtgt	attactgtgc	gagagacggg	300
gagcagtggc	ggggctttga	ctactggggc	cagggaaacc	tggtcaccgt	ctcctca	357

<210> 286
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 286	
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ccaggcaagg	ggctggagtg ggtggcagtt atatggatg atggaagtat taaatactat 180
gcagactccg	tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga	acagcctgag agccgaggac acggctgtgt attactgtgc gagagatcag 300
gagcagtggc	tggcctttga ctactggggc cagggaaacc tggtcaccgt ctcctca 357

<210> 287
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 287	
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ccagacatgg	ggctggagtg ggtggcagtt atatggatg atggaagtaa taaatactat 180
gcagactctg	tgaagggccg attcaccatc tccagagaca tttccaagaa cacgctgtat 240
ctggaaatga	acagcctgag agccgaggac acggctgtgt attactgtgc gagagacaac 300
tggggatccg	atgcttttga tatctggggc caagggacaa tggtcaccgt ctcttca 357

<210> 288
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 288	
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tcctgtgcag	cgtctggatt caccttcagt acctatgcca tgcactgggt ccgccaggct 120

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ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaattaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagggagt 300
tactatgata gtagtggta ttactacggg gaggactttg actactgggg ccaggggaacc 360
ctggtcaccg tctcctca 378

<210> 289
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 289
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tcctgtgcag cgtctggatt caccttcagt agctatgcc a tgactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atctggtatg atggaattaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagggagt 300
tactatgata gtagtggta ttacttcggg gaggactttg actactgggg ccaggggaacc 360
ctggtcaccg tctcctca 378

<210> 290
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 290
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tcctgtgcag cctctggatt caccttcagt gactactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg ggtttcatac attagtagta gtggtagtat ctttttttac 180
gcagactctg tgaagggccg attcaccatg tccagggaca acgccaagaa ctactgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attattgtgt gagaaggatt 300
agtataaccc cttttgacta ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 291
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 291
caggtcacct tgaaggagtc tggctcctgtg ctggtgaaac ccacagagac cctcacgctg 60

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acctgcaccg tctctgggtt ctactcagc aatgctagaa tgggtgtgag ctggatccgt 120
cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180
tacagcacat ctctgaagag caggctcacc atctccaagg acacctcaa aagccaggtg 240
gtccttacca tgaccaacat ggaccctgtg gacacagcca catattactg tgtacggata 300
ccgagatggc tacaaccccc ctactactac tacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 292
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 292
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acctgcactg tctctgggtg ctccatcagc agtgggtggtt actactggaa ctggatccgc 120
cagcaccag ggaagggcct ggagtggatt gggtagatctt attacagtgg gaacaccac 180
tacaacccgt ccctcaagag tcgagttacc atatcagtag acacgtctaa gaaccagttc 240
tccctgaagc tgagctctgt gattgccgcg gacacggccg tgtattactg tgcgagagac 300
tggggacgtg atgcttttga tatctggggc caagggacaa tggtcaccgt ctcttca 357

<210> 293
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 293
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acctgcactg tctcgggtg ctccatcagc agtgggtggtt actactggag ctggatccgc 120
cagcaccag ggaagggcct ggagtggatt gggtagatctt attatagtgg gagcaccgac 180
tacaacccgt ccctcaagag tcgaggtatc atatcaggag acacgtctaa gaaccagttc 240
tccctgaagc tgaactctgt gactgccgcg gacacggccg tgtattactg tgcgagagag 300
gggaggttcg gggagttagg ctctactac tttgactact ggggccaggg aaccctggtc 360
accgtctcct ca 372

<210> 294
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

7233091_1

<400> 294
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cagccccag ggaagggact ggagtggatt gggaatacct attacagtgg gagcaccaac 180
tacaaaccct ccctcaagag tcgagtcacc atatcagtag acacgtccaa gaaccagttc 240
tccctgaagc tgagttctgt gaccgtgctg gacacggccg tgtattactg tgggagagac 300
cggggtagag cagtgggtcc ctttgactac tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 295
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 295
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tcctgcaagg cttctggata caccttcacc aattatgata tcaactgggt gcgacaggcc 120
actggacaag ggcttgagtg gatgggatgg atgaacccta acagtggtaa cacaggctat 180
gcacagaagt tccagggcag agtcaccatg accaggaaca cctccataag cacagcctac 240
atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaagtagg 300
cagtggctgg tacttgacta ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 296
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 296
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tcctgcaagg cttctggata caccttcacc aattatgata tcaactgggt gcgacaggcc 120
actggacaag ggcttgagtg gatgggatgg atgaacccta acagtggtaa cacaggctat 180
gtacagaagt tccagggcag agtcaccatg accaggaaca cctccataag cacagcctac 240
atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaagtagg 300
cagtggctgg tacttgacta ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 297
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

7233091_1

<400> 297
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actggacaag ggcttgagtg gatgggatgg atgaacccaa acagtggtaa cacaggctat 180
gcacagaagt tccagggcag agtcaccatg accaggaaca cctccataag cacagcctac 240
atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaagtagg 300
cagtggctgg tacttgacta ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 298
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 298
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tcctgcaagg cttctggata caccttcacc acttatgata tcaactgggt gcgacaggcc 120
actggacaag ggcttgagtg gatgggatgg atgaacccta acagtggtaa cacaggctat 180
gcacagaagt tccagggcag agtcaccatg accaggaaca cctccataag cacagcctac 240
atggagctga gcagcctaag atctgaggac acggccgtgt attactgtgc gagaggccgg 300
cagtggctgg gctttgacta ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 299
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 299
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actggacaag ggcttgagtg gatgggatgg atgaacccta atagtggtaa cacaggctat 180
gcacagaagt tccagggcag agtcaccatg accaggaaca cctccataaa cacagcctac 240
atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaggccgg 300
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<210> 300
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid

<400> 300
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cccgggaaag gcctggagtg gatggggatc atctttcctg gtgactctga taccagatac      180
agcccgtcct tccaaggcca ggtcaccatc tcagccgaca agtccatcag caccgcctac      240
ctgcagtgga gcagcctgaa ggcctcggac accgccatgt attactgtgc gcgacagggg      300
agaagttacc actactacgg tatggacgtc tggggccaag ggaccacggg caccgtctcc      360
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<210> 301
<211> 363
<212> DNA
<213> Artificial Sequence

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<220>
<223> nucleic acid

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<400> 301
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cccgggaaaag gcctggagtg gatggggacc atctatcctg gtgactctga taccagatac      180
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ctgcagtgga gcagcctgaa ggcctcggac accgccatgt attactgtgc gagacagggg      300
agaagttact actacttcgg tatggacgtc tggggccaag ggaccacggg caccgtctcc      360
tca                                                                    363

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<210> 302
<211> 366
<212> DNA
<213> Artificial Sequence

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<220>
<223> nucleic acid

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<400> 302
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cccgggaaaag gcctggaatg gatggggatc atctatcctt atgactctga taccagatac      180
agcccgtcct tccaaggcca ggtcaccttc tcagccgaca agtccatcag caccgcctac      240
ctgcggtgga gcagcctgaa ggcctcggac accgccatgt attactgtgc gagacatcgg      300
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tcctca                                                                    366

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<210> 303
<211> 366
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<213> Artificial Sequence

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<220>

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<223> nucleic acid

<400> 303

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cccgggaaag	gcctagaatg	gatggggatc	atctatcctg	gtgactctga	taccacatac	180
agcccgctcct	tccaaggcca	agtcaccatc	tcagccgaca	agtccatcaa	caccgcctac	240
ctgcagtgga	gcagcctgaa	ggcctcggac	accgccatgt	attactgtgc	gagagaggggt	300
ttcggggagt	ctattcacta	cggtttgac	gtctggggcc	aaggggaccac	ggtcaccgtc	360
tcctca						366

<210> 304

<211> 363

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleic acid

<400> 304

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tccgggaaag	gcctggagtg	gatgggaatc	atctatcctg	gtgactctga	aaccagatac	180
agcccgctcct	tccaaggcca	ggtcaccatc	tcagccgaca	agtccatcag	caccgcctac	240
ctgcagtgga	gcagcctgaa	ggcctcggac	accgccatgt	attactgtgc	gagacatgga	300
gggggatgga	gtggttgggg	tatggacgtc	tggggccaag	ggaccacggt	caccgtctcc	360
tca						363

<210> 305

<211> 372

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleic acid

<400> 305

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cccgggaaag	gcctggagtg	gatggggatc	atctatcctg	gtgactctga	taccaaatac	180
agcccgctcct	tccaaggcca	ggtcaccatc	tcagccgaca	agtccatcag	taccgcctac	240
ctgcagtgga	gcagcctgaa	ggcctcggac	accgccatgt	attactgtgc	gagacatggt	300
ggatatagtg	gccgttccta	ctactacggt	atggacgtct	ggggccaggg	gaccgcggtc	360
accgtctcct	ca					372

<210> 306

<211> 378

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<212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 306
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 cccgggaaag gcctggagtg gatggggatc atctttcctg gtgactctga taccagatac 180
 agcccgtcct tccaaggcca ggtcaccatc tcagccgaca agtccatcac caccgcctac 240
 ctgcagtgga gcagcctgaa ggcctcggac accgccatct attactgtgc gcgacatggg 300
 catggcagct cgtccgggcg gacctactac tacggtttgg acgtctgggg ccaagggacc 360
 acggtcaccg tctcctca 378

<210> 307
 <211> 348
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 307
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 cccgggaaag gcctggagtg gatggggatc atctatcctg gtgactctga taccagatac 180
 agcccgtcct tccaaggcca ggtcaccatt tcagccgaca agtccatcaa caccgcctac 240
 ctgcagtgga gcagcctgaa ggcctcggac acagccattt attactgtgc gagagacaca 300
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<210> 308
 <211> 366
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> nucleic acid

<400> 308
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 ccaggcaagg gcctggagtg ggtggcagtt atctggtatg atggaagtaa taaattctat 180
 gtagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaataa acagcctgag agccgaggac acggctgtgt attactgtgc gagacccggg 300
 tccgattact acttctacta cggtatggac gtctggggcc aagggaccac ggtcaccgtc 360
 tcctca 366