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SEQUENCE LISTING

<110> ABRAMS, TINYA
COHEN, STEVEN BRUCE
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HUBER, THOMAS
MILLER, KATHY
SCHLEYER, SIEW
TISSOT-DAGUETTE, KATRIN ULRIKE
FINNER, CATRIN

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Arg Val Gly Asp Glu Ile Arg Leu Leu Cys Thr Asp Pro Gly Phe Val
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Lys Trp Thr Phe Glu Ile Leu Asp Glu Thr Asn Glu Asn Lys Gln Asn
65                  70                  75                  80

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

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

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

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

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

Arg Phe Ile Pro Asp Pro Lys Ala Gly Ile Met Ile Lys Ser Val Lys
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Arg Ala Tyr His Arg Leu Cys Leu His Cys Ser Val Asp Gln Glu Gly
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Lys Ser Val Leu Ser Glu Lys Phe Ile Leu Lys Val Arg Pro Ala Phe
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Lys Ala Val Pro Val Val Ser Val Ser Lys Ala Ser Tyr Leu Leu Arg
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225                 230                 235                 240

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305                 310                 315                 320

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

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

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

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

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

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

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

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

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

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

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

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

Lys Glu Gln Ile His Pro His Thr Leu Phe Thr Pro Leu Leu Ile Gly
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Phe Val Ile Val Ala Gly Met Met Cys Ile Ile Val Met Ile Leu Thr
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Tyr Lys Tyr Leu Gln Lys Pro Met Tyr Glu Val Gln Trp Lys Val Val
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Glu Glu Ile Asn Gly Asn Asn Tyr Val Tyr Ile Asp Pro Thr Gln Leu
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Pro Tyr Asp His Lys Trp Glu Phe Pro Arg Asn Arg Leu Ser Phe Gly
            580                 585                 590

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

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

Leu Lys Val Leu Ser Tyr Leu Gly Asn His Met Asn Ile Val Asn Leu
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Leu Gly Ala Cys Thr Ile Gly Gly Pro Thr Leu Val Ile Thr Glu Tyr
            660                 665                 670

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

Phe Ile Cys Ser Lys Gln Glu Asp His Ala Glu Ala Ala Leu Tyr Lys
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Asn Leu Leu His Ser Lys Glu Ser Ser Cys Ser Asp Ser Thr Asn Glu
705                 710                 715                 720

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

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

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

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

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

Thr His Gly Arg Ile Thr Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp
                805                 810                 815
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Ile Lys Asn Asp Ser Asn Tyr Val Val Lys Gly Asn Ala Arg Leu Pro
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Val Lys Trp Met Ala Pro Glu Ser Ile Phe Asn Cys Val Tyr Thr Phe
835 840 845

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

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

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

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

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

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

Asn Arg Gln Lys Pro Val Val Asp His Ser Val Arg Ile Asn Ser Val
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Gly Ser Thr Ala Ser Ser Ser Gln Pro Leu Leu Val His Asp Asp Val
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Tyr Met Ala Trp Val Arg Gln Val Pro Glu Lys Gly Leu Glu Trp Val
35 40 45

Ala Asn Ile Asn Tyr Asp Gly Ser Ser Thr Tyr Tyr Leu Asp Ser Leu
50 55 60

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

Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Ala Thr Tyr Tyr Cys
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Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
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Gly Thr Gly Thr Thr Val Thr Val Ser Ser
115 120

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polypeptide

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Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
35 40 45

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
50 55 60

Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
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20 25 30

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35 40 45

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

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

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

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

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

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

His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser

210 215 220

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

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

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

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

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

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
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Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
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35 40 45

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50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
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Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser

35 40 45

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

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

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115 120 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
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Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145 150 155 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
165 170 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
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Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
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Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
275 280 285

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<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 20
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Lys Lys Leu Trp Ser
85 90 95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

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

Asn Arg Gly Glu Cys
210

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

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 21
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Lys Lys Leu Trp Ser
85 90 95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

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

Asn Arg Gly Glu Cys

210

<210> 22
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 22
Asp Tyr Tyr Met Ala
1 5

<210> 23
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 23
Asn Ile Asn Gln Ile Ala Gly Ser Thr Tyr Tyr Leu Asp Ser Val Arg
1 5 10 15

Gly

<210> 24
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 24
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 25
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 25
Gly Phe Thr Phe Ser Asp Tyr
1 5

<210> 26
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 26
Asn Gln Ile Ala Gly Ser
1 5

<210> 27
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 27
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 28
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 28
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

Ala Asn Ile Asn Gln Ile Ala Gly Ser Thr Tyr Tyr Leu Asp Ser Val
50 55 60

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 29
<211> 452
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 29

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

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

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

Ala Asn Ile Asn Gln Ile Ala Gly Ser Thr Tyr Tyr Leu Asp Ser Val
    50                  55                  60

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
            100                 105                 110

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

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

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

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

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

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

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

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

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
```

245 250 255

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

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

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

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

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

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

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

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

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

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

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

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
435 440 445

Ser Pro Gly Lys
450

<210> 30
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 30
gaagtgcaat tggtggaaag cggcggaggc ctggtgcagc ctggcggctc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc gactactaca tggcctgggt ccgacaggcc 120

cctggcaagg gcctggaatg ggtggccaat atcaaccaaa tcgccggcag cacctactac 180

ctggacagcg tgagaggccg gttcaccatc agccgggaca acgccaagaa cagcctgtac 240

ctgcagatga acagcctgcg ggccgaggac accgccgtgt actactgcgc cagaggcgat 300

tactacggca ccacctactg gtacttcgac gtgtggggcc agggcaccac cgtgaccgtc 360

agctcagcta gcaccaaggg ccccagcgtg ttccccctgg cccccagcag caagagcacc 420

agcggcggca cagccgccct gggctgcctg gtgaaggact acttccccga gcccgtgacc 480

gtgtcctgga acagcggagc cctgacctcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gtccagcgtg gtgacagtgc ccagcagcag cctgggcacc 600

cagacctaca tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgcccccccct gcccagcccc agagctgctg 720

ggcggaccct ccgtgttcct gttccccccc aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggac gtgagccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaggaat acaagtgcaa ggtctccaac aaggccctgc cagccccat cgaaaagacc 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc cccctcccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctaccccagc 1140

gacatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agagcctgag cctgtccccc ggcaag 1356

<210> 31
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 31
Arg Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn
1 5 10

<210> 32
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 32

Tyr Thr Ser Arg Leu Gln Ser
1 5

<210> 33
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 33
Gln Gln Gly Lys Lys Leu Trp Ser
1 5

<210> 34
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 34
Ser Gln Asp Ile Ser Asn Tyr
1 5

<210> 35
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 35
Tyr Thr Ser
1

<210> 36
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 36
Gly Lys Lys Leu Trp
1 5

<210> 37
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 37
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Lys Lys Leu Trp Ser
85 90 95

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

<210> 38
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 38
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Lys Lys Leu Trp Ser
85 90 95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

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

Asn Arg Gly Glu Cys
210

<210> 39
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 39
gagatcgtga tgacccagag ccccgccacc ctgagcctga gccctggcga aagagccacc 60

ctgtcctgca gagccagcca ggacatcagc aactacctga actggtatca gcagaagccc 120

ggccaggccc ccagactgct gatctactac accagccggc tgcagagcgg catccccgcc 180

agattttctg gcagcggcag cggcaccgac tacaccctga ccatcagcag cctggaaccc 240

gaggacttcg ccgtgtacta ctgccagcag ggcaagaagc tgtggtcctt cggcggaggc 300

accaaggtgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagcgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 40
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

peptide

<400> 40
Asp Tyr Tyr Met Ala
1 5

<210> 41
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 41
Asn Ile Asn Gln Asn Thr Gly Ser Thr Tyr Tyr Val Asp Ser Val Gln
1 5 10 15

Gly

<210> 42
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 42
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 43
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 43
Gly Phe Thr Phe Ser Asp Tyr
1 5

<210> 44
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 44
Asn Gln Asn Thr Gly Ser
1 5

<210> 45

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

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 45
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 46
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 46
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 47
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 47
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
            100                 105                 110

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
435 440 445

Ser Pro Gly Lys
450

<210> 48
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 48
gaagtgcaat tggtggaaag cggcggaggc ctggtgcagc ctggcggctc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc gactactaca tggcctgggt ccgacaggcc 120

cctggcaagg gcctggaatg ggtggccaat atcaaccaaa acaccggcag cacctactac 180

gtggacagcg tgcaaggccg gttcaccatc agccgggaca acgccaagaa cagcctgtac 240

ctgcagatga acagcctgcg ggccgaggac accgccgtgt actactgcgc cagaggcgat 300

tactacggca ccacctactg gtacttcgac gtgtggggcc agggcaccac cgtgaccgtc 360

agctcagcta gcaccaaggg ccccagcgtg ttccccctgg cccccagcag caagagcacc 420

agcggcggca cagccgccct gggctgcctg gtgaaggact acttccccga gcccgtgacc 480

gtgtcctgga acagcggagc cctgacctcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gtccagcgtg gtgacagtgc ccagcagcag cctgggcacc 600

cagacctaca tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgcccccccct gcccagcccc agagctgctg 720

ggcggaccct ccgtgttcct gttccccccc aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggac gtgagccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaggaat acaagtgcaa ggtctccaac aaggccctgc cagccccat cgaaaagacc 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc cccctcccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctaccccagc 1140

gacatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agagcctgag cctgtccccc ggcaag 1356

<210> 49
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 49
Arg Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn
1 5 10

<210> 50
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 50
Tyr Thr Ser Arg Leu Gln Ser
1 5

<210> 51
<211> 8
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 51
Gln Gln Gly Lys Lys Leu Trp Ser
1 5

<210> 52
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 52
Ser Gln Asp Ile Ser Asn Tyr
1 5

<210> 53
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 53
Tyr Thr Ser
1

<210> 54
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 54
Gly Lys Lys Leu Trp
1 5

<210> 55
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 55
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Lys Lys Leu Trp Ser
                85                  90                  95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
```

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

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 56

```
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Lys Lys Leu Trp Ser
                85                  90                  95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
            100                 105                 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130                 135                 140

Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu
145                 150                 155                 160
```

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

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

Asn Arg Gly Glu Cys
210

<210> 57
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 57
gagatcgtga tgacccagag ccccgccacc ctgagcctga gccctggcga aagagccacc 60

ctgtcctgca gagccagcca ggacatcagc aactacctga actggtatca gcagaagccc 120

ggccaggccc ccagactgct gatctactac accagccggc tgcagagcgg catccccgcc 180

agattttctg gcagcggcag cggcaccgac tacaccctga ccatcagcag cctggaaccc 240

gaggacttcg ccgtgtacta ctgccagcag ggcaagaagc tgtggtcctt cggcggaggc 300

accaaggtgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagcgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 58
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 58
Asp Tyr Tyr Met Ala
1 5

<210> 59
<211> 17
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 59
Ser Ile Asn Gln Asn Thr Gly Ser Thr Tyr Tyr Leu Asp Ser Val Arg
1 5 10 15

Gly

<210> 60
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 60
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 61
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 61
Gly Phe Thr Phe Ser Asp Tyr
1 5

<210> 62
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 62
Asn Gln Asn Thr Gly Ser
1 5

<210> 63
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 63
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val

1 5 10

<210> 64
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 64
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

Ala Ser Ile Asn Gln Asn Thr Gly Ser Thr Tyr Tyr Leu Asp Ser Val
50 55 60

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 65
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 65
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

Ala Ser Ile Asn Gln Asn Thr Gly Ser Thr Tyr Tyr Leu Asp Ser Val

50 55 60

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
100 105 110

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro

325 330 335

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

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

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

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

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

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

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
435 440 445

Ser Pro Gly Lys
450

<210> 66
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 66
gaagtgcaat tggtggaaag cggcggaggc ctggtgcagc ctggcggctc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc gactactaca tggcctgggt ccgacaggcc 120

cctggcaagg gcctggaatg ggtggccagt atcaaccaaa acaccggcag cacctactac 180

ctggacagcg tgcgaggccg gttcaccatc agccgggaca acgccaagaa cagcctgtac 240

ctgcagatga acagcctgcg ggccgaggac accgccgtgt actactgcgc cagaggcgat 300

tactacggca ccacctactg gtacttcgac gtgtggggcc agggcaccac cgtgaccgtc 360

agctcagcta gcaccaaggg ccccagcgtg ttccccctgg cccccagcag caagagcacc 420

agcggcggca cagccgccct gggctgcctg gtgaaggact acttccccga gcccgtgacc 480

gtgtcctgga acagcggagc cctgacctcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gtccagcgtg gtgacagtgc ccagcagcag cctgggcacc 600

cagacctaca tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgccccccct gcccagcccc agagctgctg 720

ggcggaccct ccgtgttcct gttcccccccc aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggac gtgagccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaggaat acaagtgcaa ggtctccaac aaggccctgc cagcccccat cgaaaagacc 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc cccctcccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctaccccagc 1140

gacatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agagcctgag cctgtccccc ggcaag 1356

<210> 67
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 67
Arg Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn
1 5 10

<210> 68
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 68
Tyr Thr Ser Arg Leu Gln Ser
1 5

<210> 69
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 69
Gln Gln Gly Lys Lys Leu Trp Ser
1 5

<210> 70
<211> 7

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 70
Ser Gln Asp Ile Ser Asn Tyr
1 5

<210> 71
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 71
Tyr Thr Ser
1

<210> 72
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 72
Gly Lys Lys Leu Trp
1 5

<210> 73
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 73
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Lys Lys Leu Trp Ser
85 90 95

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

<210> 74
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 74
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Lys Lys Leu Trp Ser
85 90 95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

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

Asn Arg Gly Glu Cys
210

<210> 75
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 75
gagatcgtga tgacccagag ccccgccacc ctgagcctga gccctggcga aagagccacc 60

ctgtcctgca gagccagcca ggacatcagc aactacctga actggtatca gcagaagccc 120

ggccaggccc ccagactgct gatctactac accagccggc tgcagagcgg catccccgcc 180

agattttctg gcagcggcag cggcaccgac tacaccctga ccatcagcag cctggaaccc 240

gaggacttcg ccgtgtacta ctgccagcag ggcaagaagc tgtggtcctt cggcggaggc 300

accaaggtgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagcgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 76
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 76
Gly Tyr Tyr Met Ala
1 5

<210> 77
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 77
Asn Ile Asn Tyr Pro Gly Ser Ser Thr Tyr Tyr Leu Asp Ser Val Lys
1 5 10 15

Gly

<210> 78
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 78
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 79
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 79
Gly Phe Ala Phe Ser Gly Tyr
1 5

<210> 80
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 80
Asn Tyr Pro Gly Ser Ser
1 5

<210> 81
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 81
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 82
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

polypeptide

<400> 82
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 83
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 83
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

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Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
            100                 105                 110

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
        355                 360                 365
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Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
370 375 380

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

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

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

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
435 440 445

Ser Pro Gly Lys
450

<210> 84
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 84
gaagtgcaat tggtggaaag cggcggaggc ctggtgcagc ctggcggctc tctgagactg 60

agctgtgccg ccagcggctt cgccttcagc ggctactaca tggcctgggt ccgacaggcc 120

cctggcaagg gcctggaatg ggtggccaac atcaactacc ccggcagcag cacctactac 180

ctggacagcg tgaagggccg gttcaccatc agccgggaca acgccaagaa cagcctgtac 240

ctgcagatga acagcctgcg ggccgaggac accgccgtgt actactgcgc cagaggcgat 300

tactacggca ccacctactg gtacttcgac gtgtggggcc agggcaccac cgtgaccgtc 360

agctcagcta gcaccaaggg ccccagcgtg ttccccctgg cccccagcag caagagcacc 420

agcggcggca cagccgccct gggctgcctg gtgaaggact acttccccga gcccgtgacc 480

gtgtcctgga acagcggagc cctgacctcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gtccagcgtg gtgacagtgc ccagcagcag cctgggcacc 600

cagacctaca tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgccccccct gcccagcccc agagctgctg 720

ggcggaccct ccgtgttcct gttccccccc aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggac gtgagccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaggaat acaagtgcaa ggtctccaac aaggccctgc cagccccat cgaaaagacc 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc cccctcccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctaccccagc 1140

gacatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agagcctgag cctgtccccc ggcaag 1356

<210> 85
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 85
Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
1 5 10

<210> 86
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 86
Tyr Thr Ser Arg Leu Gln Ser
1 5

<210> 87
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 87
Gln Gln Gly Arg Arg Leu Trp Ser
1 5

<210> 88
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 88
Ser Gln Ser Ile Ser Ser Tyr
1 5

<210> 89
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 89
Tyr Thr Ser
1

<210> 90
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 90
Gly Arg Arg Leu Trp
1 5

<210> 91
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 91
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Arg Arg Leu Trp Ser
85 90 95

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

<210> 92
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 92
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Arg Arg Leu Trp Ser
85 90 95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

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

Asn Arg Gly Glu Cys
210

<210> 93
<211> 639

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 93
gatatccaga tgacccagag ccccagcagc ctgagcgcca gcgtgggcga cagagtgacc 60

atcacctgtc gggccagcca gagcatcagc agctacctga actggtatca gcagaagccc 120

ggcaaggccc ccaagctgct gatctactac accagccggc tgcagagcgg cgtgcccagc 180

agattttctg gcagcggcag cggcaccgac ttcaccctga ccatcagcag cctgcagccc 240

gaggacttcg ccacctacta ctgccagcag ggccgccgcc tgtggtcctt cggcggaggc 300

accaaggtgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagcgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 94
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 94
Asp Tyr Tyr Met Ala
1 5

<210> 95
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 95
Asn Ile Asn Gln Ile Ala Gly Ser Thr Tyr Tyr Val Asp Ser Val Gln
1 5 10 15

Gly

<210> 96
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 96
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 97
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 97
Gly Phe Thr Phe Ser Asp Tyr
1 5

<210> 98
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 98
Asn Gln Ile Ala Gly Ser
1 5

<210> 99
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 99
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 100
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 100
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 101
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 101
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
100 105 110

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

Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr

130 135 140

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr

405 410 415

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

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
435 440 445

Ser Pro Gly Lys
450

<210> 102
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 102
gaagtgcaat tggtggaaag cggcggaggc ctggtgcagc ctggcggctc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc gactactaca tggcctgggt ccgacaggcc 120

cctggcaagg gcctggaatg ggtggccaat atcaaccaaa tcgccggcag cacctactac 180

gtggacagcg tgcaaggccg gttcaccatc agccgggaca acgccaagaa cagcctgtac 240

ctgcagatga acagcctgcg ggccgaggac accgccgtgt actactgcgc cagaggcgat 300

tactacggca ccacctactg gtacttcgac gtgtggggcc agggcaccac cgtgaccgtc 360

agctcagcta gcaccaaggg ccccagcgtg ttccccctgg cccccagcag caagagcacc 420

agcggcggca cagccgccct gggctgcctg gtgaaggact acttccccga gcccgtgacc 480

gtgtcctgga acagcggagc cctgacctcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gtccagcgtg gtgacagtgc ccagcagcag cctgggcacc 600

cagacctaca tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgccccccct gcccagcccc agagctgctg 720

ggcggaccct ccgtgttcct gttcccccccc aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggac gtgagccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaggaat acaagtgcaa ggtctccaac aaggccctgc cagccccat cgaaaagacc 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc cccctcccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctaccccagc 1140

gacatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agagcctgag cctgtccccc ggcaag 1356

<210> 103
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 103
Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
1 5 10

<210> 104
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 104
Tyr Thr Ser Arg Leu Gln Ser
1 5

<210> 105
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 105
Gln Gln Gly Arg Arg Leu Trp Ser
1 5

<210> 106
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 106
Ser Gln Ser Ile Ser Ser Tyr
1 5

<210> 107
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 107
Tyr Thr Ser
1

<210> 108
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 108
Gly Arg Arg Leu Trp
1 5

<210> 109
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 109
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Arg Arg Leu Trp Ser
85 90 95

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

<210> 110
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 110

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

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Arg Arg Leu Trp Ser
85 90 95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

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

Asn Arg Gly Glu Cys
210

<210> 111
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 111
gatatccaga tgacccagag ccccagcagc ctgagcgcca gcgtgggcga cagagtgacc 60

atcacctgtc gggccagcca gagcatcagc agctacctga actggtatca gcagaagccc 120

ggcaaggccc ccaagctgct gatctactac accagccggc tgcagagcgg cgtgcccagc 180

agattttctg gcagcggcag cggcaccgac ttcaccctga ccatcagcag cctgcagccc 240

gaggacttcg ccacctacta ctgccagcag ggccgccgcc tgtggtcctt cggcggaggc 300

accaaggtgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagcgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 112
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 112
Asp Tyr Tyr Met Ala
1 5

<210> 113
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 113
Ser Ile Asn Gln Asn Thr Gly Ser Thr Tyr Tyr Leu Asp Ser Val Arg
1 5 10 15

Gly

<210> 114
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 114
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 115

<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 115
Gly Phe Thr Phe Ser Asp Tyr
1 5

<210> 116
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 116
Asn Gln Asn Thr Gly Ser
1 5

<210> 117
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 117
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 118
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 118
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

Ala Ser Ile Asn Gln Asn Thr Gly Ser Thr Tyr Tyr Leu Asp Ser Val
50 55 60

Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr

65 70 75 80

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 119
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 119
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

Ala Ser Ile Asn Gln Asn Thr Gly Ser Thr Tyr Tyr Leu Asp Ser Val
50 55 60

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

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

Ala Arg Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val Trp
100 105 110

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
        435                 440                 445
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Ser Pro Gly Lys
450

<210> 120
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 120
gaagtgcaat tggtggaaag cggcggaggc ctggtgcagc ctggcggctc tctgagactg 60

agctgtgccg ccagcggctt caccttcagc gactactaca tggcctgggt ccgacaggcc 120

cctggcaagg gcctggaatg ggtggccagt atcaaccaaa acaccggcag cacctactac 180

ctggacagcg tgcgaggccg gttcaccatc agccgggaca acgccaagaa cagcctgtac 240

ctgcagatga acagcctgcg ggccgaggac accgccgtgt actactgcgc cagaggcgat 300

tactacggca ccacctactg gtacttcgac gtgtggggcc agggcaccac cgtgaccgtc 360

agctcagcta gcaccaaggg ccccagcgtg ttccccctgg cccccagcag caagagcacc 420

agcggcggca cagccgccct gggctgcctg gtgaaggact acttccccga gcccgtgacc 480

gtgtcctgga acagcggagc cctgacctcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gtccagcgtg gtgacagtgc ccagcagcag cctgggcacc 600

cagacctaca tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgccccccct gcccagcccc agagctgctg 720

ggcggaccct ccgtgttcct gttccccccc aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggac gtgagccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaggaat acaagtgcaa ggtctccaac aaggccctgc cagccccat cgaaaagacc 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc cccctcccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctaccccagc 1140

gacatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agagcctgag cctgtccccc ggcaag 1356

<210> 121
<211> 11
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 121
Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
1 5 10

<210> 122
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 122
Tyr Thr Ser Arg Leu Gln Ser
1 5

<210> 123
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 123
Gln Gln Gly Arg Arg Leu Trp Ser
1 5

<210> 124
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

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

<210> 125
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 125
Tyr Thr Ser
1

<210> 126
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 126
Gly Arg Arg Leu Trp
1 5

<210> 127
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 127
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Arg Arg Leu Trp Ser
85 90 95

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

<210> 128
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 128
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Arg Arg Leu Trp Ser
85 90 95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

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

Asn Arg Gly Glu Cys
210

<210> 129
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 129
gatatccaga tgacccagag ccccagcagc ctgagcgcca gcgtgggcga cagagtgacc 60

atcacctgtc gggccagcca gagcatcagc agctacctga actggtatca gcagaagccc 120

ggcaaggccc ccaagctgct gatctactac accagccggc tgcagagcgg cgtgcccagc 180

agattttctg gcagcggcag cggcaccgac ttcaccctga ccatcagcag cctgcagccc 240

gaggacttcg ccacctacta ctgccagcag ggccgccgcc tgtggtcctt cggcggaggc 300

accaaggtgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagcgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 130
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 130
Ser Tyr Ala Ile Ser
1 5

<210> 131
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 131
Gly Ile Ile Pro Met Ser Gly Arg Thr Thr Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 132
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 132
Asp Tyr Gly Pro Glu Ala Pro Asp Tyr Gly Gln Ser Thr Ser Tyr Phe
1 5 10 15

Trp Tyr Tyr Ala Phe Asp Pro
20

<210> 133
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

peptide

<400> 133
Gly Gly Thr Phe Ser Ser Tyr
1 5

<210> 134
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 134
Ile Pro Met Ser Gly Arg
1 5

<210> 135
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 135
Asp Tyr Gly Pro Glu Ala Pro Asp Tyr Gly Gln Ser Thr Ser Tyr Phe
1 5 10 15

Trp Tyr Tyr Ala Phe Asp Pro
20

<210> 136
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 136
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

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

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

Gly Gly Ile Ile Pro Met Ser Gly Arg Thr Thr Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr 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 Asp Tyr Gly Pro Glu Ala Pro Asp Tyr Gly Gln Ser Thr Ser
100 105 110

Tyr Phe Trp Tyr Tyr Ala Phe Asp Pro Trp Gly Gln Gly Thr Leu Val
115 120 125

Thr Val Ser Ser
130

<210> 137
<211> 462
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 137
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

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

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

Gly Gly Ile Ile Pro Met Ser Gly Arg Thr Thr Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr 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 Asp Tyr Gly Pro Glu Ala Pro Asp Tyr Gly Gln Ser Thr Ser
100 105 110

Tyr Phe Trp Tyr Tyr Ala Phe Asp Pro Trp Gly Gln Gly Thr Leu Val
115 120 125

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

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
145 150 155 160

Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly

```
                165                 170                 175

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

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

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

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

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
            260                 265                 270

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
        275                 280                 285

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
    290                 295                 300

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

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

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

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

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
    370                 375                 380

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
385                 390                 395                 400

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
                405                 410                 415

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

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
```

435 440 445

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
450 455 460

<210> 138
<211> 1386
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 138
caggtgcagc tggtgcagtc aggcgccgaa gtgaagaaac ccggctctag cgtgaaagtc 60

agctgtaaag ctagtggggg caccttctct agctacgcta ttagctgggt cagacaggcc 120

ccaggtcaag gcttggagtg gatgggcgga attatcccta tgagcggtag aactacctac 180

gctcagaaat ttcagggtag agtgactatc accgccgacg agtctactag caccgcctat 240

atggaactga gttctctgag gtcagaggac accgccgtct actactgcgc tagagactac 300

ggccccgagg cccccgacta cggtcaatca actagctact tctggtacta cgccttcgac 360

ccttggggtc aaggcaccct ggtcaccgtg tcttcagcta gcactaaggg cccaagtgtg 420

tttcccctgg cccccagcag caagtctact tccggcggaa ctgctgccct gggttgcctg 480

gtgaaggact acttccccga gcccgtgaca gtgtcctgga actctggggc tctgacttcc 540

ggcgtgcaca ccttccccgc cgtgctgcag agcagcggcc tgtacagcct gagcagcgtg 600

gtgacagtgc cctccagctc tctgggaacc cagacctata tctgcaacgt gaaccacaag 660

cccagcaaca ccaaggtgga caagagagtg gagcccaaga gctgcgacaa gacccacacc 720

tgcccccccct gcccagctcc agaactgctg ggagggcctt ccgtgttcct gttcccccccc 780

aagcccaagg acaccctgat gatcagcagg acccccgagg tgacctgcgt ggtggtggac 840

gtgtcccacg aggacccaga ggtgaagttc aactggtacg tggacggcgt ggaggtgcac 900

aacgccaaga ccaagcccag agaggagcag tacaacagca cctacagggt ggtgtccgtg 960

ctgaccgtgc tgcaccagga ctggctgaac ggcaaagaat acaagtgcaa agtctccaac 1020

aaggccctgc cagccccaat cgaaaagaca atcagcaagg ccaagggcca gccacgggag 1080

ccccaggtgt acaccctgcc ccccagccgg gaggagatga ccaagaacca ggtgtccctg 1140

acctgtctgg tgaagggctt ctaccccagc gatatcgccg tggagtggga gagcaacggc 1200

cagcccgaga acaactacaa gaccaccccc ccagtgctgg acagcgacgg cagcttcttc 1260

ctgtacagca agctgaccgt ggacaagtcc aggtggcagc agggcaacgt gttcagctgc 1320

agcgtgatgc acgaggccct gcacaaccac tacacccaga agtccctgag cctgagcccc 1380

ggcaag 1386

<210> 139
<211> 11

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 139
Ser Gly Asp Asn Ile Pro Ser Tyr Phe Val His
1 5 10

<210> 140
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 140
Asp Asp Asn Asp Arg Pro Ser
1 5

<210> 141
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 141
Ser Ser Trp Asp Gln Asp Thr Val Val
1 5

<210> 142
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 142
Asp Asn Ile Pro Ser Tyr Phe
1 5

<210> 143
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 143
Asp Asp Asn
1

<210> 144
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 144
Trp Asp Gln Asp Thr Val
1 5

<210> 145
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 145
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

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

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

Asp Asp Asn Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Trp Asp Gln Asp Thr Val Val
85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 146
<211> 212
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 146
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

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

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

Asp Asp Asn Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Trp Asp Gln Asp Thr Val Val
85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala
100 105 110

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

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

Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu
145 150 155 160

Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser
165 170 175

Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser
180 185 190

Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro
195 200 205

Thr Glu Cys Ser
210

<210> 147
<211> 636
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 147
gatatcgagc tgactcagcc ccctagcgtc agcgtcagcc ctggtcaaac cgcctctatc 60

acctgtagcg gcgataatat ccctagctac ttcgtgcact ggtatcagca gaagcccggt 120

caagcccccg tgctggtgat ctacgacgat aacgatagac ctagcggaat ccccgagcgg 180

tttagcggct ctaatagcgg taacaccgct accctgacta ttagcggcac tcaggccgag 240

gacgaggccg actactactg ctctagctgg gatcaggaca ccgtggtgtt cggcggaggc 300

actaagctga ccgtgctggg tcaacctaag gctgccccca gcgtgaccct gttccccccc 360

agcagcgagg agctgcaggc caacaaggcc accctggtgt gcctgatcag cgacttctac 420

ccaggcgccg tgaccgtggc ctggaaggcc gacagcagcc ccgtgaaggc cggcgtggag 480

accaccaccc ccagcaagca gagcaacaac aagtacgccg ccagcagcta cctgagcctg 540

acccccgagc agtggaagag ccacaggtcc tacagctgcc aggtgaccca cgagggcagc 600

accgtggaaa agaccgtggc cccaaccgag tgcagc 636

<210> 148
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 148
Gly Phe Thr Phe Ser Asp Tyr Tyr Met Ala
1 5 10

<210> 149
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 149
Asn Ile Asn Tyr Asp Gly Ser Ser Thr Tyr Tyr Leu Asp Ser
1 5 10

<210> 150
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 150
Gly Asp Tyr Tyr Gly Thr Thr Tyr Trp Tyr Phe Asp Val
1 5 10

<210> 151
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 151
Arg Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn

1 5 10

<210> 152
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 152
Tyr Thr Ser Arg Leu Gln Ser
1 5

<210> 153
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 153
Gln Gln Gly Lys Lys Leu Trp Ser
1 5

<210> 154
<211> 503
<212> PRT
<213> Homo sapiens

<400> 154
Gln Pro Ser Val Ser Pro Gly Glu Pro Ser Pro Pro Ser Ile His Pro
1 5 10 15

Gly Lys Ser Asp Leu Ile Val Arg Val Gly Asp Glu Ile Arg Leu Leu
20 25 30

Cys Thr Asp Pro Gly Phe Val Lys Trp Thr Phe Glu Ile Leu Asp Glu
35 40 45

Thr Asn Glu Asn Lys Gln Asn Glu Trp Ile Thr Glu Lys Ala Glu Ala
50 55 60

Thr Asn Thr Gly Lys Tyr Thr Cys Thr Asn Lys His Gly Leu Ser Asn
65 70 75 80

Ser Ile Tyr Val Phe Val Arg Asp Pro Ala Lys Leu Phe Leu Val Asp
85 90 95

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

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

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Lys Pro Leu Pro Lys Asp Leu Arg Phe Ile Pro Asp Pro Lys Ala Gly
    130                 135                 140

Ile Met Ile Lys Ser Val Lys Arg Ala Tyr His Arg Leu Cys Leu His
145                 150                 155                 160

Cys Ser Val Asp Gln Glu Gly Lys Ser Val Leu Ser Glu Lys Phe Ile
                165                 170                 175

Leu Lys Val Arg Pro Ala Phe Lys Ala Val Pro Val Val Ser Val Ser
            180                 185                 190

Lys Ala Ser Tyr Leu Leu Arg Glu Gly Glu Glu Phe Thr Val Thr Cys
        195                 200                 205

Thr Ile Lys Asp Val Ser Ser Ser Val Tyr Ser Thr Trp Lys Arg Glu
    210                 215                 220

Asn Ser Gln Thr Lys Leu Gln Glu Lys Tyr Asn Ser Trp His His Gly
225                 230                 235                 240

Asp Phe Asn Tyr Glu Arg Gln Ala Thr Leu Thr Ile Ser Ser Ala Arg
                245                 250                 255

Val Asn Asp Ser Gly Val Phe Met Cys Tyr Ala Asn Asn Thr Phe Gly
            260                 265                 270

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

Asn Ile Phe Pro Met Ile Asn Thr Thr Val Phe Val Asn Asp Gly Glu
    290                 295                 300

Asn Val Asp Leu Ile Val Glu Tyr Glu Ala Phe Pro Lys Pro Glu His
305                 310                 315                 320

Gln Gln Trp Ile Tyr Met Asn Arg Thr Phe Thr Asp Lys Trp Glu Asp
                325                 330                 335

Tyr Pro Lys Ser Glu Asn Glu Ser Asn Ile Arg Tyr Val Ser Glu Leu
            340                 345                 350

His Leu Thr Arg Leu Lys Gly Thr Glu Gly Gly Thr Tyr Thr Phe Leu
        355                 360                 365

Val Ser Asn Ser Asp Val Asn Ala Ala Ile Ala Phe Asn Val Tyr Val
    370                 375                 380

Asn Thr Lys Pro Glu Ile Leu Thr Tyr Asp Arg Leu Val Asn Gly Met
385                 390                 395                 400
```

```
Leu Gln Cys Val Ala Ala Gly Phe Pro Glu Pro Thr Ile Asp Trp Tyr
                405                 410                 415

Phe Cys Pro Gly Thr Glu Gln Arg Cys Ser Ala Ser Val Leu Pro Val
            420                 425                 430

Asp Val Gln Thr Leu Asn Ser Ser Gly Pro Pro Phe Gly Lys Leu Val
        435                 440                 445

Val Gln Ser Ser Ile Asp Ser Ser Ala Phe Lys His Asn Gly Thr Val
    450                 455                 460

Glu Cys Lys Ala Tyr Asn Asp Val Gly Lys Thr Ser Ala Tyr Phe Asn
465                 470                 475                 480

Phe Ala Phe Lys Glu Gln Ile His Pro His Thr Leu Phe Thr Pro Arg
                485                 490                 495

Ser His His His His His His
            500
```

<210> 155
<211> 294
<212> PRT
<213> Homo sapiens

<400> 155

```
Gln Pro Ser Val Ser Pro Gly Glu Pro Ser Pro Pro Ser Ile His Pro
1               5                   10                  15

Gly Lys Ser Asp Leu Ile Val Arg Val Gly Asp Glu Ile Arg Leu Leu
            20                  25                  30

Cys Thr Asp Pro Gly Phe Val Lys Trp Thr Phe Glu Ile Leu Asp Glu
        35                  40                  45

Thr Asn Glu Asn Lys Gln Asn Glu Trp Ile Thr Glu Lys Ala Glu Ala
    50                  55                  60

Thr Asn Thr Gly Lys Tyr Thr Cys Thr Asn Lys His Gly Leu Ser Asn
65                  70                  75                  80

Ser Ile Tyr Val Phe Val Arg Asp Pro Ala Lys Leu Phe Leu Val Asp
                85                  90                  95

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

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

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

130 135 140

Ile Met Ile Lys Ser Val Lys Arg Ala Tyr His Arg Leu Cys Leu His
145 150 155 160

Cys Ser Val Asp Gln Glu Gly Lys Ser Val Leu Ser Glu Lys Phe Ile
165 170 175

Leu Lys Val Arg Pro Ala Phe Lys Ala Val Pro Val Val Ser Val Ser
180 185 190

Lys Ala Ser Tyr Leu Leu Arg Glu Gly Glu Glu Phe Thr Val Thr Cys
195 200 205

Thr Ile Lys Asp Val Ser Ser Ser Val Tyr Ser Thr Trp Lys Arg Glu
210 215 220

Asn Ser Gln Thr Lys Leu Gln Glu Lys Tyr Asn Ser Trp His His Gly
225 230 235 240

Asp Phe Asn Tyr Glu Arg Gln Ala Thr Leu Thr Ile Ser Ser Ala Arg
245 250 255

Val Asn Asp Ser Gly Val Phe Met Cys Tyr Ala Asn Asn Thr Phe Gly
260 265 270

Ser Ala Asn Val Thr Thr Thr Leu Glu Val Val Asp Lys Gly Arg Ser
275 280 285

His His His His His His
290

<210> 156
<211> 222
<212> PRT
<213> Homo sapiens

<400> 156
Gly Phe Ile Asn Ile Phe Pro Met Ile Asn Thr Thr Val Phe Val Asn
1 5 10 15

Asp Gly Glu Asn Val Asp Leu Ile Val Glu Tyr Glu Ala Phe Pro Lys
20 25 30

Pro Glu His Gln Gln Trp Ile Tyr Met Asn Arg Thr Phe Thr Asp Lys
35 40 45

Trp Glu Asp Tyr Pro Lys Ser Glu Asn Glu Ser Asn Ile Arg Tyr Val
50 55 60

Ser Glu Leu His Leu Thr Arg Leu Lys Gly Thr Glu Gly Gly Thr Tyr
65 70 75 80

```
Thr Phe Leu Val Ser Asn Ser Asp Val Asn Ala Ala Ile Ala Phe Asn
                85                  90                  95

Val Tyr Val Asn Thr Lys Pro Glu Ile Leu Thr Tyr Asp Arg Leu Val
            100                 105                 110

Asn Gly Met Leu Gln Cys Val Ala Ala Gly Phe Pro Glu Pro Thr Ile
        115                 120                 125

Asp Trp Tyr Phe Cys Pro Gly Thr Glu Gln Arg Cys Ser Ala Ser Val
    130                 135                 140

Leu Pro Val Asp Val Gln Thr Leu Asn Ser Ser Gly Pro Pro Phe Gly
145                 150                 155                 160

Lys Leu Val Val Gln Ser Ser Ile Asp Ser Ser Ala Phe Lys His Asn
                165                 170                 175

Gly Thr Val Glu Cys Lys Ala Tyr Asn Asp Val Gly Lys Thr Ser Ala
            180                 185                 190

Tyr Phe Asn Phe Ala Phe Lys Gly Asn Asn Lys Glu Gln Ile His Pro
        195                 200                 205

His Thr Leu Phe Thr Pro Arg Ser His His His His His His
    210                 215                 220
```

<210> 157
<211> 741
<212> PRT
<213> Mus musculus

<400> 157

```
Ser Gln Pro Ser Ala Ser Pro Gly Glu Pro Ser Pro Pro Ser Ile His
1               5                   10                  15

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

Thr Cys Ile Asp Pro Asp Phe Val Arg Trp Thr Phe Lys Thr Tyr Phe
        35                  40                  45

Asn Glu Met Val Glu Asn Lys Lys Asn Glu Trp Ile Gln Glu Lys Ala
    50                  55                  60

Glu Ala Thr Arg Thr Gly Thr Tyr Thr Cys Ser Asn Ser Asn Gly Leu
65                  70                  75                  80

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

Val Gly Leu Pro Leu Phe Gly Lys Glu Asp Ser Asp Ala Leu Val Arg
```

```
            100                 105                 110

Cys Pro Leu Thr Asp Pro Gln Val Ser Asn Tyr Ser Leu Ile Glu Cys
        115                 120                 125

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

Ala Gly Ile Thr Ile Lys Asn Val Lys Arg Ala Tyr His Arg Leu Cys
145                 150                 155                 160

Val Arg Cys Ala Ala Gln Arg Asp Gly Thr Trp Leu His Ser Asp Lys
                165                 170                 175

Phe Thr Leu Lys Val Arg Ala Ala Ile Lys Ala Ile Pro Val Val Ser
            180                 185                 190

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

Val Cys Thr Ile Lys Asp Val Ser Thr Ser Val Asn Ser Met Trp Leu
    210                 215                 220

Lys Met Asn Pro Gln Pro Gln His Ile Ala Gln Val Lys His Asn Ser
225                 230                 235                 240

Trp His Arg Gly Asp Phe Asn Tyr Glu Arg Gln Glu Thr Leu Thr Ile
                245                 250                 255

Ser Ser Ala Arg Val Asp Asp Ser Gly Val Phe Met Cys Tyr Ala Asn
            260                 265                 270

Asn Thr Phe Gly Ser Ala Asn Val Thr Thr Thr Leu Lys Val Val Glu
        275                 280                 285

Lys Gly Phe Ile Asn Ile Ser Pro Val Lys Asn Thr Thr Val Phe Val
    290                 295                 300

Thr Asp Gly Glu Asn Val Asp Leu Val Val Glu Tyr Glu Ala Tyr Pro
305                 310                 315                 320

Lys Pro Glu His Gln Gln Trp Ile Tyr Met Asn Arg Thr Ser Ala Asn
                325                 330                 335

Lys Gly Lys Asp Tyr Val Lys Ser Asp Asn Lys Ser Asn Ile Arg Tyr
            340                 345                 350

Val Asn Gln Leu Arg Leu Thr Arg Leu Lys Gly Thr Glu Gly Gly Thr
        355                 360                 365

Tyr Thr Phe Leu Val Ser Asn Ser Asp Ala Ser Ala Ser Val Thr Phe
```

370 375 380

Asn Val Tyr Val Asn Thr Lys Pro Glu Ile Leu Thr Tyr Asp Arg Leu
385 390 395 400

Ile Asn Gly Met Leu Gln Cys Val Ala Glu Gly Phe Pro Glu Pro Thr
405 410 415

Ile Asp Trp Tyr Phe Cys Thr Gly Ala Glu Gln Arg Cys Thr Thr Pro
420 425 430

Val Ser Pro Val Asp Val Gln Val Gln Asn Val Ser Val Ser Pro Phe
435 440 445

Gly Lys Leu Val Val Gln Ser Ser Ile Asp Ser Ser Val Phe Arg His
450 455 460

Asn Gly Thr Val Glu Cys Lys Ala Ser Asn Asp Val Gly Lys Ser Ser
465 470 475 480

Ala Phe Phe Asn Phe Ala Phe Lys Glu Gln Ile Gln Ala His Thr Leu
485 490 495

Phe Thr Pro Leu Glu Val Leu Phe Gln Gly Pro Arg Ser Pro Arg Gly
500 505 510

Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu
515 520 525

Leu Gly Gly Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val
530 535 540

Leu Met Ile Ser Leu Ser Pro Ile Val Thr Cys Val Val Val Asp Val
545 550 555 560

Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val
565 570 575

Glu Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser
580 585 590

Thr Leu Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met
595 600 605

Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala
610 615 620

Pro Ile Glu Arg Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro
625 630 635 640

Gln Val Tyr Val Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln

645 650 655

Val Thr Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr
660 665 670

Val Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr
675 680 685

Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu
690 695 700

Arg Val Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser
705 710 715 720

Val Val His Glu Gly Leu His Asn His His Thr Thr Lys Ser Phe Ser
725 730 735

Arg Thr Pro Gly Lys
740

<210> 158
<211> 741
<212> PRT
<213> Rattus norvegicus

<400> 158
Ser Gln Pro Ser Ala Ser Pro Gly Glu Pro Ser Pro Pro Ser Ile Gln
1 5 10 15

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

Thr Cys Thr Asp Pro Ala Phe Val Lys Trp Thr Phe Glu Ile Leu Asp
35 40 45

Val Arg Ile Glu Asn Lys Gln Ser Glu Trp Ile Arg Glu Lys Ala Glu
50 55 60

Ala Thr His Thr Gly Lys Tyr Thr Cys Val Ser Gly Ser Gly Leu Arg
65 70 75 80

Ser Ser Ile Tyr Val Phe Val Arg Asp Pro Ala Val Leu Phe Leu Val
85 90 95

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

Pro Leu Thr Asp Pro Gln Val Ser Asn Tyr Ser Leu Ile Glu Cys Asp
115 120 125

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

```
Gly Ile Thr Ile Lys Asn Val Lys Arg Ala Tyr His Arg Leu Cys Ile
145                 150                 155                 160

Arg Cys Ala Ala Gln Arg Glu Gly Lys Trp Met Arg Ser Asp Lys Phe
                165                 170                 175

Thr Leu Lys Val Arg Ala Ala Ile Lys Ala Ile Pro Val Val Ser Val
            180                 185                 190

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

Cys Thr Ile Lys Asp Val Ser Thr Ser Val Asp Ser Met Trp Ile Lys
    210                 215                 220

Leu Asn Pro Gln Pro Gln Ser Lys Ala Gln Val Lys Arg Asn Ser Trp
225                 230                 235                 240

His Gln Gly Asp Phe Asn Tyr Glu Arg Gln Glu Thr Leu Thr Ile Ser
                245                 250                 255

Ser Ala Arg Val Asn Asp Ser Gly Val Phe Met Cys Tyr Ala Asn Asn
            260                 265                 270

Thr Phe Gly Ser Ala Asn Val Thr Thr Thr Leu Lys Val Val Glu Lys
        275                 280                 285

Gly Phe Ile Asn Ile Phe Pro Val Lys Asn Thr Thr Val Phe Val Thr
    290                 295                 300

Asp Gly Glu Asn Val Asp Leu Val Val Glu Phe Glu Ala Tyr Pro Lys
305                 310                 315                 320

Pro Glu His Gln Gln Trp Ile Tyr Met Asn Arg Thr Pro Thr Asn Arg
                325                 330                 335

Gly Glu Asp Tyr Val Lys Ser Asp Asn Gln Ser Asn Ile Arg Tyr Val
            340                 345                 350

Asn Glu Leu Arg Leu Thr Arg Leu Lys Gly Thr Glu Gly Gly Thr Tyr
        355                 360                 365

Thr Phe Leu Val Ser Asn Ser Asp Val Ser Ala Ser Val Thr Phe Asp
    370                 375                 380

Val Tyr Val Asn Thr Lys Pro Glu Ile Leu Thr Tyr Asp Arg Leu Met
385                 390                 395                 400

Asn Gly Arg Leu Gln Cys Val Ala Ala Gly Phe Pro Glu Pro Thr Ile
                405                 410                 415
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Asp Trp Tyr Phe Cys Thr Gly Ala Glu Gln Arg Cys Thr Val Pro Val
            420                 425                 430

Pro Pro Val Asp Val Gln Ile Gln Asn Ala Ser Val Ser Pro Phe Gly
        435                 440                 445

Lys Leu Val Val Gln Ser Ser Ile Asp Ser Ser Val Phe Arg His Asn
    450                 455                 460

Gly Thr Val Glu Cys Lys Ala Ser Asn Ala Val Gly Lys Ser Ser Ala
465                 470                 475                 480

Phe Phe Asn Phe Ala Phe Lys Gly Asn Ser Lys Glu Gln Ile Gln Pro
                485                 490                 495

His Thr Leu Phe Thr Pro Arg Ser Leu Glu Val Leu Phe Gln Gly Pro
            500                 505                 510

Gly Ser Pro Pro Leu Lys Glu Cys Pro Pro Cys Ala Ala Pro Asp Leu
        515                 520                 525

Leu Gly Gly Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val
    530                 535                 540

Leu Met Ile Ser Leu Ser Pro Met Val Thr Cys Val Val Val Asp Val
545                 550                 555                 560

Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val
                565                 570                 575

Glu Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser
            580                 585                 590

Thr Leu Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met
        595                 600                 605

Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Arg Ala Leu Pro Ser
    610                 615                 620

Pro Ile Glu Lys Thr Ile Ser Lys Pro Arg Gly Pro Val Arg Ala Pro
625                 630                 635                 640

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

Phe Ser Leu Thr Cys Met Ile Thr Gly Phe Leu Pro Ala Glu Ile Ala
            660                 665                 670

Val Asp Trp Thr Ser Asn Gly Arg Thr Glu Gln Asn Tyr Lys Asn Thr
        675                 680                 685
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Ala Thr Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu
690 695 700

Arg Val Gln Lys Ser Thr Trp Glu Arg Gly Ser Leu Phe Ala Cys Ser
705 710 715 720

Val Val His Glu Gly Leu His Asn His Leu Thr Thr Lys Thr Ile Ser
725 730 735

Arg Ser Leu Gly Lys
740

<210> 159
<211> 527
<212> PRT
<213> Macaca fascicularis

<400> 159
Met Tyr Arg Met Gln Leu Leu Ser Cys Ile Ala Leu Ser Leu Ala Leu
1 5 10 15

Val Thr Asn Ser Gln Pro Ser Val Ser Pro Gly Glu Pro Ser Pro Pro
20 25 30

Ser Ile His Pro Ala Lys Ser Glu Leu Ile Val Arg Val Gly Asn Glu
35 40 45

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

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

Lys Ala Glu Ala Thr Asn Thr Gly Lys Tyr Thr Cys Thr Asn Lys His
85 90 95

Gly Leu Ser Ser Ser Ile Tyr Val Phe Val Arg Asp Pro Ala Lys Leu
100 105 110

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

Val Arg Cys Pro Leu Thr Asp Pro Glu Val Thr Ser Tyr Ser Leu Lys
130 135 140

Gly Cys Gln Gly Lys Pro Leu Pro Lys Asp Leu Arg Phe Val Pro Asp
145 150 155 160

Pro Lys Ala Gly Ile Thr Ile Lys Ser Val Lys Arg Ala Tyr His Arg
165 170 175

Leu Cys Leu His Cys Ser Ala Asp Gln Glu Gly Lys Ser Val Leu Ser

180 185 190

Asp Lys Phe Ile Leu Lys Val Arg Pro Ala Phe Lys Ala Val Pro Val
195 200 205

Val Ser Val Ser Lys Ala Ser Tyr Leu Leu Arg Glu Gly Glu Glu Phe
210 215 220

Thr Val Thr Cys Thr Ile Lys Asp Val Ser Ser Ser Val Tyr Ser Thr
225 230 235 240

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

Trp His His Gly Asp Phe Asn Tyr Glu Arg Gln Ala Thr Leu Thr Ile
260 265 270

Ser Ser Ala Arg Val Asn Asp Ser Gly Val Phe Met Cys Tyr Ala Asn
275 280 285

Asn Thr Phe Gly Ser Ala Asn Val Thr Thr Thr Leu Glu Val Val Asp
290 295 300

Lys Gly Phe Ile Asn Ile Phe Pro Met Ile Asn Thr Thr Val Phe Val
305 310 315 320

Asn Asp Gly Glu Asn Val Asp Leu Ile Val Glu Tyr Glu Ala Phe Pro
325 330 335

Lys Pro Glu His Gln Gln Trp Ile Tyr Met Asn Arg Thr Phe Thr Asp
340 345 350

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

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

Tyr Thr Phe Leu Val Ser Asn Ser Asp Val Asn Ala Ser Ile Ala Phe
385 390 395 400

Asn Val Tyr Val Asn Thr Lys Pro Glu Ile Leu Thr Tyr Asp Arg Leu
405 410 415

Val Asn Gly Met Leu Gln Cys Val Ala Ala Gly Phe Pro Glu Pro Thr
420 425 430

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

Val Leu Pro Val Asp Val Gln Thr Leu Asn Ala Ser Gly Pro Pro Phe

450 455 460

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

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

Ala Tyr Phe Asn Phe Ala Phe Lys Gly Asn Asn Lys Glu Gln Ile His
500 505 510

Pro His Thr Leu Phe Thr Pro Arg Ser His His His His His His
515 520 525

<210> 160
<211> 503
<212> PRT
<213> Homo sapiens

<400> 160
Gln Pro Ser Val Ser Pro Gly Glu Pro Ser Pro Pro Ser Ile His Pro
1 5 10 15

Gly Lys Ser Asp Leu Ile Val Arg Val Gly Asp Glu Ile Arg Leu Leu
20 25 30

Cys Thr Asp Pro Gly Phe Val Lys Trp Thr Phe Glu Ile Leu Asp Glu
35 40 45

Thr Asn Glu Asn Lys Gln Asn Glu Trp Ile Thr Glu Lys Ala Glu Ala
50 55 60

Thr Asn Thr Gly Lys Tyr Thr Cys Thr Asn Lys His Gly Leu Ser Asn
65 70 75 80

Ser Ile Tyr Val Phe Val Arg Asp Pro Ala Lys Leu Phe Leu Val Asp
85 90 95

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

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

Lys Pro Leu Pro Lys Asp Leu Arg Phe Ile Pro Asp Pro Lys Ala Gly
130 135 140

Ile Met Ile Lys Ser Val Lys Arg Ala Tyr His Arg Leu Cys Leu His
145 150 155 160

Cys Ser Val Asp Gln Glu Gly Lys Ser Val Leu Ser Glu Lys Phe Ile
165 170 175

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Leu Lys Val Arg Pro Ala Phe Lys Ala Val Pro Val Val Ser Val Ser
            180                 185                 190

Lys Ala Ser Tyr Leu Leu Arg Glu Gly Glu Glu Phe Thr Val Thr Cys
        195                 200                 205

Thr Ile Lys Asp Val Ser Ser Ser Val Tyr Ser Thr Trp Lys Arg Glu
    210                 215                 220

Asn Ser Gln Thr Lys Leu Gln Glu Lys Tyr Asn Ser Trp His His Gly
225                 230                 235                 240

Asp Phe Asn Tyr Glu Arg Gln Ala Thr Leu Thr Ile Ser Ser Ala Arg
                245                 250                 255

Val Asn Asp Ser Gly Val Phe Met Cys Tyr Ala Asn Asn Thr Phe Gly
            260                 265                 270

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

Asn Ile Phe Pro Met Ile Asn Thr Thr Val Phe Val Asn Asp Gly Glu
    290                 295                 300

Asn Val Asp Leu Ile Val Glu Tyr Glu Ala Phe Pro Lys Pro Glu His
305                 310                 315                 320

Gln Gln Trp Ile Tyr Met Asn Arg Thr Phe Thr Asp Lys Trp Glu Asp
                325                 330                 335

Tyr Pro Lys Ser Glu Asn Glu Ser Asn Ile Arg Tyr Val Ser Glu Leu
            340                 345                 350

His Leu Thr Arg Leu Lys Gly Thr Glu Gly Gly Thr Tyr Thr Phe Leu
        355                 360                 365

Val Ser Asn Ser Asp Val Asn Ala Ala Ile Ala Phe Asn Val Tyr Val
    370                 375                 380

Asn Thr Lys Pro Glu Ile Leu Thr Tyr Asp Arg Leu Val Asn Gly Met
385                 390                 395                 400

Leu Gln Cys Val Ala Ala Gly Phe Pro Glu Pro Thr Ile Asp Trp Tyr
                405                 410                 415

Phe Cys Pro Gly Thr Glu Gln Arg Cys Ser Ala Ser Val Leu Pro Val
            420                 425                 430

Asp Val Gln Thr Leu Asn Ser Ser Gly Pro Pro Phe Gly Lys Leu Val
        435                 440                 445
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Val Gln Ser Ser Ile Asp Ser Ser Ala Phe Lys His Asn Gly Thr Val
    450                 455                 460


Glu Cys Lys Ala Tyr Asn Asp Val Gly Lys Thr Ser Ala Tyr Phe Asn
465                 470                 475                 480


Phe Ala Phe Lys Glu Gln Ile His Pro His Thr Leu Phe Thr Pro Arg
                485                 490                 495


Ser His His His His His His
            500
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<210> 161
<211> 11
<212> PRT
<213> Homo sapiens

<400> 161
Val Phe Val Arg Asp Pro Ala Lys Leu Phe Leu
1   5   10

<210> 162
<211> 14
<212> PRT
<213> Homo sapiens

<400> 162
His Cys Ser Val Asp Gln Glu Gly Lys Ser Val Leu Ser Glu
1   5   10

<210> 163
<211> 5
<212> PRT
<213> Homo sapiens

<400> 163
Asp Pro Ala Lys Leu
1   5

<210> 164
<211> 9
<212> PRT
<213> Homo sapiens

<400> 164
Gln Glu Gly Lys Ser Val Leu Ser Glu
1   5