SEQUENCE LISTING

<110> AMGEN INC.

<120> HUMAN ANTIGEN BINDING PROTEINS THAT BIND BETA-KLOTHO, FGF RECEPTORS AND COMPLEXES THEREOF

<130> A-1519-WO-PCT

<140> US/PCT10/XXXXX
<141> 2010-12-03

<150> US 61/267,321
<151> 2009-12-07

<150> US 61/381,846
<151> 2010-09-10

<160> 483

<170> PatentIn version 3.5

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35 40 45

Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His Leu Glu Ile Arg
50 55 60

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

Leu Gln Leu Lys Ala Leu Lys Pro Gly Val Ile Gln Ile Leu Gly Val
                85                  90                  95

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

Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg Glu Leu Leu Leu
        115                 120                 125

Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His Gly Leu Pro Leu
    130                 135                 140

His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro Ala Pro Arg Gly
145                 150                 155                 160

Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro Ala Pro Pro Glu
                165                 170                 175

Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val Gly Ser Ser Asp
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Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg Ser Pro Ser Tyr Ala
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<212> PRT
<213> Homo sapiens

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

Asp Leu Leu Gln Leu Arg Cys Arg Leu Arg Asp Asp Val Gln Ser Ile
    50                  55                  60

Asn Trp Leu Arg Asp Gly Val Gln Leu Ala Glu Ser Asn Arg Thr Arg
65                  70                  75                  80

Ile Thr Gly Glu Glu Val Glu Val Gln Asp Ser Val Pro Ala Asp Ser
                85                  90                  95

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

Tyr Phe Ser Val Asn Val Ser Asp Ala Leu Pro Ser Ser Glu Asp Asp
        115                 120                 125

Asp Asp Asp Asp Asp Ser Ser Ser Glu Glu Lys Glu Thr Asp Asn Thr
    130                 135                 140

Lys Pro Asn Arg Met Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys
145                 150                 155                 160

Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe
                165                 170                 175

Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys
            180                 185                 190

Asn Gly Lys Glu Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val
        195                 200                 205

Arg Tyr Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp
    210                 215                 220

Lys Gly Asn Tyr Thr Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn
225                 230                 235                 240

His Thr Tyr Gln Leu Asp Val Val Glu Arg Ser Pro His Arg Pro Ile
                245                 250                 255

Leu Gln Ala Gly Leu Pro Ala Asn Lys Thr Val Ala Leu Gly Ser Asn
            260                 265                 270

Val Glu Phe Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln
        275                 280                 285

Trp Leu Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn
    290                 295                 300
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Leu Pro Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp
305                 310                 315                 320

Lys Glu Met Glu Val Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala
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Gly Glu Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Leu Ser His His
            340                 345                 350

Ser Ala Trp Leu Thr Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val
        355                 360                 365

Met Thr Ser Pro Leu Tyr Leu Glu Ile Ile Ile Tyr Cys Thr Gly Ala
    370                 375                 380

Phe Leu Ile Ser Cys Met Val Gly Ser Val Ile Val Tyr Lys Met Lys
385                 390                 395                 400

Ser Gly Thr Lys Lys Ser Asp Phe His Ser Gln Met Ala Val His Lys
                405                 410                 415

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

Ser Ser Ala Ser Met Asn Ser Gly Val Leu Leu Val Arg Pro Ser Arg
        435                 440                 445

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

Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu
465                 470                 475                 480

Gly Lys Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu
                485                 490                 495

Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala
            500                 505                 510

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

Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile
    530                 535                 540

Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile
545                 550                 555                 560

Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg
                565                 570                 575

Arg Pro Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu
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580 585 590

Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala
595 600 605

Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu
610 615 620

Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala
625 630 635 640

Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys
645 650 655

Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu
660 665 670

Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val
675 680 685

Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val
690 695 700

Pro Val Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp
705 710 715 720

Lys Pro Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys
725 730 735

Trp His Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu
740 745 750

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

Leu Ser Met Pro Leu Asp Gln Tyr Ser Pro Ser Phe Pro Asp Thr Arg
770 775 780

Ser Ser Thr Cys Ser Ser Gly Glu Asp Ser Val Phe Ser His Glu Pro
785 790 795 800

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Gly Gly Leu Lys Arg Arg
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<212> PRT
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Pro Trp Gly Ala Pro Val Glu Val Glu Ser Phe Leu Val His Pro Gly
        35                  40                  45

Asp Leu Leu Gln Leu Arg Cys Arg Leu Arg Asp Asp Val Gln Ser Ile
    50                  55                  60

Asn Trp Leu Arg Asp Gly Val Gln Leu Ala Glu Ser Asn Arg Thr Arg
65                  70                  75                  80

Ile Thr Gly Glu Glu Val Glu Val Gln Asp Ser Val Pro Ala Asp Ser
                85                  90                  95

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

Tyr Phe Ser Val Asn Val Ser Asp Ala Leu Pro Ser Ser Glu Asp Asp
        115                 120                 125

Asp Asp Asp Asp Asp Ser Ser Ser Glu Glu Lys Glu Thr Asp Asn Thr
    130                 135                 140

Lys Pro Asn Arg Met Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys
145                 150                 155                 160

Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe
                165                 170                 175

Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys
            180                 185                 190

Asn Gly Lys Glu Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val
        195                 200                 205

Arg Tyr Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp
    210                 215                 220

Lys Gly Asn Tyr Thr Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn
225                 230                 235                 240

His Thr Tyr Gln Leu Asp Val Val Glu Arg Ser Pro His Arg Pro Ile
                245                 250                 255

Leu Gln Ala Gly Leu Pro Ala Asn Lys Thr Val Ala Leu Gly Ser Asn
            260                 265                 270

Val Glu Phe Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln
        275                 280                 285

Trp Leu Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn
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290 295 300

Leu Pro Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp
305 310 315 320

Lys Glu Met Glu Val Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala
325 330 335

Gly Glu Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Leu Ser His His
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Ser Ala Trp Leu Thr Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val
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Met Thr Ser Pro Leu Tyr
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<400> 7

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Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
        35                  40                  45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
    50                  55                  60

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

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
            100                 105                 110

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

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
    130                 135                 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

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

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285
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Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445

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

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
    530                 535                 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
                565                 570                 575
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Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
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Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
625                 630                 635                 640

Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
                645                 650                 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
            660                 665                 670

Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
705                 710                 715                 720

Leu Ala Trp Arg Leu Tyr Asp Arg Gln Phe Arg Pro Ser Gln Arg Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
    770                 775                 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
                805                 810                 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
            820                 825                 830

His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
```

850 855 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865 870 875 880

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
885 890 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
900 905 910

Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
915 920 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
930 935 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945 950 955 960

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
965 970 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
980 985 990

Gln Lys Lys Pro Leu Ile Phe Leu Gly Cys Cys Phe Phe Ser Thr Leu
995 1000 1005

Val Leu Leu Leu Ser Ile Ala Ile Phe Gln Arg Gln Lys Arg Arg
1010 1015 1020

Lys Phe Trp Lys Ala Lys Asn Leu Gln His Ile Pro Leu Lys Lys
1025 1030 1035

Gly Lys Arg Val Val Ser
1040

<210> 8
<211> 996
<212> PRT
<213> Homo sapiens

<400> 8
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
20 25 30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
50 55 60

```
Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
            100                 105                 110

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

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
    130                 135                 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

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

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
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340 345 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
355 360 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
370 375 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385 390 395 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
405 410 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
420 425 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
435 440 445

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

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465 470 475 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
485 490 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
500 505 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
515 520 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
530 535 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545 550 555 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
565 570 575

Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
580 585 590

Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
595 600 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
610 615 620

```
Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
625                 630                 635                 640

Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
                645                 650                 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
            660                 665                 670

Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
705                 710                 715                 720

Leu Ala Trp Arg Leu Tyr Asp Arg Gln Phe Arg Pro Ser Gln Arg Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
    770                 775                 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
                805                 810                 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
            820                 825                 830

His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
    850                 855                 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865                 870                 875                 880

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
                885                 890                 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
            900                 905                 910
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```
Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
        915                 920                 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
    930                 935                 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945                 950                 955                 960

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
                965                 970                 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
            980                 985                 990

Gln Lys Lys Pro
        995
```

<210> 9
<211> 326
<212> PRT
<213> Homo sapiens

<400> 9

```
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
1               5                   10                  15

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
            20                  25                  30

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 Asn Phe Gly Thr Gln Thr
65                  70                  75                  80

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

Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro
            100                 105                 110

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

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
    130                 135                 140

Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly
145                 150                 155                 160
```

```
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn
                165                 170                 175

Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp
            180                 185                 190

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

Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu
    210                 215                 220

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
225                 230                 235                 240

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
                245                 250                 255

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
            260                 265                 270

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

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
    290                 295                 300

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
305                 310                 315                 320

Ser Leu Ser Pro Gly Lys
                325
```

<210> 10
<211> 107
<212> PRT
<213> Homo sapiens

<400> 10

```
Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
1               5                   10                  15

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

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
        35                  40                  45

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

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
65                  70                  75                  80

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
```

85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
100 105

<210> 11
<211> 106
<212> PRT
<213> Homo sapiens

<400> 11
Gly Gln Pro Lys Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser
1 5 10 15

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

Phe Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro
35 40 45

Val Lys Ala Gly Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn
50 55 60

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

Ser His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val
85 90 95

Glu Lys Thr Val Ala Pro Thr Glu Cys Ser
100 105

<210> 12
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 12
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

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

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

Asp Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

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

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

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

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

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

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

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

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

Ala Pro Thr Glu Cys Ser
210

<210> 13
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 13
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

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

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

Asp Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

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

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys

100 105 110

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

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

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

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

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

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

Ala Pro Thr Glu Cys Ser
210

<210> 14
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 14
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Glu Ser Val
20 25 30

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

Asp Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Gly Asn Ser Asp His
85 90 95

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

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

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

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

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

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

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

Ala Pro Thr Glu Cys Ser
210

<210> 15
<211> 215
<212> PRT
<213> Artificial Sequence

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

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

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

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

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

Gly Ile Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Gly Ser Pro
85 90 95

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

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

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

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


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


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


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


Ser Phe Asn Arg Gly Glu Cys
    210                 215


<210> 16
<211> 215
<212> PRT
<213> Artificial Sequence

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

<400> 16
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15


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


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


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


Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80


Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ala Pro
                85                  90                  95


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


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


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


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

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

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

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

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 17
<211> 215
<212> PRT
<213> Artificial Sequence

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

<400> 17
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95

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

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

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

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

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

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val

180 185 190

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

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 18
<211> 215
<212> PRT
<213> Artificial Sequence

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

<400> 18
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95

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

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

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

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

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

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

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

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 19
<211> 215
<212> PRT
<213> Artificial Sequence

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

<400> 19
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Cys Gly Ser Ser Pro
85 90 95

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

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

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

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

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

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

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

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 20
<211> 214
<212> PRT
<213> Artificial Sequence

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

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

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Phe
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 21
<211> 219
<212> PRT
<213> Artificial Sequence

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

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Tyr Tyr
20 25 30

Asn Gly Phe Thr Tyr Leu Asp Trp Phe Leu Gln Lys Pro Gly Gln Ser
35 40 45

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

Asp Arg Phe Ser Gly Ser Val Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ser
85 90 95

Leu Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
165 170 175

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

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

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 22
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 22
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Pro
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 23
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 23
Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Leu
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 24
<211> 214
<212> PRT
<213> Artificial Sequence

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

<400> 24
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1 5 10 15

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

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile

35 40 45

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Asp Phe Pro Ile
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 25
<211> 219
<212> PRT
<213> Artificial Sequence

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

<400> 25
Asp Phe Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Gln Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Pro
35 40 45

Pro His Leu Leu Ile Tyr Glu Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ser
85 90 95

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

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
165 170 175

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

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

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 26
<211> 219
<212> PRT
<213> Artificial Sequence

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

<400> 26
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Phe Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

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

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Lys Ile
65 70 75 80

```
Ser Arg Val Glu Ala Glu Asp Val Gly Leu Tyr Tyr Cys Met Gln Ala
                85                  90                  95

Leu Gln Thr Pro Cys Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
        115                 120                 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
    130                 135                 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145                 150                 155                 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
                165                 170                 175

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

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

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215


<210> 27
<211> 215
<212> PRT
<213> Artificial Sequence

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

<400> 27
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Gly Ser Ser Pro
                85                  90                  95
```

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

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

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

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

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

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

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

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 28
<211> 215
<212> PRT
<213> Artificial Sequence

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

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

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Gly Ser Ser Pro
85 90 95

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

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser

115 120 125

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

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

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

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

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

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 29
<211> 215
<212> PRT
<213> Artificial Sequence

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

<400> 29
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Gly Ser Ser Pro
85 90 95

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

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

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

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

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

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

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

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 30
<211> 450
<212> PRT
<213> Artificial Sequence

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

<400> 30
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

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

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

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ile Leu Leu Leu Gly Ala Tyr Tyr Tyr Tyr Gly Met Asp
100 105 110

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

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

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

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

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

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

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

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Lys
450

<210> 31
<211> 450
<212> PRT
<213> Artificial Sequence

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

<400> 31
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

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

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

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ile Leu Leu Val Gly Ala Tyr Tyr Tyr Cys Gly Met Asp
100 105 110

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

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

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

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

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

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

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

```
Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Lys
    450
```

<210> 32
<211> 450
<212> PRT
<213> Artificial Sequence

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

<400> 32

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

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
            20                  25                  30

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

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

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
            100                 105                 110

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

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

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

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

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

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

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

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

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

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

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

```
Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

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

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

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

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

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

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

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

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

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

Gly Lys
    450
```

<210> 33
<211> 450
<212> PRT
<213> Artificial Sequence

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

<400> 33

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

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
            20                  25                  30

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

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
    50                  55                  60
```

```
Leu Lys Asn Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
            100                 105                 110

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

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

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

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

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

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

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

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Lys
    450
```

<210> 34
<211> 447
<212> PRT
<213> Artificial Sequence

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

<400> 34

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

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

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

Ser Gly Ile Ser Gly Ser Gly Val Ser Thr His Tyr Ala Asp Ser Val
    50                  55                  60

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

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

Ala Lys Ser Leu Ile Val Val Ile Val Tyr Ala Leu Asp His Trp Gly
            100                 105                 110

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

```
Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
    130                 135                 140

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

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

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

Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His
        195                 200                 205

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

Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

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

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

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320

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

Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340                 345                 350

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

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser
385                 390                 395                 400

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

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
420 425 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 35
<211> 447
<212> PRT
<213> Artificial Sequence

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

<400> 35
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Lys Ser Leu Ile Val Val Met Val Tyr Val Leu Asp Tyr Trp Gly
100 105 110

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

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
130 135 140

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

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

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

Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His
195 200 205

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

Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val
225 230 235 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
245 250 255

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

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

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
290 295 300

Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305 310 315 320

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

Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

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

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser
385 390 395 400

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

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
420 425 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 36
<211> 447
<212> PRT
<213> Artificial Sequence

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

<400> 36
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly

```
1               5                   10                  15

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

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

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

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

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

Ala Lys Ser Leu Ile Val Val Met Val Tyr Val Leu Asp Tyr Trp Gly
            100                 105                 110

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

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
    130                 135                 140

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

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

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

Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His
        195                 200                 205

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

Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

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

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

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
290 295 300

Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305 310 315 320

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

Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

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

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser
385 390 395 400

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

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
420 425 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 37
<211> 447
<212> PRT
<213> Artificial Sequence

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

<400> 37
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

85 90 95

Ala Lys Ser Leu Ile Val Val Ile Val Tyr Ala Leu Asp Tyr Trp Gly
100 105 110

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

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
130 135 140

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

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

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

Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His
195 200 205

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

Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val
225 230 235 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
245 250 255

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

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

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
290 295 300

Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305 310 315 320

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

Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

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

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser
385 390 395 400

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

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
420 425 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 38
<211> 447
<212> PRT
<213> Artificial Sequence

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

<400> 38
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
20 25 30

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

Gly Arg Ile Tyr Thr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Met Ser Lys Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

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

Arg Asp Pro Asp Gly Asp Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly
100 105 110

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

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
130 135 140

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

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala

165 170 175

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

Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His
195 200 205

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

Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val
225 230 235 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
245 250 255

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

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

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
290 295 300

Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305 310 315 320

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

Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

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

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser
385 390 395 400

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

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
420 425 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 39
<211> 447
<212> PRT
<213> Artificial Sequence

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

<400> 39

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
            20                  25                  30

Phe Trp Ser Trp Ile Arg Gln Pro Ala Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Arg Ile Tyr Thr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
    50                  55                  60

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

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
                85                  90                  95

Arg Asp Pro Asp Gly Asp Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly
            100                 105                 110

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

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
    130                 135                 140

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

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

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

Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His
        195                 200                 205

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

Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
```

245 250 255

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

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

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
290 295 300

Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305 310 315 320

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

Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

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

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser
385 390 395 400

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

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
420 425 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 40
<211> 453
<212> PRT
<213> Artificial Sequence

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

<400> 40
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

```
Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
    50                  55                  60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65                  70                  75                  80

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

Phe Cys Thr Ser Thr Tyr Ser Ser Gly Trp Tyr Val Trp Asp Tyr Tyr
            100                 105                 110

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala
        115                 120                 125

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

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

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

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

Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr
        195                 200                 205

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

Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
225                 230                 235                 240

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

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

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

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

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

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

325 330 335

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

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

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

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

Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
405 410 415

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

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

Leu Ser Pro Gly Lys
450

<210> 41
<211> 454
<212> PRT
<213> Artificial Sequence

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

<400> 41
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Asp Leu
20 25 30

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

Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe
50 55 60

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

```
Tyr Gly Met Gly Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125

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

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

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

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

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

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

Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
```

385 390 395 400

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

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

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

Ser Leu Ser Pro Gly Lys
450

<210> 42
<211> 451
<212> PRT
<213> Artificial Sequence

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

<400> 42
Gln Val Thr Leu Lys Glu Ala Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

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

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

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Val Arg Ile Ala Gly Asp Tyr Tyr Tyr Tyr Tyr Gly Met
100 105 110

Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr
115 120 125

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

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

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

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

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

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

Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Pro Gly Lys
```

450

<210> 43
<211> 450
<212> PRT
<213> Artificial Sequence

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

<400> 43

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asp Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60

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

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

Ala Arg Asp Arg Ala Ala Ala Gly Leu His Tyr Tyr Tyr Gly Met Asp
            100                 105                 110

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

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

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

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

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

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

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

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240
```

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Lys
450

<210> 44
<211> 450
<212> PRT
<213> Artificial Sequence

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

<400> 44
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Ile Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60

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

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

Ala Arg Asp Arg Ala Ala Ala Gly Leu His Tyr Tyr Tyr Gly Met Asp
            100                 105                 110

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

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

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

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

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

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

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

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

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

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

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

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300
```

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

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

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

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

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

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

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

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

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

Gly Lys
    450
```

<210> 45
<211> 450
<212> PRT
<213> Artificial Sequence

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

<400> 45

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asp Lys Tyr Tyr Gly Asp Ser Val
    50                  55                  60

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

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

Ala Arg Asp Arg Ala Ala Ala Gly Leu His Tyr Tyr Tyr Gly Met Asp
            100                 105                 110

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

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

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

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

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

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

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

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Lys
450

<210> 46
<211> 453
<212> PRT
<213> Artificial Sequence

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

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
20 25 30

Gly Tyr Asn Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Asn Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Arg Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Glu Asn Ile Val Val Ile Pro Ala Ala Ile Phe Ala Gly
100 105 110

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

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

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

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

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

Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr
        195                 200                 205

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

Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

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

Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
                405                 410                 415

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

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

Leu Ser Pro Gly Lys
450

<210> 47
<211> 448
<212> PRT
<213> Artificial Sequence

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

<400> 47
Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Ala Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asn Ala
20 25 30

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

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Glu Tyr
85 90 95

Tyr Cys Ile Thr Asp Arg Val Leu Ser Tyr Tyr Ala Met Ala 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 Cys Ser Arg Ser Thr Ser Glu Ser Thr
130 135 140

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

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

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

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

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

Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser
225                 230                 235                 240

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

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

Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
        275                 280                 285

Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val
    290                 295                 300

Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
305                 310                 315                 320

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

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

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

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

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp
385                 390                 395                 400

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

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
            420                 425                 430

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445


<210> 48
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 48
```

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

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

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

Asp Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

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

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

<210> 49
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 49
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

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

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

Asp Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

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

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

<210> 50
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 50
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Glu Ser Val
20 25 30

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

Asp Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Gly Asn Ser Asp His
85 90 95

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

<210> 51
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 51
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ile Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Gly Ser Pro
85 90 95

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

<210> 52
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 52
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ala Pro
85 90 95

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

<210> 53
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 53
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95

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

<210> 54
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 54
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95

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

<210> 55
<211> 108
<212> PRT
<213> Artificial Sequence

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

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

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln Cys Gly Ser Ser Pro
85 90 95

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

<210> 56
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 56
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Phe
85 90 95

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

<210> 57
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 57
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Tyr Tyr
20 25 30

Asn Gly Phe Thr Tyr Leu Asp Trp Phe Leu Gln Lys Pro Gly Gln Ser
35 40 45

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

50 55 60

Asp Arg Phe Ser Gly Ser Val Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ser
85 90 95

Leu Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105 110

<210> 58
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 58
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Pro
85 90 95

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

<210> 59
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 59
Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Leu
85 90 95

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

<210> 60
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 60
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1 5 10 15

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

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Asp Phe Pro Ile
85 90 95

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

<210> 61
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 61
Asp Phe Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Gln Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Pro
35 40 45

Pro His Leu Leu Ile Tyr Glu Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ser
85 90 95

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

<210> 62
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 62
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Phe Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

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

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Lys Ile
65 70 75 80

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

Leu Gln Thr Pro Cys Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 63
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 63
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Gly Ser Ser Pro
85 90 95

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

<210> 64
<211> 108
<212> PRT
<213> Artificial Sequence

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

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

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Gly Ser Ser Pro
85 90 95

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

<210> 65
<211> 108
<212> PRT

<213> Artificial Sequence

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

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

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

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Gly Ser Ser Pro
85 90 95

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

<210> 66
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 66
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

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

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

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ile Leu Leu Leu Gly Ala Tyr Tyr Tyr Tyr Gly Met Asp
100 105 110

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

<210> 67
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 67
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

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

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

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ile Leu Leu Val Gly Ala Tyr Tyr Tyr Cys Gly Met Asp
100 105 110

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

<210> 68
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 68
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
20 25 30

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

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser

50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
100 105 110

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

<210> 69
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 69
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

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

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

Leu Lys Asn Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
100 105 110

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

<210> 70
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 70

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

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

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

Ser Gly Ile Ser Gly Ser Gly Val Ser Thr His Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Lys Ser Leu Ile Val Val Ile Val Tyr Ala Leu Asp His Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 71
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 71
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Lys Ser Leu Ile Val Val Met Val Tyr Val Leu Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser

115 120

<210> 72
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 72
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Lys Ser Leu Ile Val Val Met Val Tyr Val Leu Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 73
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 73
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Lys Ser Leu Ile Val Val Ile Val Tyr Ala Leu Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 74
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 74
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
20 25 30

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

Gly Arg Ile Tyr Thr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Met Ser Lys Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

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

Arg Asp Pro Asp Gly Asp Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Ser Val Thr Val Ser Ser
115 120

<210> 75
<211> 121
<212> PRT
<213> Artificial Sequence

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

<400> 75
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
20 25 30

Phe Trp Ser Trp Ile Arg Gln Pro Ala Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Thr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

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

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Asp Pro Asp Gly Asp Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 76
<211> 127
<212> PRT
<213> Artificial Sequence

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

<400> 76
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

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

Phe Cys Thr Ser Thr Tyr Ser Ser Gly Trp Tyr Val Trp Asp Tyr Tyr
100 105 110

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 77
<211> 127
<212> PRT
<213> Artificial Sequence

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

<400> 77
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

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

Phe Cys Thr Ser Thr Tyr Ser Ser Gly Trp Tyr Val Trp Asp Tyr Tyr
100 105 110

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 78
<211> 128
<212> PRT
<213> Artificial Sequence

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

<400> 78
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Asp Leu
20 25 30

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

Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe
50 55 60

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

Tyr Gly Met Gly Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 79
<211> 125
<212> PRT
<213> Artificial Sequence

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

<400> 79
Gln Val Thr Leu Lys Glu Ala Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

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

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

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Val Arg Ile Ala Gly Asp Tyr Tyr Tyr Tyr Tyr Gly Met
100 105 110

Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 80
<211> 127
<212> PRT
<213> Artificial Sequence

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

<400> 80
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
20 25 30

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Gly Tyr Asn Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Ile Gly Asn Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65                  70                  75                  80

Ser Leu Lys Leu Arg Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85                  90                  95

Cys Ala Arg Glu Asn Ile Val Val Ile Pro Ala Ala Ile Phe Ala Gly
            100                 105                 110

Trp Phe Asp Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125
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<210> 81
<211> 122
<212> PRT
<213> Artificial Sequence

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

<400> 81

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Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Ala Lys Pro Gly Gly
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asn Ala
            20                  25                  30

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

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
    50                  55                  60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65                  70                  75                  80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Glu Tyr
                85                  90                  95

Tyr Cys Ile Thr Asp Arg Val Leu Ser Tyr Tyr Ala Met Ala Val Trp
            100                 105                 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120
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<210> 82
<211> 124
<212> PRT

<213> Artificial Sequence

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

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Ile Lys Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Arg Ala Ala Ala Gly Leu His Tyr Tyr Tyr Gly Met Asp
100 105 110

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

<210> 83
<211> 124
<212> PRT
<213> Artificial Sequence

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

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asp Lys Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Arg Ala Ala Ala Gly Leu His Tyr Tyr Tyr Gly Met Asp
100 105 110

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

<210> 84
<211> 124
<212> PRT
<213> Artificial Sequence

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

<400> 84
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asp Lys Tyr Tyr Gly Asp Ser Val
50 55 60

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

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

Ala Arg Asp Arg Ala Ala Ala Gly Leu His Tyr Tyr Tyr Gly Met Asp
100 105 110

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

<210> 85
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 85
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggtcagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtcag agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tcctggtcgt ctatgatgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggct ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gatagtagta gtgatcatgt ggtattcggc 300

ggagggacca agctgaccgt ccta 324

<210> 86
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 86
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggacagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtcaa agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tcctggtcgt ctatgatgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggct ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gataatacta gtgatcatgt ggtattcggc 300

ggggggacca aactgaccgt ccta 324

<210> 87
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 87
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggacagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtgaa agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tgctggtcgt ctatgatgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggct ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gatggtaata gtgatcatgt ggtattcggc 300

ggagggacca agctgaccgt ccta 324

<210> 88
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 88
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gaattttgac agcagttact tagcctggta ccagcagaaa 120

cctggccagg ctccccggct cctcatctat ggtacatcca gcagggccac tggcatccca 180

gacaggttca gtggcattgg gtctgggaca gacttcactc tcaccatcaa cagactggag 240

cctgaagatt ttgcaatgta ttactgtcag cagtatggtg gctcaccgct cactttcggc 300

ggagggaccg aggtggaaat caaa 324

<210> 89
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 89
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagc ggcaactact tggcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttattgtcag cagtatggta gcgcaccgct cactttcggc 300

ggagggacca aggtggaaat caaa 324

<210> 90
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 90
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagc ggcaactact tggcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacagattca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcaatgta ttattgtcag cagtatggta gctcaccgct cactttcggc 300

ggagggtcca aggtggagat caaa 324

<210> 91
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 91
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gaatttcgac agcaactact tagcctggta ccagcagaag 120

cctggccagg ctccccggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaacttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcaatgta ttactgtcag cagtatggta gttcaccgct cactttcggc 300

ggagggacca aggtggaaat caaa 324

<210> 92
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 92
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagggccacc 60

ctctcctgca gggccagtca gaattttgac agcagctcct tagcctggta ccagcagaaa 120

cctggccagg ctccccggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcaatgta ttactgtcag cagtgtggta gctcaccgct cactttcggc 300

ggagggacca aggtggaaat caaa 324

<210> 93
<211> 321
<212> DNA
<213> Artificial Sequence

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

<400> 93
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagc agtacctact tagcctggca ccagcagaaa 120

cctggccagg gtcttaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc ttaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttactgtcag cagtatggaa gctcattcac tttcggcgga 300

gggaccaggg tggagatcaa a 321

<210> 94
<211> 336
<212> DNA
<213> Artificial Sequence

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

<400> 94
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60

atctcctgca ggtctagtca gagcctcctg tattataatg gattcaccta tttggattgg 120

ttcctgcaga agccagggca gtctccacat ctcctgatct atttgggttc taatcgggcc 180

tccggggtcc ctgacaggtt cagtggcagt gtttcaggca cagattttac actgaaaatc 240

agcagagtgg aggctgagga tgttggggtt tattattgca tgcagtctct gcaaactcca 300

ttcactttcg gccctgggac caaagtggat atcaaa 336

<210> 95
<211> 321

<212> DNA
<213> Artificial Sequence

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

<400> 95
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttaac agcaacttag cctggtacca gcagaaacct 120

ggccaggctc ccaggctcct catttatggt gtatccacca gggccactgg tatcccagcc 180

aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatccgcag cctgcagtct 240

gaagattttg cagtttatta ctgtcagcag tataataact ggcctccgac gttcggccaa 300

gggaccaagg tggaaatcaa a 321

<210> 96
<211> 321
<212> DNA
<213> Artificial Sequence

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

<400> 96
gacatacagc tgacccagtc tccatcctcc ctgtctgcat ctataggaga cagagtcacc 60

atcacttgcc gggcaagtca ggacattaga tatgatttag gctggtatca gcagaaacca 120

gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccttca 180

aggttcagcg gcagtggatc tgggacagaa ttcactctca cagtcagcag cctgcagcct 240

gaagattttg caacttatta ctgtctacag cataatagtt accctctcac tttcggcgga 300

gggaccaagg tggagatcga a 321

<210> 97
<211> 321
<212> DNA
<213> Artificial Sequence

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

<400> 97
gacatccaga tgacccagtc tccctcttcc gtgtctgcat ctgtaggaga cagagtcacc 60

atcacttgtc gggcgagtca gggtattagc atctggttag cctggtatca gcagaaacct 120

gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180

aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240

gaagattttg caacttacta ttgtcaacag gctaacgatt tcccgatcac cttcggccaa 300

gggacacgac tggagattaa a 321

<210> 98
<211> 336
<212> DNA
<213> Artificial Sequence

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

<400> 98
gattttgtga tgacccagac tccactctct ctgtccgtca cccctggaca gccggcctcc 60

atctcctgca agtctagtca gagcctccta cagagtgatg gaaagaccta tttgtattgg 120

tacctgcaga agccaggcca gcctccacat ctcctgatct atgaagtttc caaccgattc 180

tctggagtgc cagataggtt cagtggcagc gggtcaggga cagatttcac actgaaaatc 240

agccgggtgg aggctgagga tgttggggtt tattactgca tgcaaagtat acagcttcct 300

cggacgttcg gccaagggac caaggtggaa atcaaa 336

<210> 99
<211> 336
<212> DNA
<213> Artificial Sequence

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

<400> 99
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60

atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaactt tttggattgg 120

tacctacaga agccagggca gtctccacag ctcctgatct atttgggttc tgatcgggcc 180

tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagagtttac actgaaaatc 240

agcagagtgg aggctgagga tgttgggctt tattactgca tgcaagctct acaaactccg 300

tgcagttttg gccaggggac caagctggag atcaaa 336

<210> 100
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 100
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagt agcacctatt tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagttta ttactgtcag cagtctggta gctcaccgct cactttcggc 300

ggagggaccg aggtggagat caaa 324

<210> 101
<211> 324
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 101
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagc agcacctact tagcctggta ccagcagaaa 120

cctggccagg ctcccagtct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaggatt ttgcagtgta ttactgtcag cagtctggta gctcacctct cactttcggc 300

ggagggacca aggtggagat caaa 324

<210> 102
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 102
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagc agcacctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcct tcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaggatt ttgcagtgta ttactgtcag cagtctggta gctcacctct cactttcggc 300

ggagggacca aggtggagat caaa 324

<210> 103
<211> 372
<212> DNA
<213> Artificial Sequence

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

<400> 103
caggtcacct tgaaggagtc tggtcctgtg ctggtgaaac ccacagagac cctcacgctg 60

acctgcaccg tctctgggtt ctcactcagc aatgctagaa tgggtgtgag ctggatccgt 120

cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180

tacagcacat ctctgaagag caggctcacc atctccaagg acacctccaa aagccaggtg 240

gtccttacca tgaccaacat ggaccctgtg gacacagcca catattactg tgcacggata 300

ttattactgg gagcttacta ctactacggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcct ca 372

<210> 104
<211> 372
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 104
caggtcacct tgaaggagtc tggtcctgtg ctggtgaaac ccacagagac cctcacgctg 60

acctgcaccg tctctgggtt ctcactcagc aatgctagaa tgggtgtgag ctggatccgt 120

cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180

tacagcacat ctctgaagag caggctcacc atctccaagg acacctccaa aagccaggtg 240

gtccttacca tgaccaacat ggaccctgtg gacacagcca catattactg tgcacggata 300

ttattagtgg gagcttacta ctactgcggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcct ca 372

<210> 105
<211> 372
<212> DNA
<213> Artificial Sequence

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

<400> 105
caggtcacct tgaaggagtc tggtcctgtg ctggtgaaac ccacagagac cctcacgctg 60

acctgcaccg tctctgggtt ctcactcaac aatgctagaa tgggtgtgag ctggatccgt 120

cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180

tacagcacat ctctgaagag caggctcacc atctccaagg acacctccaa aagccaggtg 240

gtcctaatta tgaccaacat ggaccctgtg gacacagcca catattactg tgcacggtca 300

gtagtaactg gcggctacta ctacgacggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcct ca 372

<210> 106
<211> 372
<212> DNA
<213> Artificial Sequence

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

<400> 106
caggtcacct tgaaggagtc tggtcctgtg ctggtgaaac ccacagagac cctcacgctg 60

acctgcaccg tctctgggtt ctcactcagc aatgctagaa tgggtgtgag ctggatccgt 120

cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180

tacagcacat ctctgaagaa caggctcacc atctccaagg acacctccaa aagccaggtg 240

gtccttatta tgaccaacat ggaccctgtg gacacagcca catattactg tgcacggtca 300

gtagtgactg gcggctacta ctacgacggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcct ca 372

<210> 107
<211> 363

<212> DNA
<213> Artificial Sequence

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

<400> 107
gaggtgcagc tgttggagtc tgggggaggg ttggtacagc cgggggggtc cctgagactc 60

tcctgtgcag cctctagatt cacctttagc acctatgcca tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcaggt attagtggta gtggtgtcag cacacactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaatccctc 300

attgtagtaa tagtatatgc ccttgaccac tggggccagg gaaccctggt caccgtctcc 360

tca 363

<210> 108
<211> 363
<212> DNA
<213> Artificial Sequence

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

<400> 108
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc cgggggggta cctgagactc 60

tcctgtgcag cctctggatt cacgtttagt acctatgcca tgagctgggt ccgccaggct 120

ccagggaagg gactggagtg ggtctcagct atcagtggta gtggtgttag cacatactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaatccctt 300

attgtagtaa tggtgtatgt ccttgactac tggggccagg gaaccctggt caccgtctcc 360

tca 363

<210> 109
<211> 363
<212> DNA
<213> Artificial Sequence

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

<400> 109
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc cgggggggta cctgagactc 60

tcctgtgcag cctctggatt cacgtttagc acctatgcca tgagctgggt ccgccaggct 120

ccagggaagg gactggagtg ggtctcagct attagtggca gtggtgtgag cacaaactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaatccctt 300

attgtagtaa tggtgtatgt ccttgactac tggggccagg gaaccctggt caccgtctcc 360

tca 363

<210> 110
<211> 363
<212> DNA
<213> Artificial Sequence

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

<400> 110
gaggtgcagc tgttggagtc tgggggaggg ttggtacagc cgggggggtc cctgagactc 60

tcctgtgcag cctctagatt cacctttagc acctatgcca tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcaggt attagtggta gtggtgttag cacatactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaatccctt 300

attgtagtaa tagtatatgc ccttgactac tggggccagg gaaccctggt caccgtctcc 360

tca 363

<210> 111
<211> 363
<212> DNA
<213> Artificial Sequence

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

<400> 111
caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60

acctgcactg tctctggtgg ctccatcagt agttactact ggagctggat ccggcagccc 120

gccgggaagg gactggagtg gattgggcgt atctatacca gtgggagcac caactacaac 180

ccctccctca agagtcgggt caccatgtca aaagacacgt ccaagaacca gttctccctg 240

aagctgaggt ctgtgaccgc cgcggacacg gccgtgtatt actgtgcgag agatccggac 300

ggtgactact actactacgg tatggacgtc tggggccaag ggacctcggt caccgtctcc 360

tca 363

<210> 112
<211> 363
<212> DNA
<213> Artificial Sequence

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

<400> 112
caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60

acctgcactg tctctggtgg ctccatcagt agttacttct ggagctggat ccggcagccc 120

gccgggaagg gactggagtg gattgggcgt atctatacca gtgggagcac caactacaac 180

ccctccctca agagtcgagt caccatgtca atagacacgt ccaagaacca gttctccctg 240

aagctgagtt ctgtgaccgc cgcggacacg gccgtgtatt actgtgcgag agatccggac 300

ggtgactact actactacgg tatggacgtc tggggccaag ggaccacggt caccgtctcc 360

tca 363

<210> 113
<211> 381
<212> DNA
<213> Artificial Sequence

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

<400> 113
gaggtgcagc tggtggagtc tgggggaggc ttggtaaagc ctgggggtc ccttagactc 60

tcctgtgcag cctctggatt cactttcagt gacgcctgga tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggttggccgt attaaaagca aaactgatgg tgggacaaca 180

gactacgctg cacccgtgaa aggcagattc accatctcaa gagatgattc aaaaaacact 240

ctgtatctgc aaatgaacag cctgaaaacc gaggacacag ccgtgtattt ttgtacctct 300

acgtatagca gtggctggta cgtatgggac tactacggta tggacgtctg gggccaaggg 360

accacggtca ccgtctcctc a 381

<210> 114
<211> 384
<212> DNA
<213> Artificial Sequence

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

<400> 114
caggtccagc tggtacagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60

tcctgcaagg tttcgggata caccctcact gatttatcca tgcactgggt gcgacaggct 120

cctggaaaag ggcttgagtg gatgggaggt tttgatcctg aagatggtga aacaatctac 180

gcacagaagt tccagggcag aatcaccatg accgaggaca catctacaga cacagcctac 240

atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc aagtattgta 300

gtagtcccag ctgctataca gagttactac tactactacg gtatgggcgt ctggggccaa 360

gggaccacgg tcaccgtctc ctcc 384

<210> 115
<211> 375
<212> DNA
<213> Artificial Sequence

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

<400> 115
caggtcacct tgaaggaggc tggtcctgtg ttggtgaaac ccacagagac cctcacgttg 60

acctgcaccg tctctgggtt ctcactcagc aatgctagaa tgggtgtgaa ctggatccgt 120

cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180

tacagcacat ctctgaagag caggctcacc atctccaagg acacctccaa aagccaggtg 240

gtccttacca tgaccaacat ggaccctgtg gacacagcca catattactg tgcacgggtt 300

cgtatagcag gtgattacta ctactactac ggtatggacg tctggggcca agggaccacg 360

gtcaccgtct cctca 375

<210> 116
<211> 381
<212> DNA
<213> Artificial Sequence

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

<400> 116
caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcacagac cctgtccctc 60

acctgcactg tctctggtgg ctccatcagc agtggtggtt acaactggag ctggatccgc 120

cagcacccag ggaagggcct ggagtggatt gggaacatct attacagtgg gagcacctac 180

tacaacccgt ccctcaagag tcgagttacc atatcagtag acacgtctaa gaaccagttc 240

tccctgaagc tgagatctgt gactgccgcg gacacggccg tgtattactg tgcgagagag 300

aatattgtag taataccagc tgctatattc gcgggttggt tcgacccctg gggccaggga 360

accctggtca ccgtctcctc a 381

<210> 117
<211> 366
<212> DNA
<213> Artificial Sequence

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

<400> 117
gaggtgcacc tggtggagtc tgggggaggc ttggcaaagc ctgggggtc ccttagactc 60

tcctgtgcag cctctggatt cactttcaga aacgcctgga tgagctgggt ccgccaggct 120

ccaggaaagg ggctggaatg ggttggccgt attaaaagca aaactgatgg tgggacaaca 180

gactacgctg cacccgtgaa aggcagattc accatctcga gagatgattc aaaaaacacg 240

ctgtatctgc aaatgaacag cctgaaaacc gaggacacag ccgagtatta ctgtatcaca 300

gatcgggtgc taagctacta cgctatggcc gtctggggcc aagggaccac ggtcaccgtc 360

tcctca 366

<210> 118
<211> 372
<212> DNA
<213> Artificial Sequence

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

<400> 118
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60

tcctgtgcag cgtctggatt caccttcagt aactatggca ttcactgggt ccgccaggct 120

ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtat taaatactat 180

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatagg 300

gcagcagctg gtctccacta ctactacggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcct ca 372

<210> 119
<211> 372
<212> DNA
<213> Artificial Sequence

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

<400> 119
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60

tcctgtgcag cgtctggatt caccttcagt agctatggca tccactgggt ccgccaggct 120

ccaggcaagg ggctggaatg ggtggcagtt atatggtatg atggaagtga taaatactat 180

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240

ctacaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatagg 300

gcagcagctg gtctccacta ttattacggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcct ca 372

<210> 120
<211> 372
<212> DNA
<213> Artificial Sequence

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

<400> 120
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60

tcctgtgcag tgtctggatt caccttcagt agctatggca tccactgggt ccgccaggct 120

ccaggcaagg ggctggaatg ggtggcagtt atatggtatg atggaagtga taaatactat 180

ggagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240

ctacaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatagg 300

gcagcagctg gtctccacta ttattacggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcct ca 372

<210> 121
<211> 5
<212> PRT
<213> Artificial Sequence

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

peptide

<400> 121
Asp Leu Ser Met His
1 5

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

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

<400> 122
Asn Ala Arg Met Gly Val Ser
1 5

<210> 123
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 123
Asp Ala Trp Met Ser
1 5

<210> 124
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 124
Thr Tyr Ala Met Ser
1 5

<210> 125
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 125
Ser Tyr Phe Trp Ser
1 5

<210> 126
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 126
Asn Ala Arg Met Gly Val Asn
1 5

<210> 127
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 127
Asn Ala Trp Met Ser
1 5

<210> 128
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 128
Ser Tyr Gly Ile His
1 5

<210> 129
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 129
Asn Tyr Gly Ile His
1 5

<210> 130
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 130
Ser Gly Gly Tyr Asn Trp Ser
1 5

<210> 131
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 131
Ser Tyr Tyr Trp Ser
1 5

<210> 132
<211> 17
<212> PRT
<213> Artificial Sequence

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

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

Gly

<210> 133
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 133
His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser Leu Lys Ser
1 5 10 15

<210> 134
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 134
His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser Leu Lys Asn
1 5 10 15

<210> 135
<211> 19
<212> PRT
<213> Artificial Sequence

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

<400> 135
Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro
1 5 10 15

Val Lys Gly

<210> 136
<211> 17

<212> PRT
<213> Artificial Sequence

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

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

Gly

<210> 137
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 137
Gly Ile Ser Gly Ser Gly Val Ser Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 138
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 138
Ala Ile Ser Gly Ser Gly Val Ser Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 139
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 139
Ala Ile Ser Gly Ser Gly Val Ser Thr Asn Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 140

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

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

<400> 140
Arg Ile Tyr Thr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 141
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 141
Val Ile Trp Tyr Asp Gly Ser Asp Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 142
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 142
Val Ile Trp Tyr Asp Gly Ser Ile Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 143
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 143
Val Ile Trp Tyr Asp Gly Ser Asp Lys Tyr Tyr Gly Asp Ser Val Lys
1 5 10 15

Gly

<210> 144
<211> 16
<212> PRT
<213> Artificial Sequence

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

<400> 144
Asn Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 145
<211> 19
<212> PRT
<213> Artificial Sequence

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

<400> 145
Ile Val Val Val Pro Ala Ala Ile Gln Ser Tyr Tyr Tyr Tyr Tyr Gly
1 5 10 15

Met Gly Val

<210> 146
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 146
Ile Leu Leu Leu Gly Ala Tyr Tyr Tyr Tyr Gly Met Asp Val
1 5 10

<210> 147
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 147
Ile Leu Leu Val Gly Ala Tyr Tyr Tyr Cys Gly Met Asp Val
1 5 10

<210> 148
<211> 14
<212> PRT
<213> Artificial Sequence

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

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

<210> 149

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

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

<400> 149
Thr Tyr Ser Ser Gly Trp Tyr Val Trp Asp Tyr Tyr Gly Met Asp Val
1 5 10 15

<210> 150
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 150
Ser Leu Ile Val Val Ile Val Tyr Ala Leu Asp His
1 5 10

<210> 151
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 151
Ser Leu Ile Val Val Ile Val Tyr Ala Leu Asp Tyr
1 5 10

<210> 152
<211> 12
<212> PRT
<213> Artificial Sequence

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

<400> 152
Ser Leu Ile Val Val Met Val Tyr Val Leu Asp Tyr
1 5 10

<210> 153
<211> 13
<212> PRT
<213> Artificial Sequence

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

<400> 153
Asp Pro Asp Gly Asp Tyr Tyr Tyr Tyr Gly Met Asp Val
1 5 10

<210> 154
<211> 15

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 154
Val Arg Ile Ala Gly Asp Tyr Tyr Tyr Tyr Tyr Gly Met Asp Val
1 5 10 15

<210> 155
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 155
Asp Arg Val Leu Ser Tyr Tyr Ala Met Ala Val
1 5 10

<210> 156
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 156
Asp Arg Ala Ala Ala Gly Leu His Tyr Tyr Tyr Gly Met Asp Val
1 5 10 15

<210> 157
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 157
Glu Asn Ile Val Val Ile Pro Ala Ala Ile Phe Ala Gly Trp Phe Asp
1 5 10 15

Pro

<210> 158
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 158
Arg Ala Ser Gln Asp Ile Arg Tyr Asp Leu Gly
1 5 10

<210> 159
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 159
Arg Ser Ser Gln Ser Leu Leu Tyr Tyr Asn Gly Phe Thr Tyr Leu Asp
1 5 10 15

<210> 160
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 160
Arg Ala Ser Gln Asn Phe Asp Ser Ser Ser Leu Ala
1 5 10

<210> 161
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 161
Arg Ala Ser Gln Asn Phe Asp Ser Ser Tyr Leu Ala
1 5 10

<210> 162
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 162
Arg Ala Ser Gln Ser Val Ser Gly Asn Tyr Leu Ala
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<400> 163
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1 5 10

<210> 164
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Arg Ala Ser Gln Asn Phe Asp Ser Asn Tyr Leu Ala
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<210> 165
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1 5 10

<210> 166
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<400> 166
Gly Gly Asn Asn Ile Gly Ser Glu Ser Val His
1 5 10

<210> 167
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Gly Gly Asn Asn Ile Gly Ser Gln Ser Val His
1 5 10

<210> 168
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<210> 169

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<400> 170
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<210> 172
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<210> 173
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<210> 174
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<210> 175
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<220>
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<210> 176
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<210> 177
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<210> 178
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<210> 179
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<210> 180
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1 5 10

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1 5 10

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1 5

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<210> 194
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gacgcctgga tgagc 15

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acctatgcca tgagc 15

<210> 199
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agttacttct ggagc 15

<210> 200
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<220>
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<210> 201
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oligonucleotide

<400> 201
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<210> 202
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<210> 203
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<210> 204
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<400> 204
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<210> 205
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<400> 205
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<210> 206
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<220>
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<400> 206
cacatttttt cgaatgacga aaaatcctac agcacatctc tgaagagc 48

<210> 207
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<210> 208
<211> 57
<212> DNA
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<220>
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oligonucleotide

<400> 208
cgtattaaaa gcaaaactga tggtgggaca acagactacg ctgcacccgt gaaaggc 57

<210> 209
<211> 51
<212> DNA
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<220>
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<400> 209
ggtattagtg gtagtggtgt cagcacacac tacgcagact ccgtgaaggg c 51

<210> 210
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<220>
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oligonucleotide

<400> 210

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<210> 211
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<212> DNA
<213> Artificial Sequence

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<400> 211
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<210> 212
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 212
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<210> 213
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 213
cgtatctata ccagtgggag caccaactac aacccctccc tcaagagt 48

<210> 214
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 214
gttatatggt atgatggaag tgataaatac tatgcagact ccgtgaaggg c 51

<210> 215
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
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<400> 215
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<210> 216
<211> 51
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<400> 216
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<210> 217
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<212> DNA
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oligonucleotide

<400> 217
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<210> 218
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<212> DNA
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<400> 218
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<210> 219
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<212> DNA
<213> Artificial Sequence

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<400> 219
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<210> 220
<211> 42
<212> DNA
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oligonucleotide

<400> 220
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<210> 221
<211> 42
<212> DNA
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<220>
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oligonucleotide

<400> 221
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<210> 222
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
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<400> 222
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<210> 223
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<220>
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<400> 223
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<210> 224
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<400> 224
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<210> 225
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<212> DNA
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<220>
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<400> 225
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<210> 226
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<212> DNA
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<220>
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<400> 226
gatccggacg gtgactacta ctactacggt atggacgtc 39

<210> 227
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<212> DNA
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<220>
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oligonucleotide

<400> 227
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<210> 228
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<220>
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oligonucleotide

<400> 228
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<210> 229
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oligonucleotide

<400> 229
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<210> 230
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<210> 231
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oligonucleotide

<400> 231
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<210> 232
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<212> DNA
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<220>
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oligonucleotide

<400> 232
aggtctagtc agagcctcct gtattataat ggattcacct atttggat 48

<210> 233
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oligonucleotide

<400> 233
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<210> 234
<211> 36
<212> DNA
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<220>
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oligonucleotide

<400> 234
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<210> 235
<211> 36
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oligonucleotide

<400> 235
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<210> 236
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oligonucleotide

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<210> 237
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oligonucleotide

<400> 237
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<210> 238

<211> 33
<212> DNA
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oligonucleotide

<400> 238
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<210> 239
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oligonucleotide

<400> 239
gggggaaaca acattggaag tgaaagtgtg cac 33

<210> 240
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oligonucleotide

<400> 240
gggggaaaca acattggaag tcaaagtgtg cac 33

<210> 241
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oligonucleotide

<400> 241
cgggcgagtc agggtattag catctggtta gcc 33

<210> 242
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oligonucleotide

<400> 242
aagtctagtc agagcctcct acagagtgat ggaaagacct atttgtat 48

<210> 243
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oligonucleotide

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aggtctagtc agagcctcct gcatagtaat ggatacaact ttttggat 48

<210> 244
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<220>
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<400> 244
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<210> 245
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<220>
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<400> 245
ttgggttcta atcgggcctc c 21

<210> 246
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<220>
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<400> 246
ggtgcatcca gcagggccac t 21

<210> 247
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<400> 247
ggtacatcca gcagggccac t 21

<210> 248
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<220>
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<400> 248
ggtgtatcca ccagggccac t 21

<210> 249
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<220>
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oligonucleotide

<400> 249
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<210> 250
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<220>
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oligonucleotide

<400> 250
gaagtttcca accgattctc t 21

<210> 251
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oligonucleotide

<400> 251
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<210> 252
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oligonucleotide

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<210> 253
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oligonucleotide

<400> 253
atgcagtctc tgcaaactcc attcact 27

<210> 254
<211> 27
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<220>

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oligonucleotide

<400> 254
cagcagtgtg gtagctcacc gctcact 27

<210> 255
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oligonucleotide

<400> 255
cagcagtatg gtggctcacc gctcact 27

<210> 256
<211> 27
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oligonucleotide

<400> 256
cagcagtatg gtagcgcacc gctcact 27

<210> 257
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oligonucleotide

<400> 257
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<210> 258
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oligonucleotide

<400> 258
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<210> 259
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oligonucleotide

<400> 259
cagcagtata ataactggcc tccgacg 27

<210> 260
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oligonucleotide

<400> 260
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<210> 261
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oligonucleotide

<400> 261
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<210> 262
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oligonucleotide

<400> 262
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oligonucleotide

<400> 263
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<210> 264
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oligonucleotide

<400> 264
atgcaaagta tacagcttcc tcggacg 27

<210> 265
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oligonucleotide

<400> 265
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<210> 266
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<220>
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oligonucleotide

<400> 266
cagcagtctg gtagctcacc tctcact 27

<210> 267
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<220>
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peptide

<400> 267
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1 5

<210> 268
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peptide

<400> 268
Met Gln Ser Leu Gln Thr Pro Phe Thr
1 5

<210> 269
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peptide

<400> 269
Gln Gln Tyr Asn Asn Trp Pro Pro Thr
1 5

<210> 270
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peptide

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1 5

<210> 271
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<400> 271
Gln Gln Ala Asn Asp Phe Pro Ile Thr
1 5

<210> 272
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 272
Met Gln Ala Leu Gln Thr Pro Cys Ser
1 5

<210> 273
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 273
Gln Val Trp Asp Gly Asn Ser Asp His Val Val
1 5 10

<210> 274
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 274
Gln Val Trp Asp Asn Thr Ser Asp His Val Val
1 5 10

<210> 275
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 275
Gln Val Trp Asp Ser Ser Ser Asp His Val Val
1 5 10

<210> 276
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Gly, Ser or Asn

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Ser, Thr or Asn

<400> 276
Gln Val Trp Asp Xaa Xaa Ser Asp His Val Val
1 5 10

<210> 277
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 277
Gln Gln Cys Gly Ser Ser Pro Leu Thr
1 5

<210> 278
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 278
Gln Gln Tyr Gly Gly Ser Pro Leu Thr
1 5

<210> 279
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 279
Gln Gln Tyr Gly Ser Ala Pro Leu Thr
1 5

<210> 280
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 280
Gln Gln Tyr Gly Ser Ser Phe Thr
1 5

<210> 281
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 281
Gln Gln Tyr Gly Ser Ser Pro Leu Thr
1 5

<210> 282
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 282
Gln Gln Ser Gly Ser Ser Pro Leu Thr
1 5

<210> 283
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Cys, Tyr or Ser

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Ser or Gly

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Ser or Ala

<220>
<221> MOD_RES
<222> (7)..(7)

<223> Pro or Phe

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Leu or absent

<400> 283
Gln Gln Xaa Gly Xaa Xaa Xaa Xaa Thr
1   5

<210> 284
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 284
Ala Ala Ser Ser Leu Gln Ser
1   5

<210> 285
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 285
Gly Val Ser Thr Arg Ala Thr
1   5

<210> 286
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 286
Asp Asp Ser Asp Arg Pro Ser
1   5

<210> 287
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 287
Glu Val Ser Asn Arg Phe Ser
1   5

<210> 288
<211> 7
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 288
Leu Gly Ser Asn Arg Ala Ser
1 5

<210> 289
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 289
Leu Gly Ser Asp Arg Ala Ser
1 5

<210> 290
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Asn or Asp

<400> 290
Leu Gly Ser Xaa Arg Ala Ser
1 5

<210> 291
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 291
Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 292
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 292
Gly Thr Ser Ser Arg Ala Thr
1 5

<210> 293
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 293
Gly Ala Ser Phe Arg Ala Thr
1 5

<210> 294
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Ala or Thr

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Ser or Phe

<400> 294
Gly Xaa Ser Xaa Arg Ala Thr
1 5

<210> 295
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 295
Arg Ala Ser Gln Ser Val Asn Ser Asn Leu Ala
1 5 10

<210> 296
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 296
Arg Ala Ser Gln Asp Ile Arg Tyr Asp Leu Gly
1 5 10

<210> 297
<211> 11

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 297
Arg Ala Ser Gln Gly Ile Ser Ile Trp Leu Ala
1 5 10

<210> 298
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 298
Lys Ser Ser Gln Ser Leu Leu Gln Ser Asp Gly Lys Thr Tyr Leu Tyr
1 5 10 15

<210> 299
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 299
Arg Ala Ser Gln Asn Phe Asp Ser Ser Ser Leu Ala
1 5 10

<210> 300
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 300
Arg Ala Ser Gln Asn Phe Asp Ser Ser Tyr Leu Ala
1 5 10

<210> 301
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 301
Arg Ala Ser Gln Ser Val Ser Gly Asn Tyr Leu Ala
1 5 10

<210> 302
<211> 12
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 302
Arg Ala Ser Gln Ser Val Ser Gly Thr Tyr Leu Ala
1 5 10

<210> 303
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 303
Arg Ala Ser Gln Asn Phe Asp Ser Asn Tyr Leu Ala
1 5 10

<210> 304
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Asn or Ser

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Val or Phe

<220>
<221> MOD_RES
<222> (7)..(7)
<223> Asp or Ser

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Gly or Ser

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Ser, Asn or Thr

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Ser or Tyr

<400> 304
Arg Ala Ser Gln Xaa Xaa Xaa Xaa Xaa Xaa Leu Ala
1 5 10

<210> 305

<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 305
Gly Gly Asn Asn Ile Gly Ser Glu Ser Val His
1 5 10

<210> 306
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 306
Gly Gly Asn Asn Ile Gly Ser Gln Ser Val His
1 5 10

<210> 307
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Glu or Gln

<400> 307
Gly Gly Asn Asn Ile Gly Ser Xaa Ser Val His
1 5 10

<210> 308
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 308
Arg Ser Ser Gln Ser Leu Leu Tyr Tyr Asn Gly Phe Thr Tyr Leu Asp
1 5 10 15

<210> 309
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 309

Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Phe Leu Asp
1 5 10 15

<210> 310
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Tyr or His

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Tyr or Ser

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Phe or Tyr

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Thr or Asn

<220>
<221> MOD_RES
<222> (14)..(14)
<223> Tyr or Phe

<400> 310
Arg Ser Ser Gln Ser Leu Leu Xaa Xaa Asn Gly Xaa Xaa Xaa Leu Asp
1 5 10 15

<210> 311
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 311
Ile Val Val Val Pro Ala Ala Ile Gln Ser Tyr Tyr Tyr Tyr Tyr Gly
1 5 10 15

Met Gly Val

<210> 312
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 312
Asp Pro Asp Gly Asp Tyr Tyr Tyr Tyr Gly Met Asp Val
1 5 10

<210> 313
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 313
Thr Tyr Ser Ser Gly Trp Tyr Val Trp Asp Tyr Tyr Gly Met Asp Val
1 5 10 15

<210> 314
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 314
Asp Arg Val Leu Ser Tyr Tyr Ala Met Ala Val
1 5 10

<210> 315
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 315
Val Arg Ile Ala Gly Asp Tyr Tyr Tyr Tyr Tyr Gly Met Asp Val
1 5 10 15

<210> 316
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 316
Glu Asn Ile Val Val Ile Pro Ala Ala Ile Phe Ala Gly Trp Phe Asp
1 5 10 15

Pro

<210> 317
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 317
Asp Arg Ala Ala Ala Gly Leu His Tyr Tyr Tyr Gly Met Asp Val
1 5 10 15

<210> 318
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 318
Ile Leu Leu Leu Gly Ala Tyr Tyr Tyr Tyr Gly Met Asp Val
1 5 10

<210> 319
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 319
Ile Leu Leu Val Gly Ala Tyr Tyr Tyr Cys Gly Met Asp Val
1 5 10

<210> 320
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 320
Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp Val
1 5 10

<210> 321
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 321
Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp Val
1 5 10

<210> 322
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Ile, Val or Ser

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Leu or Val

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Leu, Thr or Val

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Leu, Val, Gly or Thr

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Ala, Gly or absent

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Tyr, Cys or Asp

<400> 322
Xaa Xaa Xaa Xaa Gly Xaa Tyr Tyr Tyr Xaa Gly Met Asp Val
1 5 10

<210> 323
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 323
Ser Leu Ile Val Val Ile Val Tyr Ala Leu Asp His
1 5 10

<210> 324
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 324
Ser Leu Ile Val Val Ile Val Tyr Ala Leu Asp Tyr
1 5 10

<210> 325
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 325
Ser Leu Ile Val Val Met Val Tyr Val Leu Asp Tyr
1 5 10

<210> 326
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Ile or Met

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Ala or Val

<220>
<221> MOD_RES
<222> (12)..(12)
<223> His or Tyr

<400> 326
Ser Leu Ile Val Val Xaa Val Tyr Xaa Leu Asp Xaa
1 5 10

<210> 327
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 327
Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 328
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 328
Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro
1 5 10 15

Val Lys Gly

<210> 329
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 329
Arg Ile Tyr Thr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 330
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 330
Arg Ile Lys Ser Lys Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro Val
1 5 10 15

Lys Gly

<210> 331
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 331
His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser Leu Lys Ser
1 5 10 15

<210> 332
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 332
His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser Leu Lys Asn
1 5 10 15

<210> 333
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

peptide

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser or Asn

<400> 333
His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser Leu Lys Xaa
1 5 10 15

<210> 334
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 334
Gly Ile Ser Gly Ser Gly Val Ser Thr His Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 335
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 335
Gly Ile Ser Gly Ser Gly Val Ser Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 336
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 336
Ala Ile Ser Gly Ser Gly Val Ser Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 337
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 337
Ala Ile Ser Gly Ser Gly Val Ser Thr Asn Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 338
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Gly or Ala

<220>
<221> MOD_RES
<222> (10)..(10)
<223> His, Tyr or Asn

<400> 338
Xaa Ile Ser Gly Ser Gly Val Ser Thr Xaa Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 339
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 339
Val Ile Trp Tyr Asp Gly Ser Asp Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 340
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 340

Val Ile Trp Tyr Asp Gly Ser Ile Lys Tyr Tyr Gly Asp Ser Val Lys
1 5 10 15

Gly

<210> 341
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Asp or Ile

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Ala or Gly

<400> 341
Val Ile Trp Tyr Asp Gly Ser Xaa Lys Tyr Tyr Xaa Asp Ser Val Lys
1 5 10 15

Gly

<210> 342
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 342
Asn Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 343
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 343
Arg Ile Tyr Thr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 344
<211> 16
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Asn or Arg

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Tyr or Thr

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Tyr or Asn

<400> 344
Xaa Ile Tyr Xaa Ser Gly Ser Thr Xaa Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 345
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 345
Asp Leu Ser Met His
1 5

<210> 346
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 346
Asp Ala Trp Met Ser
1 5

<210> 347
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 347
Thr Tyr Ala Met Ser
1 5

<210> 348
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 348
Ser Tyr Phe Trp Ser
1 5

<210> 349
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 349
Ser Gly Gly Tyr Asn Trp Ser
1 5

<210> 350
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 350
Asn Ala Arg Met Gly Val Ser
1 5

<210> 351
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 351
Asn Ala Arg Met Gly Val Asn
1 5

<210> 352
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (7)..(7)
<223> Ser or Asn

<400> 352
Asn Ala Arg Met Gly Val Xaa
1 5

<210> 353
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 353
Ser Tyr Gly Ile His
1 5

<210> 354
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 354
Asn Tyr Gly Ile His
1 5

<210> 355
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Ser or Asn

<400> 355
Xaa Tyr Gly Ile His
1 5

<210> 356
<211> 822
<212> PRT
<213> Homo sapiens

<400> 356
Met Trp Ser Trp Lys Cys Leu Leu Phe Trp Ala Val Leu Val Thr Ala
1 5 10 15

Thr Leu Cys Thr Ala Arg Pro Ser Pro Thr Leu Pro Glu Gln Ala Gln
20 25 30

Pro Trp Gly Ala Pro Val Glu Val Glu Ser Phe Leu Val His Pro Gly
35 40 45

Asp Leu Leu Gln Leu Arg Cys Arg Leu Arg Asp Asp Val Gln Ser Ile
50 55 60

Asn Trp Leu Arg Asp Gly Val Gln Leu Ala Glu Ser Asn Arg Thr Arg

65 70 75 80

Ile Thr Gly Glu Glu Val Glu Val Gln Asp Ser Val Pro Ala Asp Ser
85 90 95

Gly Leu Tyr Ala Cys Val Thr Ser Ser Pro Ser Gly Ser Asp Thr Thr
100 105 110

Tyr Phe Ser Val Asn Val Ser Asp Ala Leu Pro Ser Ser Glu Asp Asp
115 120 125

Asp Asp Asp Asp Asp Ser Ser Ser Glu Glu Lys Glu Thr Asp Asn Thr
130 135 140

Lys Pro Asn Arg Met Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys
145 150 155 160

Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe
165 170 175

Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys
180 185 190

Asn Gly Lys Glu Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val
195 200 205

Arg Tyr Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp
210 215 220

Lys Gly Asn Tyr Thr Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn
225 230 235 240

His Thr Tyr Gln Leu Asp Val Val Glu Arg Ser Pro His Arg Pro Ile
245 250 255

Leu Gln Ala Gly Leu Pro Ala Asn Lys Thr Val Ala Leu Gly Ser Asn
260 265 270

Val Glu Phe Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln
275 280 285

Trp Leu Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn
290 295 300

Leu Pro Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp
305 310 315 320

Lys Glu Met Glu Val Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala
325 330 335

Gly Glu Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Leu Ser His His
340 345 350

```
Ser Ala Trp Leu Thr Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val
        355                 360                 365

Met Thr Ser Pro Leu Tyr Leu Glu Ile Ile Ile Tyr Cys Thr Gly Ala
    370                 375                 380

Phe Leu Ile Ser Cys Met Val Gly Ser Val Ile Val Tyr Lys Met Lys
385                 390                 395                 400

Ser Gly Thr Lys Lys Ser Asp Phe His Ser Gln Met Ala Val His Lys
                405                 410                 415

Leu Ala Lys Ser Ile Pro Leu Arg Arg Gln Val Thr Val Ser Ala Asp
            420                 425                 430

Ser Ser Ala Ser Met Asn Ser Gly Val Leu Leu Val Arg Pro Ser Arg
        435                 440                 445

Leu Ser Ser Ser Gly Thr Pro Met Leu Ala Gly Val Ser Glu Tyr Glu
    450                 455                 460

Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu
465                 470                 475                 480

Gly Lys Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu
                485                 490                 495

Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala
            500                 505                 510

Val Lys Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu
        515                 520                 525

Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile
    530                 535                 540

Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile
545                 550                 555                 560

Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg
                565                 570                 575

Arg Pro Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu
            580                 585                 590

Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala
        595                 600                 605

Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu
    610                 615                 620

Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala
625                 630                 635                 640
```

```
Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys
                645                 650                 655

Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu
            660                 665                 670

Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val
        675                 680                 685

Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val
    690                 695                 700

Pro Val Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp
705                 710                 715                 720

Lys Pro Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys
                725                 730                 735

Trp His Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu
            740                 745                 750

Asp Leu Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu Tyr Leu Asp
        755                 760                 765

Leu Ser Met Pro Leu Asp Gln Tyr Ser Pro Ser Phe Pro Asp Thr Arg
    770                 775                 780

Ser Ser Thr Cys Ser Ser Gly Glu Asp Ser Val Phe Ser His Glu Pro
785                 790                 795                 800

Leu Pro Glu Glu Pro Cys Leu Pro Arg His Pro Ala Gln Leu Ala Asn
                805                 810                 815

Gly Gly Leu Lys Arg Arg
            820


<210> 357
<211> 822
<212> PRT
<213> Mus musculus

<400> 357
Met Trp Gly Trp Lys Cys Leu Leu Phe Trp Ala Val Leu Val Thr Ala
1               5                   10                  15

Thr Leu Cys Thr Ala Arg Pro Ala Pro Thr Leu Pro Glu Gln Ala Gln
            20                  25                  30

Pro Trp Gly Val Pro Val Glu Val Glu Ser Leu Leu Val His Pro Gly
        35                  40                  45

Asp Leu Leu Gln Leu Arg Cys Arg Leu Arg Asp Asp Val Gln Ser Ile
    50                  55                  60
```

```
Asn Trp Leu Arg Asp Gly Val Gln Leu Val Glu Ser Asn Arg Thr Arg
65                  70                  75                  80

Ile Thr Gly Glu Glu Val Glu Val Arg Asp Ser Ile Pro Ala Asp Ser
                85                  90                  95

Gly Leu Tyr Ala Cys Val Thr Ser Ser Pro Ser Gly Ser Asp Thr Thr
            100                 105                 110

Tyr Phe Ser Val Asn Val Ser Asp Ala Leu Pro Ser Ser Glu Asp Asp
        115                 120                 125

Asp Asp Asp Asp Asp Ser Ser Ser Glu Glu Lys Glu Thr Asp Asn Thr
    130                 135                 140

Lys Pro Asn Arg Arg Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys
145                 150                 155                 160

Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe
                165                 170                 175

Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys
            180                 185                 190

Asn Gly Lys Glu Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val
        195                 200                 205

Arg Tyr Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp
    210                 215                 220

Lys Gly Asn Tyr Thr Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn
225                 230                 235                 240

His Thr Tyr Gln Leu Asp Val Val Glu Arg Ser Pro His Arg Pro Ile
                245                 250                 255

Leu Gln Ala Gly Leu Pro Ala Asn Lys Thr Val Ala Leu Gly Ser Asn
            260                 265                 270

Val Glu Phe Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln
        275                 280                 285

Trp Leu Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn
    290                 295                 300

Leu Pro Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp
305                 310                 315                 320

Lys Glu Met Glu Val Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala
                325                 330                 335

Gly Glu Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Leu Ser His His
            340                 345                 350
```

```
Ser Ala Trp Leu Thr Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val
        355                 360                 365

Met Thr Ser Pro Leu Tyr Leu Glu Ile Ile Ile Tyr Cys Thr Gly Ala
    370                 375                 380

Phe Leu Ile Ser Cys Met Leu Gly Ser Val Ile Ile Tyr Lys Met Lys
385                 390                 395                 400

Ser Gly Thr Lys Lys Ser Asp Phe His Ser Gln Met Ala Val His Lys
                405                 410                 415

Leu Ala Lys Ser Ile Pro Leu Arg Arg Gln Val Thr Val Ser Ala Asp
            420                 425                 430

Ser Ser Ala Ser Met Asn Ser Gly Val Leu Leu Val Arg Pro Ser Arg
        435                 440                 445

Leu Ser Ser Ser Gly Thr Pro Met Leu Ala Gly Val Ser Glu Tyr Glu
    450                 455                 460

Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu
465                 470                 475                 480

Gly Lys Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu
                485                 490                 495

Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala
            500                 505                 510

Val Lys Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu
        515                 520                 525

Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile
    530                 535                 540

Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile
545                 550                 555                 560

Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg
                565                 570                 575

Arg Pro Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu
            580                 585                 590

Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala
        595                 600                 605

Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu
    610                 615                 620

Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala
625                 630                 635                 640
```

```
Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys
                645                 650                 655

Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu
            660                 665                 670

Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val
        675                 680                 685

Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val
    690                 695                 700

Pro Val Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp
705                 710                 715                 720

Lys Pro Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys
                725                 730                 735

Trp His Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu
            740                 745                 750

Asp Leu Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu Tyr Leu Asp
        755                 760                 765

Leu Ser Ile Pro Leu Asp Gln Tyr Ser Pro Ser Phe Pro Asp Thr Arg
    770                 775                 780

Ser Ser Thr Cys Ser Ser Gly Glu Asp Ser Val Phe Ser His Glu Pro
785                 790                 795                 800

Leu Pro Glu Glu Pro Cys Leu Pro Arg His Pro Thr Gln Leu Ala Asn
                805                 810                 815

Ser Gly Leu Lys Arg Arg
            820


<210> 358
<211> 822
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      consensus sequence


<220>
<221> MOD_RES
<222> (3)..(3)
<223> Ser or Gly

<220>
<221> MOD_RES
<222> (36)..(36)
<223> Ala or Val

<220>
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<221> MOD_RES
<222> (43)..(43)
<223> Phe or Leu

<220>
<221> MOD_RES
<222> (74)..(74)
<223> Ala or Val

<220>
<221> MOD_RES
<222> (89)..(89)
<223> Gln or Arg

<220>
<221> MOD_RES
<222> (149)..(149)
<223> Met or Arg

<220>
<221> MOD_RES
<222> (812)..(812)
<223> Ala or Thr

<220>
<221> MOD_RES
<222> (817)..(817)
<223> Gly or Ser

<400> 358
Met Trp Xaa Trp Lys Cys Leu Leu Phe Trp Ala Val Leu Val Thr Ala
1 5 10 15

Thr Leu Cys Thr Ala Arg Pro Ala Pro Thr Leu Pro Glu Gln Ala Gln
20 25 30

Pro Trp Gly Xaa Pro Val Glu Val Glu Ser Xaa Leu Val His Pro Gly
35 40 45

Asp Leu Leu Gln Leu Arg Cys Arg Leu Arg Asp Asp Val Gln Ser Ile
50 55 60

Asn Trp Leu Arg Asp Gly Val Gln Leu Xaa Glu Ser Asn Arg Thr Arg
65 70 75 80

Ile Thr Gly Glu Glu Val Glu Val Xaa Asp Ser Ile Pro Ala Asp Ser
85 90 95

Gly Leu Tyr Ala Cys Val Thr Ser Ser Pro Ser Gly Ser Asp Thr Thr
100 105 110

Tyr Phe Ser Val Asn Val Ser Asp Ala Leu Pro Ser Ser Glu Asp Asp
115 120 125

Asp Asp Asp Asp Asp Ser Ser Ser Glu Glu Lys Glu Thr Asp Asn Thr
130 135 140

Lys Pro Asn Arg Xaa Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys
145 150 155 160

Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe

165 170 175

Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys
180 185 190

Asn Gly Lys Glu Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val
195 200 205

Arg Tyr Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp
210 215 220

Lys Gly Asn Tyr Thr Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn
225 230 235 240

His Thr Tyr Gln Leu Asp Val Val Glu Arg Ser Pro His Arg Pro Ile
245 250 255

Leu Gln Ala Gly Leu Pro Ala Asn Lys Thr Val Ala Leu Gly Ser Asn
260 265 270

Val Glu Phe Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln
275 280 285

Trp Leu Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn
290 295 300

Leu Pro Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp
305 310 315 320

Lys Glu Met Glu Val Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala
325 330 335

Gly Glu Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Leu Ser His His
340 345 350

Ser Ala Trp Leu Thr Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val
355 360 365

Met Thr Ser Pro Leu Tyr Leu Glu Ile Ile Ile Tyr Cys Thr Gly Ala
370 375 380

Phe Leu Ile Ser Cys Met Leu Gly Ser Val Ile Ile Tyr Lys Met Lys
385 390 395 400

Ser Gly Thr Lys Lys Ser Asp Phe His Ser Gln Met Ala Val His Lys
405 410 415

Leu Ala Lys Ser Ile Pro Leu Arg Arg Gln Val Thr Val Ser Ala Asp
420 425 430

Ser Ser Ala Ser Met Asn Ser Gly Val Leu Leu Val Arg Pro Ser Arg
435 440 445

```
Leu Ser Ser Ser Gly Thr Pro Met Leu Ala Gly Val Ser Glu Tyr Glu
    450                 455                 460

Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu
465                 470                 475                 480

Gly Lys Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu
                485                 490                 495

Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala
            500                 505                 510

Val Lys Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu
        515                 520                 525

Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile
    530                 535                 540

Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile
545                 550                 555                 560

Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg
                565                 570                 575

Arg Pro Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu
            580                 585                 590

Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala
        595                 600                 605

Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu
    610                 615                 620

Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala
625                 630                 635                 640

Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys
                645                 650                 655

Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu
            660                 665                 670

Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val
        675                 680                 685

Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val
    690                 695                 700

Pro Val Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp
705                 710                 715                 720

Lys Pro Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys
                725                 730                 735
```

```
Trp His Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu
            740                 745                 750

Asp Leu Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu Tyr Leu Asp
        755                 760                 765

Leu Ser Ile Pro Leu Asp Gln Tyr Ser Pro Ser Phe Pro Asp Thr Arg
    770                 775                 780

Ser Ser Thr Cys Ser Ser Gly Glu Asp Ser Val Phe Ser His Glu Pro
785                 790                 795                 800

Leu Pro Glu Glu Pro Cys Leu Pro Arg His Pro Xaa Gln Leu Ala Asn
                805                 810                 815

Xaa Gly Leu Lys Arg Arg
            820


<210> 359
<211> 1044
<212> PRT
<213> Homo sapiens

<400> 359
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1               5                   10                  15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
            20                  25                  30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
        35                  40                  45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
    50                  55                  60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
            100                 105                 110

Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
        115                 120                 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
    130                 135                 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160
```

```
Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
                165                 170                 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445
```

```
Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
    530                 535                 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
                565                 570                 575

Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
            580                 585                 590

Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
625                 630                 635                 640

Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
                645                 650                 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
            660                 665                 670

Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
705                 710                 715                 720

Leu Ala Trp Arg Leu Tyr Asp Arg Gln Phe Arg Pro Ser Gln Arg Gly
                725                 730                 735
```

```
Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
    770                 775                 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
                805                 810                 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
            820                 825                 830

His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
    850                 855                 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865                 870                 875                 880

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
                885                 890                 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
            900                 905                 910

Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
        915                 920                 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
    930                 935                 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945                 950                 955                 960

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
                965                 970                 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
            980                 985                 990

Gln Lys Lys Pro Leu Ile Phe Leu  Gly Cys Cys Phe Phe  Ser Thr Leu
        995                 1000                1005

Val Leu  Leu Leu Ser Ile Ala  Ile Phe Gln Arg Gln  Lys Arg Arg
```

1010 1015 1020

Lys Phe Trp Lys Ala Lys Asn Leu Gln His Ile Pro Leu Lys Lys
1025 1030 1035

Gly Lys Arg Val Val Ser
1040

<210> 360
<211> 1043
<212> PRT
<213> Mus musculus

<400> 360
Met Lys Thr Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Ser Asp Glu Arg Asn Thr Arg Ser Arg Lys Thr Met Ser Asn
20 25 30

Arg Ala Leu Gln Arg Ser Ala Val Leu Ser Ala Phe Val Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Lys Ala Ile Trp Asp Lys Lys
50 55 60

Gln Tyr Val Ser Pro Val Asn Pro Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val
85 90 95

Glu Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg
100 105 110

Tyr Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr
115 120 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu
130 135 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145 150 155 160

Asn Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg
165 170 175

Ala Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
180 185 190

Leu Tyr His Trp Asp Leu Pro Leu Thr Leu Gln Glu Glu Tyr Gly Gly
195 200 205

Trp Lys Asn Ala Thr Met Ile Asp Leu Phe Asn Asp Tyr Ala Thr Tyr
210 215 220

```
Cys Phe Gln Thr Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Phe Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Thr Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asp Lys Asn Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Thr Asp Asn Met Glu Asp Val Ile Asn Cys Gln
305                 310                 315                 320

His Ser Met Ser Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Phe Met Lys Thr Gly Ala Met Ile Pro Glu
            340                 345                 350

Phe Ser Glu Ala Glu Lys Glu Glu Val Arg Gly Thr Ala Asp Phe Phe
        355                 360                 365

Ala Phe Ser Phe Gly Pro Asn Asn Phe Arg Pro Ser Asn Thr Val Val
    370                 375                 380

Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Gln Val Leu Asn Trp
385                 390                 395                 400

Ile Lys Leu Glu Tyr Asp Asp Pro Gln Ile Leu Ile Ser Glu Asn Gly
                405                 410                 415

Trp Phe Thr Asp Ser Tyr Ile Lys Thr Glu Asp Thr Thr Ala Ile Tyr
            420                 425                 430

Met Met Lys Asn Phe Leu Asn Gln Val Leu Gln Ala Ile Lys Phe Asp
        435                 440                 445

Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Thr Leu Leu Asp Gly Phe
    450                 455                 460

Glu Trp Gln Asp Ala Tyr Thr Thr Arg Arg Gly Leu Phe Tyr Val Asp
465                 470                 475                 480

Phe Asn Ser Glu Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala His Tyr
                485                 490                 495

Tyr Lys Gln Ile Ile Gln Asp Asn Gly Phe Pro Leu Lys Glu Ser Thr
```

500 505 510

Pro Asp Met Lys Gly Arg Phe Pro Cys Asp Phe Ser Trp Gly Val Thr
515 520 525

Glu Ser Val Leu Lys Pro Glu Phe Thr Val Ser Ser Pro Gln Phe Thr
530 535 540

Asp Pro His Leu Tyr Val Trp Asn Val Thr Gly Asn Arg Leu Leu Tyr
545 550 555 560

Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ser Gln Cys Thr Asp
565 570 575

Tyr Val Ser Ile Lys Lys Arg Val Glu Met Leu Ala Lys Met Lys Val
580 585 590

Thr His Tyr Gln Phe Ala Leu Asp Trp Thr Ser Ile Leu Pro Thr Gly
595 600 605

Asn Leu Ser Lys Val Asn Arg Gln Val Leu Arg Tyr Tyr Arg Cys Val
610 615 620

Val Ser Glu Gly Leu Lys Leu Gly Val Phe Pro Met Val Thr Leu Tyr
625 630 635 640

His Pro Thr His Ser His Leu Gly Leu Pro Leu Pro Leu Leu Ser Ser
645 650 655

Gly Gly Trp Leu Asn Met Asn Thr Ala Lys Ala Phe Gln Asp Tyr Ala
660 665 670

Glu Leu Cys Phe Arg Glu Leu Gly Asp Leu Val Lys Leu Trp Ile Thr
675 680 685

Ile Asn Glu Pro Asn Arg Leu Ser Asp Met Tyr Asn Arg Thr Ser Asn
690 695 700

Asp Thr Tyr Arg Ala Ala His Asn Leu Met Ile Ala His Ala Gln Val
705 710 715 720

Trp His Leu Tyr Asp Arg Gln Tyr Arg Pro Val Gln His Gly Ala Val
725 730 735

Ser Leu Ser Leu His Cys Asp Trp Ala Glu Pro Ala Asn Pro Phe Val
740 745 750

Asp Ser His Trp Lys Ala Ala Glu Arg Phe Leu Gln Phe Glu Ile Ala
755 760 765

Trp Phe Ala Asp Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ser Val Met
770 775 780

```
Lys Glu Tyr Ile Ala Ser Lys Asn Gln Arg Gly Leu Ser Ser Ser Val
785                 790                 795                 800

Leu Pro Arg Phe Thr Ala Lys Glu Ser Arg Leu Val Lys Gly Thr Val
                805                 810                 815

Asp Phe Tyr Ala Leu Asn His Phe Thr Thr Arg Phe Val Ile His Lys
            820                 825                 830

Gln Leu Asn Thr Asn Arg Ser Val Ala Asp Arg Asp Val Gln Phe Leu
        835                 840                 845

Gln Asp Ile Thr Arg Leu Ser Ser Pro Ser Arg Leu Ala Val Thr Pro
    850                 855                 860

Trp Gly Val Arg Lys Leu Leu Ala Trp Ile Arg Arg Asn Tyr Arg Asp
865                 870                 875                 880

Arg Asp Ile Tyr Ile Thr Ala Asn Gly Ile Asp Asp Leu Ala Leu Glu
                885                 890                 895

Asp Asp Gln Ile Arg Lys Tyr Tyr Leu Glu Lys Tyr Val Gln Glu Ala
            900                 905                 910

Leu Lys Ala Tyr Leu Ile Asp Lys Val Lys Ile Lys Gly Tyr Tyr Ala
        915                 920                 925

Phe Lys Leu Thr Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe Phe Thr
    930                 935                 940

Ser Asp Phe Arg Ala Lys Ser Ser Val Gln Phe Tyr Ser Lys Leu Ile
945                 950                 955                 960

Ser Ser Ser Gly Leu Pro Ala Glu Asn Arg Ser Pro Ala Cys Gly Gln
                965                 970                 975

Pro Ala Glu Asp Thr Asp Cys Thr Ile Cys Ser Phe Leu Val Glu Lys
            980                 985                 990

Lys Pro Leu Ile Phe Phe Gly Cys  Cys Phe Ile Ser Thr  Leu Ala Val
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Leu Leu  Ser Ile Thr Val Phe  His His Gln Lys Arg  Arg Lys Phe
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35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Lys Ala Ile Trp Xaa Lys Xaa
50 55 60

Xaa Xaa Xaa Ser Pro Val Asn Xaa Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe Pro Lys Asn Phe Xaa Trp Gly Ile Gly Thr Gly Ala Xaa Gln Val
85 90 95

Glu Gly Ser Trp Lys Xaa Asp Gly Lys Gly Pro Ser Ile Trp Asp Xaa
100 105 110

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Phe Ile His Ser His Leu Lys Xaa Val Xaa Xaa Thr Xaa Xaa Ser Ser
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Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Xaa Ala Leu Asp Phe Ile
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Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

Xaa Gly Xaa Val Xaa Xaa Xaa Asn Ala Xaa Gly Leu Xaa Tyr Tyr Xaa
                165                 170                 175

Xaa Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Xaa Leu Gln Glu Xaa Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Xaa Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
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Cys Phe Gln Xaa Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Phe Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Xaa Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Xaa Xaa Xaa Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Asp Asn Xaa Xaa Asp Ile Xaa Xaa Cys Gln
305                 310                 315                 320

Xaa Ser Met Xaa Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Xaa Met Lys Xaa Xaa Xaa Xaa Ala Met Ile
            340                 345                 350

Pro Xaa Phe Ser Glu Ala Glu Lys Xaa Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Xaa Asn Thr
    370                 375                 380

Met Xaa Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Xaa Xaa Leu
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Asn Trp Ile Lys Leu Glu Tyr Xaa Xaa Pro Xaa Ile Leu Ile Ala Glu
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Asn Gly Trp Phe Thr Asp Ser Xaa Ile Lys Thr Glu Asp Thr Thr Ala
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Ile Tyr Met Met Lys Asn Phe Leu Xaa Gln Val Leu Gln Ala Ile Lys
        435                 440                 445

Xaa Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Xaa Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Xaa Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Xaa Asp Asn Gly Phe Xaa Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Met Xaa Gly Xaa Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Xaa Xaa Xaa Ser Ser Pro Gln
    530                 535                 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Xaa Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
                565                 570                 575

Thr Asp Phe Val Xaa Ile Lys Lys Xaa Leu Glu Met Leu Ala Lys Met
            580                 585                 590

Lys Val Thr His Tyr Xaa Phe Ala Leu Asp Trp Xaa Ser Ile Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Xaa Val Asn Arg Gln Xaa Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Xaa Xaa Met Val Thr
625                 630                 635                 640

Leu Tyr His Pro Thr His Ala His Leu Gly Leu Pro Xaa Pro Leu Leu
                645                 650                 655

Xaa Ala Xaa Gly Trp Leu Asn Xaa Xaa Thr Ala Xaa Ala Phe Gln Xaa
            660                 665                 670

Tyr Ala Xaa Leu Cys Phe Xaa Glu Leu Gly Asp Leu Val Lys Leu Trp
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Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Xaa Asn Asp Thr Tyr Xaa Ala Ala His Asn Leu Leu Ile Ala His Ala
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Xaa Xaa Trp Xaa Leu Tyr Asp Arg Gln Phe Arg Pro Xaa Gln Xaa Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Xaa Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Phe Xaa Asp Ser His Trp Lys Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Asp Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
    770                 775                 780

Xaa Met Lys Glu Tyr Ile Ala Ser Lys Xaa Xaa Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Xaa Leu Pro Arg Xaa Thr Xaa Xaa Glu Xaa Arg Leu Leu Lys Gly
                805                 810                 815

Thr Val Asp Phe Xaa Ala Leu Asn His Phe Thr Thr Arg Phe Val Ile
            820                 825                 830

His Xaa Gln Leu Xaa Xaa Xaa Arg Xaa Xaa Ala Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Ser Arg Leu Ala Val
    850                 855                 860

Xaa Pro Trp Gly Val Arg Lys Leu Leu Xaa Trp Ile Arg Arg Asn Tyr
865                 870                 875                 880

Xaa Asp Xaa Asp Ile Tyr Ile Thr Ala Xaa Gly Ile Asp Asp Xaa Ala
                885                 890                 895

Leu Glu Asp Asp Xaa Ile Arg Lys Tyr Tyr Leu Xaa Lys Tyr Leu Gln
            900                 905                 910

Glu Xaa Leu Lys Ala Tyr Leu Ile Asp Lys Val Lys Ile Lys Gly Tyr
        915                 920                 925

Tyr Ala Phe Lys Leu Xaa Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
    930                 935                 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Xaa Lys
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Leu Ile Ser Ser Xaa Gly Xaa Pro Xaa Glu Asn Xaa Ser Xaa Xaa Cys
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965 970 975

Xaa Gln Xaa Xaa Glu Xaa Thr Asp Cys Thr Ile Cys Xaa Phe Leu Val
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Xaa Lys Lys Pro Leu Ile Phe Xaa Gly Cys Cys Phe Xaa Ser Thr Leu
995 1000 1005

Xaa Leu Leu Leu Ser Ile Xaa Ile Phe Xaa Xaa Gln Lys Arg Arg
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Lys Phe Xaa Lys Ala Lys Asn Leu Gln Xaa Ile Pro Leu Lys Lys
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35 40 45

Gly Val Gln Leu Ala Glu Ser Asn Arg Thr Arg Ile Thr Gly Glu Glu
50 55 60

Val Glu Val Gln Asp Ser Val Pro Ala Asp Ser Gly Leu Tyr Ala Cys
65 70 75 80

Val Thr Ser Ser Pro Ser Gly Ser Asp Thr Thr Tyr Phe Ser Val Asn
85 90 95

Val Ser Asp Ala Leu Pro Ser Ser Glu Asp Asp Asp Asp Asp Asp Asp
100 105 110

Ser Ser Ser Glu Glu Lys Glu Thr Asp Asn Thr Lys Pro Asn Arg Met
115 120 125

Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys Met Glu Lys Lys Leu
130 135 140

His Ala Val Pro Ala Ala Lys Thr Val Lys Phe Lys Cys Pro Ser Ser
145 150 155 160

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Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys Asn Gly Lys Glu Phe
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Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val Arg Tyr Ala Thr Trp
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Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp Lys Gly Asn Tyr Thr
        195                 200                 205

Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn His Thr Tyr Gln Leu
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Asp Val Val Glu Arg Ser Pro His Arg Pro Ile Leu Gln Ala Gly Leu
225                 230                 235                 240

Pro Ala Asn Lys Thr Val Ala Leu Gly Ser Asn Val Glu Phe Met Cys
                245                 250                 255

Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln Trp Leu Lys His Ile
            260                 265                 270

Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn Leu Pro Tyr Val Gln
        275                 280                 285

Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp Lys Glu Met Glu Val
    290                 295                 300

Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala Gly Glu Tyr Thr Cys
305                 310                 315                 320

Leu Ala Gly Asn Ser Ile Gly Leu Ser His His Ser Ala Trp Leu Thr
                325                 330                 335

Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val Met Thr Ser Pro Leu
            340                 345                 350

Tyr Gly Gly Gly Gly Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro
        355                 360                 365

Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
    370                 375                 380

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
385                 390                 395                 400

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
                405                 410                 415

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
            420                 425                 430

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
```

435 440 445

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
450 455 460

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
465 470 475 480

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu
485 490 495

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
500 505 510

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
515 520 525

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
530 535 540

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
545 550 555 560

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
565 570 575

Lys Ser Leu Ser Leu Ser Pro Gly Lys
580 585

<210> 363
<211> 1176
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 363
Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn Pro Asn Phe Thr
1 5 10 15

Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr Phe Pro Lys Asn
20 25 30

Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val Glu Gly Ser Trp
35 40 45

Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His Phe Ile His Thr
50 55 60

His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser Asp Ser Tyr Ile
65 70 75 80

Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile Gly Val Ser Phe
85 90 95

```
Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro Asp Gly Ile Val
            100                 105                 110

Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser Thr Leu Leu Asp
        115                 120                 125

Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr Leu Tyr His Trp
    130                 135                 140

Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly Trp Lys Asn Asp
145                 150                 155                 160

Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr Cys Phe Gln Met
                165                 170                 175

Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His Asn Pro Tyr Leu
            180                 185                 190

Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala Pro Gly Glu Lys
        195                 200                 205

Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn Leu Ile Lys Ala
    210                 215                 220

His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe Arg Pro His Gln
225                 230                 235                 240

Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp Ile Glu Pro Asn
                245                 250                 255

Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln Gln Ser Met Val
            260                 265                 270

Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly Asp Gly Asp Tyr
        275                 280                 285

Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu Pro Ile Phe Ser
    290                 295                 300

Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp Phe Phe Ala Phe
305                 310                 315                 320

Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr Met Ala Lys Met
                325                 330                 335

Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu Asn Trp Ile Lys
            340                 345                 350

Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu Asn Gly Trp Phe
        355                 360                 365

Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala Ile Tyr Met Met
```

370 375 380

Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg Leu Asp Glu Ile
385 390 395 400

Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp Gly Phe Glu Trp
405 410 415

Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr Val Asp Phe Asn
420 425 430

Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala His Tyr Tyr Lys
435 440 445

Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu Ser Thr Pro Asp
450 455 460

Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly Val Thr Glu Ser
465 470 475 480

Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln Phe Ser Asp Pro
485 490 495

His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu Leu His Arg Val
500 505 510

Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys Thr Asp Phe Val
515 520 525

Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met Lys Val Thr His
530 535 540

Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro Thr Gly Asn Leu
545 550 555 560

Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg Cys Val Val Ser
565 570 575

Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr Leu Tyr Tyr Pro
580 585 590

Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu His Ala Asp Gly
595 600 605

Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala Tyr Ala Gly Leu
610 615 620

Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp Ile Thr Ile Asn
625 630 635 640

Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser Gly Asn Asp Thr
645 650 655

```
Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala Leu Ala Trp Arg
            660                 665                 670

Leu Tyr Asp Arg Gln Phe Arg Pro Ser Gln Arg Gly Ala Val Ser Leu
        675                 680                 685

Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro Tyr Ala Asp Ser
    690                 695                 700

His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu Ile Ala Trp Phe
705                 710                 715                 720

Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala Ala Met Arg Glu
                725                 730                 735

Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser Ser Ala Leu Pro
            740                 745                 750

Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly Thr Val Asp Phe
        755                 760                 765

Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met His Glu Gln Leu
    770                 775                 780

Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln Phe Leu Gln Asp
785                 790                 795                 800

Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val Ile Pro Trp Gly
                805                 810                 815

Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr Gly Asp Met Asp
            820                 825                 830

Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala Leu Glu Asp Asp
        835                 840                 845

Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln Glu Val Leu Lys
    850                 855                 860

Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr Tyr Ala Phe Lys
865                 870                 875                 880

Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe Phe Thr Ser Asp
                885                 890                 895

Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys Val Ile Ser Ser
            900                 905                 910

Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys Ser Gln Thr Gln
        915                 920                 925

Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val Gln Lys Lys Pro
    930                 935                 940
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Gly Gly Gly Gly Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
945                 950                 955                 960

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
                965                 970                 975

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
            980                 985                 990

Val Asp Val Ser His Glu Asp Pro  Glu Val Lys Phe Asn  Trp Tyr Val
        995                 1000                1005

Asp Gly  Val Glu Val His Asn  Ala Lys Thr Lys Pro  Arg Glu Glu
    1010                1015                1020

Gln Tyr  Asn Ser Thr Tyr Arg  Val Val Ser Val Leu  Thr Val Leu
    1025                1030                1035

His Gln  Asp Trp Leu Asn Gly  Lys Glu Tyr Lys Cys  Lys Val Ser
    1040                1045                1050

Asn Lys  Ala Leu Pro Ala Pro  Ile Glu Lys Thr Ile  Ser Lys Ala
    1055                1060                1065

Lys Gly  Gln Pro Arg Glu Pro  Gln Val Tyr Thr Leu  Pro Pro Ser
    1070                1075                1080

Arg Asp  Glu Leu Thr Lys Asn  Gln Val Ser Leu Thr  Cys Leu Val
    1085                1090                1095

Lys Gly  Phe Tyr Pro Ser Asp  Ile Ala Val Glu Trp  Glu Ser Asn
    1100                1105                1110

Gly Gln  Pro Glu Asn Asn Tyr  Lys Thr Thr Pro Pro  Val Leu Asp
    1115                1120                1125

Ser Asp  Gly Ser Phe Phe Leu  Tyr Ser Lys Leu Thr  Val Asp Lys
    1130                1135                1140

Ser Arg  Trp Gln Gln Gly Asn  Val Phe Ser Cys Ser  Val Met His
    1145                1150                1155

Glu Ala  Leu His Asn His Tyr  Thr Gln Lys Ser Leu  Ser Leu Ser
    1160                1165                1170

Pro Gly  Lys
    1175
```

<210> 364
<211> 88
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 364
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys
85

<210> 365
<211> 88
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 365
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys
85

<210> 366
<211> 93
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 366
Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1   5   10   15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu His Ser
            20   25   30

Asp Gly Lys Thr Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35   40   45

Pro Gln Leu Leu Ile Tyr Glu Val Ser Ser Arg Phe Ser Gly Val Pro
    50   55   60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65   70   75   80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
                85   90

<210> 367
<211> 93
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 367
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1   5   10   15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20   25   30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35   40   45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50   55   60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65   70   75   80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
                85   90

<210> 368
<211> 93
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 368
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1   5   10   15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
85 90

<210> 369
<211> 89
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 369
Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys
85

<210> 370
<211> 88
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 370
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn

20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys
85

<210> 371
<211> 87
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 371
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Lys
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Lys Ser Val
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Tyr Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys
85

<210> 372
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 372
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Glu Leu
20 25 30

Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser Thr Asp 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 Thr

<210> 373
<211> 99
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 373
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg

<210> 374
<211> 100
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 374
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
            20   25   30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
    50   55   60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65   70   75   80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
                85   90   95

Tyr Cys Thr Thr
            100

<210> 375
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 375
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1   5   10   15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Lys

<210> 376
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 376
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg

<210> 377
<211> 99
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 377
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg

<210> 378
<211> 97
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 378
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
20 25 30

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg

<210> 379
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 379
Gly Gly Gly Gly Gly
1 5

<210> 380
<211> 5
<212> PRT
<213> Homo sapiens

<400> 380
Cys Pro Ser Cys Pro
1 5

<210> 381
<211> 5
<212> PRT
<213> Homo sapiens

<400> 381
Cys Pro Pro Cys Pro
1 5

<210> 382
<211> 6

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
6xHis tag

<400> 382
His His His His His His
1 5

<210> 383
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 383
His His His His His
1 5

<210> 384
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 384
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

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Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Gly Lys
225
```

<210> 385
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 385

```
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Lys
1               5                   10                  15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Glu Ser Val
            20                  25                  30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr
        35                  40                  45

Asp Asp Ser 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 Arg Val Glu Ala Gly
65                  70                  75                  80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Gly Asn Ser Asp His
                85                  90                  95

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys
            100                 105                 110

Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln
        115                 120                 125

Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly
    130                 135                 140
```

Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro Val Lys Ala Gly
145 150 155 160

Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala
165 170 175

Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser
180 185 190

Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val
195 200 205

Ala Pro Thr Glu Cys Ser
210

<210> 386
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 386
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Glu Ser Val
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr
35 40 45

Tyr Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Gly Asn Ser Asp His
85 90 95

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys
100 105 110

Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln
115 120 125

Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly
130 135 140

Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro Val Lys Ala Gly
145 150 155 160

Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala

165 170 175

Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser
180 185 190

Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val
195 200 205

Ala Pro Thr Glu Cys Ser
210

<210> 387
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 387
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Glu Ser Val
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr
35 40 45

Ala Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Gly Asn Ser Asp His
85 90 95

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys
100 105 110

Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln
115 120 125

Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly
130 135 140

Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro Val Lys Ala Gly
145 150 155 160

Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala
165 170 175

Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser
180 185 190

Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val
195 200 205

Ala Pro Thr Glu Cys Ser
210

<210> 388
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 388
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Glu Ser Val
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr
35 40 45

Asp Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Ala Gly Asn Ser Asp His
85 90 95

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys
100 105 110

Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln
115 120 125

Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly
130 135 140

Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro Val Lys Ala Gly
145 150 155 160

Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala
165 170 175

Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser
180 185 190

Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val
195 200 205

Ala Pro Thr Glu Cys Ser
210

<210> 389
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 389
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Glu Ser Val
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr
35 40 45

Ala Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Ala Gly Asn Ser Asp His
85 90 95

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys
100 105 110

Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln
115 120 125

Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly
130 135 140

Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro Val Lys Ala Gly
145 150 155 160

Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala
165 170 175

Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser
180 185 190

Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val
195 200 205

Ala Pro Thr Glu Cys Ser
210

<210> 390
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 390

```
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1               5                   10                  15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Asn Asn Ala
            20                  25                  30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
    50                  55                  60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
```

245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
290 295 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
325 330 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440 445

Gly Lys
450

<210> 391
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 391
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
20 25 30

```
Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
    50                  55                  60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
```

305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
325 330 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440 445

Gly Lys
450

<210> 392
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 392
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Asn Asn Ala
20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

```
Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
```

370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440 445

Gly Lys
450

<210> 393
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 393
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Gln
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Asn Asn Ala
20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
115 120 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
130 135 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145 150 155 160

```
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
```

435 440 445

Gly Lys
450

<210> 394
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 394
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Gln
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Asn Asn Ala
20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
100 105 110

Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
115 120 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
130 135 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145 150 155 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
165 170 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
180 185 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
195 200 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
210 215 220

```
Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450
```

<210> 395
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 395

```
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Gln
1               5                  10                  15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Asn Asn Ala
            20                  25                  30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
    50                  55                  60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ile Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285
```

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
290 295 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
325 330 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440 445

Gly Lys
450

<210> 396
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 396
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
50 55 60

```
Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Lys Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350
```

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440 445

Gly Lys
450

<210> 397
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 397
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ile Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
115 120 125

```
Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415
```

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440 445

Gly Lys
450

<210> 398
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 398
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Ile Met Thr Asn Met Arg Ala Glu Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
115 120 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
130 135 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145 150 155 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
165 170 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
180 185 190

```
Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450
```

<210> 399
<211> 450

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 399

```
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1               5                  10                  15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
            20                  25                  30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
    50                  55                  60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Ile Met Thr Asn Met Arg Ala Glu Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ile Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255
```

```
Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450


<210> 400
<211> 449
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 400
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1               5                   10                  15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
            20                  25                  30
```

```
Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
    50                  55                  60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Asp Gly Met Asp Val
            100                 105                 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
        115                 120                 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
    130                 135                 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145                 150                 155                 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
                165                 170                 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
            180                 185                 190

Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val
        195                 200                 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys
    210                 215                 220

Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro
225                 230                 235                 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                245                 250                 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            260                 265                 270

Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        275                 280                 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val
    290                 295                 300

Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu
305                 310                 315                 320
```

```
Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys
                325                 330                 335

Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            340                 345                 350

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
        355                 360                 365

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    370                 375                 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu
385                 390                 395                 400

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                405                 410                 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            420                 425                 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        435                 440                 445

Lys
```

<210> 401
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 401

```
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1               5                   10                  15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
            20                  25                  30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
    50                  55                  60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95
```

```
Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Ser Gly Met Asp
            100                 105                 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
        195                 200                 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380
```

```
Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450
```

<210> 402
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 402

```
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1               5                   10                  15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Gln Ser Val
            20                  25                  30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr
        35                  40                  45

Asp Asp Ser 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 Arg Val Glu Ala Gly
65                  70                  75                  80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Gln Thr Ser Asp His
                85                  90                  95

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys
            100                 105                 110

Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln
        115                 120                 125

Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly
    130                 135                 140

Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro Val Lys Ala Gly
145                 150                 155                 160
```

Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala
165 170 175

Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser
180 185 190

Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val
195 200 205

Ala Pro Thr Glu Cys Ser
210

<210> 403
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 403
Ser Tyr Val Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Gln Ser Val
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr
35 40 45

Asp Asp Ser 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 Arg Val Glu Ala Gly
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Thr Ala Asp His
85 90 95

Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys
100 105 110

Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln
115 120 125

Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly
130 135 140

Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro Val Lys Ala Gly
145 150 155 160

Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala
165 170 175

Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser

180 185 190

Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val
195 200 205

Ala Pro Thr Glu Cys Ser
210

<210> 404
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 404
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Ile Leu Leu Val Gly Ala Tyr Tyr Tyr Ser Gly Met Asp
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
115 120 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
130 135 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145 150 155 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
165 170 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
180 185 190

Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn
195 200 205

```
Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg
    210                 215                 220

Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
                325                 330                 335

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
385                 390                 395                 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450
```

<210> 405
<211> 451
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 405

```
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1               5                  10                  15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Asn Asn Ala
            20                  25                  30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
    50                  55                  60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65                  70                  75                  80

Val Leu Ile Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Arg Ser Val Val Thr Gly Gly Tyr Tyr Tyr Tyr Asp Gly Met
            100                 105                 110

Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr
        115                 120                 125

Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser
    130                 135                 140

Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
145                 150                 155                 160

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
                165                 170                 175

Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
            180                 185                 190

Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys
        195                 200                 205

Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu
    210                 215                 220

Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
            260                 265                 270
```

```
Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile
                325                 330                 335

Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
        355                 360                 365

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    370                 375                 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400

Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            420                 425                 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        435                 440                 445

Pro Gly Lys
    450
```

<210> 406
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 406
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggaaagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtgaa agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tgctggtcgt ctatgatgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggct ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gatggtaata gtgaccatgt ggtattcggc 300

ggagggacca agctgaccgt cctaggtcag cccaaggcca accccactgt cactctgttc 360

ccgccctcct ctgaggagct ccaagccaac aaggccacac tagtgtgtct gatcagtgac 420

ttctacccgg gagctgtgac agtggcctgg aaggcagatg gcagccccgt caaggcggga 480

gtggagacca ccaaaccctc caaacagagc aacaacaagt acgcggccag cagctacctg 540

agcctgacgc ccgagcagtg gaagtcccac agaagctaca gctgccaggt cacgcatgaa 600

gggagcaccg tggagaagac agtggccccct acagaatgtt ca 642

<210> 407
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 407
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggacagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtgaa agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tgctggtcgt ctattatgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggct ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gatggtaata gtgaccatgt ggtattcggc 300

ggagggacca agctgaccgt cctaggtcag cccaaggcca accccactgt cactctgttc 360

ccgccctcct ctgaggagct ccaagccaac aaggccacac tagtgtgtct gatcagtgac 420

ttctacccgg gagctgtgac agtggcctgg aaggcagatg gcagccccgt caaggcggga 480

gtggagacca ccaaaccctc caaacagagc aacaacaagt acgcggccag cagctacctg 540

agcctgacgc ccgagcagtg gaagtcccac agaagctaca gctgccaggt cacgcatgaa 600

gggagcaccg tggagaagac agtggccccct acagaatgtt ca 642

<210> 408
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 408
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggacagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtgaa agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tgctggtcgt ctatgctgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggct ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gatggtaata gtgaccatgt ggtattcggc 300

ggagggacca agctgaccgt cctaggtcag cccaaggcca accccactgt cactctgttc 360

ccgccctcct ctgaggagct ccaagccaac aaggccacac tagtgtgtct gatcagtgac 420

ttctacccgg gagctgtgac agtggcctgg aaggcagatg gcagccccgt caaggcggga 480

gtggagacca ccaaaccctc caaacagagc aacaacaagt acgcggccag cagctacctg 540

agcctgacgc ccgagcagtg gaagtcccac agaagctaca gctgccaggt cacgcatgaa 600

gggagcaccg tggagaagac agtggcccct acagaatgtt ca 642

<210> 409
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 409
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggacagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtgaa agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tgctggtcgt ctatgatgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggct ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gctggtaata gtgaccatgt ggtattcggc 300

ggagggacca agctgaccgt cctaggtcag cccaaggcca accccactgt cactctgttc 360

ccgccctcct ctgaggagct ccaagccaac aaggccacac tagtgtgtct gatcagtgac 420

ttctacccgg gagctgtgac agtggcctgg aaggcagatg gcagccccgt caaggcggga 480

gtggagacca ccaaaccctc caaacagagc aacaacaagt acgcggccag cagctacctg 540

agcctgacgc ccgagcagtg gaagtcccac agaagctaca gctgccaggt cacgcatgaa 600

gggagcaccg tggagaagac agtggcccct acagaatgtt ca 642

<210> 410
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 410
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggacagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtgaa agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tgctggtcgt ctatgctgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggct ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gctggtaata gtgaccatgt ggtattcggc 300

ggagggacca agctgaccgt cctaggtcag cccaaggcca accccactgt cactctgttc 360

ccgccctcct ctgaggagct ccaagccaac aaggccacac tagtgtgtct gatcagtgac 420

ttctacccgg gagctgtgac agtggcctgg aaggcagatg gcagccccgt caaggcggga 480

gtggagacca ccaaaccctc caaacagagc aacaacaagt acgcggccag cagctacctg 540

agcctgacgc ccgagcagtg gaagtcccac agaagctaca gctgccaggt cacgcatgaa 600

gggagcaccg tggagaagac agtggcccct acagaatgtt ca 642

<210> 411
<211> 1350
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

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<223> Description of Artificial Sequence: Synthetic
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polynucleotide

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<223> Description of Artificial Sequence: Synthetic polynucleotide

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polynucleotide

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polynucleotide

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<223> Description of Artificial Sequence: Synthetic polynucleotide

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acagttgagc gcaaatgttg tgtcgagtgc ccaccgtgcc cagcaccacc tgtggcagga 720

ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggacccct 780

gaggtcacgt gcgtggtggt ggacgtgagc cacgaagacc ccgaggtcca gttcaactgg 840

tacgtggacg gcgtggaggt gcataatgcc aagacaaagc cacgggagga gcagttcaac 900

agcacgttcc gtgtggtcag cgtcctcacc gttgtgcacc aggactggct gaacggcaag 960

gagtacaagt gcaaggtctc caacaaaggc ctcccagccc ccatcgagaa aaccatctcc 1020

aaaaccaaag ggcagccccg agaaccacag gtgtacaccc tgcccccatc ccgggaggag 1080

atgaccaaga accaggtcag cctgacctgc ctggtcaaag gcttctaccc cagcgacatc 1140

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac acctcccatg 1200

ctggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcaggtgg 1260

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg 1320

cagaagagcc tctccctgtc tccgggtaaa 1350

<210> 421
<211> 1347
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 421
caggtcacct tgaaggagtc tggtcctgtg ctggtgaaac ccacagagac cctcacgctg 60

acctgcaccg tgtctgggtt ctcactcaac aatgctagaa tgggtgtgag ctggatccgt 120

cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180

tacagcacat ctctgaagag caggctcacc atctccaagg acacctccaa aagccaggtg 240

gtcctaatta tgaccaacat ggaccctgtg gacacagcca catattactg tgcacggtca 300

gtagtaactg gcggctacta cgacggtatg gacgtctggg gccaagggac cacggtcacc 360

gtctctagtg cctccaccaa gggcccatcg gtcttccccc tggcgccctg ctccaggagc 420

acctccgaga gcacagcggc cctgggctgc ctggtcaagg actacttccc cgaaccggtg 480

acggtgtcgt ggaactcagg cgctctgacc agcggcgtgc acaccttccc agctgtccta 540

cagtcctcag gactctactc cctcagcagc gtggtgaccg tgccctccag caacttcggc 600

acccagacct acacctgcaa cgtagatcac aagcccagca acaccaaggt ggacaagaca 660

gttgagcgca aatgttgtgt cgagtgccca ccgtgcccag caccacctgt ggcaggaccg 720

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gaccccctgag 780

gtcacgtgcg tggtggtgga cgtgagccac gaagaccccg aggtccagtt caactggtac 840

gtggacggcg tggaggtgca taatgccaag acaaagccac gggaggagca gttcaacagc 900

acgttccgtg tggtcagcgt cctcaccgtt gtgcaccagg actggctgaa cggcaaggag 960

tacaagtgca aggtctccaa caaaggcctc ccagccccca tcgagaaaac catctccaaa 1020

accaaagggc agccccgaga accacaggtg tacaccctgc ccccatcccg ggaggagatg 1080

accaagaacc aggtcagcct gacctgcctg gtcaaaggct tctaccccag cgacatcgcc 1140

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacacc tcccatgctg 1200

gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 1260

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 1320

aagagcctct ccctgtctcc gggtaaa 1347

<210> 422
<211> 1350
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 422

caggtcacct tgaaggagtc tggtcctgtg ctggtgaaac ccacagagac cctcacgctg 60

acctgcaccg tgtctgggtt ctcactcaac aatgctagaa tgggtgtgag ctggatccgt 120

cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180

tacagcacat ctctgaagag caggctcacc atctccaagg acacctccaa aagccaggtg 240

gtcctaatta tgaccaacat ggaccctgtg gacacagcca catattactg tgcacggtca 300

gtagtaactg gcggctacta ctacagcggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcta gtgcctccac caagggccca tcggtcttcc ccctggcgcc ctgctccagg 420

agcacctccg agagcacagc ggccctgggc tgcctggtca aggactactt ccccgaaccg 480

gtgacggtgt cgtggaactc aggcgctctg accagcggcg tgcacacctt cccagctgtc 540

ctacagtcct caggactcta ctccctcagc agcgtggtga ccgtgccctc cagcaacttc 600

ggcacccaga cctacacctg caacgtagat cacaagccca gcaacaccaa ggtggacaag 660

acagttgagc gcaaatgttg tgtcgagtgc ccaccgtgcc cagcaccacc tgtggcagga 720

ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggacccct 780

gaggtcacgt gcgtggtggt ggacgtgagc cacgaagacc ccgaggtcca gttcaactgg 840

tacgtggacg gcgtggaggt gcataatgcc aagacaaagc cacgggagga gcagttcaac 900

agcacgttcc gtgtggtcag cgtcctcacc gttgtgcacc aggactggct gaacggcaag 960

gagtacaagt gcaaggtctc caacaaaggc ctcccagccc ccatcgagaa aaccatctcc 1020

aaaaccaaag ggcagccccg agaaccacag gtgtacaccc tgccccccatc ccgggaggag 1080

atgaccaaga accaggtcag cctgacctgc ctggtcaaag gcttctaccc cagcgacatc 1140

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac acctcccatg 1200

ctggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcaggtgg 1260

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg 1320

cagaagagcc tctccctgtc tccgggtaaa 1350

<210> 423
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 423
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggacagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtcaa agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tcctggtcgt ctatgatgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggtt ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gatcagacta gtgatcatgt ggtattcggc 300

gggggggacca agctgaccgt cctaggtcag cccaaggcca accccactgt cactctgttc 360

ccgccctcct ctgaggagct ccaagccaac aaggccacac tagtgtgtct gatcagtgac 420

ttctacccgg gagctgtgac agtggcctgg aaggcagatg gcagccccgt caaggcggga 480

gtggagacca ccaaaccctc caaacagagc aacaacaagt acgcggccag cagctacctg 540

agcctgacgc ccgagcagtg gaagtcccac agaagctaca gctgccaggt cacgcatgaa 600

gggagcaccg tggagaagac agtggcccct acagaatgtt ca 642

<210> 424
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 424
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggacagac ggccaggatt 60

acctgtgggg gaaacaacat tggaagtcaa agtgtgcact ggtaccagca gaagccaggc 120

caggcccctg tcctggtcgt ctatgatgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggtt ccaactctgg gaacacggcc accctgacca tcagcagggt cgaagccggg 240

gatgaggccg actattactg tcaggtgtgg gataatactg ctgatcatgt ggtattcggc 300

gggggggacca agctgaccgt cctaggtcag cccaaggcca accccactgt cactctgttc 360

ccgccctcct ctgaggagct ccaagccaac aaggccacac tagtgtgtct gatcagtgac 420

ttctacccgg gagctgtgac agtggcctgg aaggcagatg gcagccccgt caaggcggga 480

gtggagacca ccaaaccctc caaacagagc aacaacaagt acgcggccag cagctacctg 540

agcctgacgc ccgagcagtg gaagtcccac agaagctaca gctgccaggt cacgcatgaa 600

gggagcaccg tggagaagac agtggcccct acagaatgtt ca 642

<210> 425
<211> 1350
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 425
caggtcacct tgaaggagtc tggtcctgtg ctggtgaaac ccacagagac cctcacgctg 60

acctgcaccg tgtctgggtt ctcactcagc aatgctagaa tgggtgtgag ctggatccgt 120

cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180

tacagcacat ctctgaagag caggctcacc atctccaagg acacctccaa aagccaggtg 240

gtccttacca tgaccaacat ggaccctgtg gacacagcca catattactg tgcacggata 300

ttattagtgg gagcttacta ctacagcggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcta gtgcctccac caagggccca tcggtcttcc ccctggcgcc ctgctccagg 420

agcacctccg agagcacagc ggccctgggc tgcctggtca aggactactt ccccgaaccg 480

gtgacggtgt cgtggaactc aggcgctctg accagcggcg tgcacacctt cccagctgtc 540

ctacagtcct caggactcta ctccctcagc agcgtggtga ccgtgccctc cagcaacttc 600

ggcacccaga cctacacctg caacgtagat cacaagccca gcaacaccaa ggtggacaag 660

acagttgagc gcaaatgttg tgtcgagtgc ccaccgtgcc cagcaccacc tgtggcagga 720

ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggacccct 780

gaggtcacgt gcgtggtggt ggacgtgagc cacgaagacc ccgaggtcca gttcaactgg 840

tacgtggacg gcgtggaggt gcataatgcc aagacaaagc cacgggagga gcagttcaac 900

agcacgttcc gtgtggtcag cgtcctcacc gttgtgcacc aggactggct gaacggcaag 960

gagtacaagt gcaaggtctc caacaaaggc ctcccagccc ccatcgagaa aaccatctcc 1020

aaaaccaaag ggcagccccg agaaccacag gtgtacaccc tgcccccatc ccgggaggag 1080

atgaccaaga accaggtcag cctgacctgc ctggtcaaag gcttctaccc cagcgacatc 1140

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac acctcccatg 1200

ctggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcaggtgg 1260

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg 1320

cagaagagcc tctccctgtc tccgggtaaa 1350

<210> 426
<211> 1353
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 426
caggtcacct tgaaggagtc tggtcctgtg ctggtgaaac ccacagagac cctcacgctg 60

acctgcaccg tgtctgggtt ctcactcaac aatgctagaa tgggtgtgag ctggatccgt 120

cagcccccag ggaaggccct ggagtggctt gcacacattt tttcgaatga cgaaaaatcc 180

tacagcacat ctctgaagag caggctcacc atctccaagg acacctccaa aagccaggtg 240

gtcctaatta tgaccaacat ggaccctgtg gacacagcca catattactg tgcacggtca 300

gtagtaactg gcggctacta ttactacgac ggtatggacg tctggggcca agggaccacg 360

gtcaccgtct ctagtgcctc caccaagggc ccatcggtct tccccctggc gccctgctcc 420

aggagcacct ccgagagcac agcggccctg ggctgcctgg tcaaggacta cttccccgaa 480

ccggtgacgg tgtcgtggaa ctcaggcgct ctgaccagcg gcgtgcacac cttcccagct 540

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aagacagttg agcgcaaatg ttgtgtcgag tgcccaccgt gcccagcacc acctgtggca 720

ggaccgtcag tcttcctctt ccccccaaaa cccaaggaca ccctcatgat ctcccggacc 780

cctgaggtca cgtgcgtggt ggtggacgtg agccacgaag accccgaggt ccagttcaac 840

tggtacgtgg acggcgtgga ggtgcataat gccaagacaa agccacggga ggagcagttc 900

aacagcacgt tccgtgtggt cagcgtcctc accgttgtgc accaggactg gctgaacggc 960

aaggagtaca agtgcaaggt ctccaacaaa ggcctcccag cccccatcga gaaaaccatc 1020

tccaaaacca aagggcagcc ccgagaacca caggtgtaca ccctgccccc atcccgggag 1080

gagatgacca agaaccaggt cagcctgacc tgcctggtca aaggcttcta ccccagcgac 1140

atcgccgtgg agtgggagag caatgggcag ccggagaaca actacaagac cacacctccc 1200

atgctggact ccgacggctc cttcttcctc tacagcaagc tcaccgtgga caagagcagg 1260

tggcagcagg ggaacgtctt ctcatgctcc gtgatgcatg aggctctgca caaccactac 1320

acgcagaaga gcctctccct gtctccgggt aaa 1353

<210> 427
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 427
Tyr Asp Ser Asp Arg Pro Ser
1 5

<210> 428
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 428
Ala Asp Ser Asp Arg Pro Ser
1 5

<210> 429
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 429
Gln Val Trp Ala Gly Asn Ser Asp His Val Val
1 5 10

<210> 430
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 430
Gln Val Trp Ala Gly Asn Ser Asp His Val Val
1 5 10

<210> 431

<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 431
Ile Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp Val
1 5 10

<210> 432
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 432
Ile Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp Val
1 5 10

<210> 433
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 433
Ile Val Val Thr Gly Gly Tyr Tyr Tyr Asp Gly Met Asp Val
1 5 10

<210> 434
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 434
Ser Val Val Thr Gly Gly Tyr Tyr Asp Gly Met Asp Val
1 5 10

<210> 435
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 435
Ser Val Val Thr Gly Gly Tyr Tyr Tyr Ser Gly Met Asp Val
1 5 10

<210> 436
<211> 11

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 436
Gln Val Trp Asp Gln Thr Ser Asp His Val Val
1 5 10

<210> 437
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 437
Gln Val Trp Asp Asn Thr Ala Asp His Val Val
1 5 10

<210> 438
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 438
Ile Leu Leu Val Gly Ala Tyr Tyr Tyr Ser Gly Met Asp Val
1 5 10

<210> 439
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 439
Ser Val Val Thr Gly Gly Tyr Tyr Tyr Tyr Asp Gly Met Asp Val
1 5 10 15

<210> 440
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 440
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Gly Gly Ser Gly Gly Gly Gly Ser
35 40

<210> 441
<211> 228
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 441
Glu Arg Lys Ser Ser Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val
1 5 10 15

Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr
65 70 75 80

Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro
100 105 110

Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
210 215 220

Ser Pro Gly Lys
225

<210> 442
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 442
tatgatagcg accggccctc a 21

<210> 443
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 443
gctgatagcg accggccctc a 21

<210> 444
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 444
gctgatagcg accggccctc a 21

<210> 445
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 445
caggtgtggg ctggtaatag tgaccatgtg gta 33

<210> 446
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 446
atcgtagtaa ctggcggcta ctactacgac ggtatggacg tc 42

<210> 447
<211> 39

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 447
tcagtagtaa ctggcggcta ctacgacggt atggacgtc 39

<210> 448
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 448
tcagtagtaa ctggcggcta ctactacagc ggtatggacg tc 42

<210> 449
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 449
caggtgtggg atcagactag tgatcatgtg gta 33

<210> 450
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 450
caggtgtggg ataatactgc tgatcatgtg gta 33

<210> 451
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 451
atattattag tgggagctta ctactacagc ggtatggacg tc 42

<210> 452
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 452
tcagtagtaa ctggcggcta ctattactac gacggtatgg acgtc 45

<210> 453
<211> 739
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 453
Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp
1 5 10 15

Leu Arg Gly Ala Arg Cys Gln Val Thr Leu Lys Glu Ser Gly Pro Val
20 25 30

Leu Val Lys Pro Thr Glu Thr Leu Thr Leu Thr Cys Thr Val Ser Gly
35 40 45

Phe Ser Leu Asn Asn Ala Arg Met Gly Val Ser Trp Ile Arg Gln Pro
50 55 60

Pro Gly Lys Ala Leu Glu Trp Leu Ala His Ile Phe Ser Asn Asp Glu
65 70 75 80

Lys Ser Tyr Ser Thr Ser Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp
85 90 95

Thr Ser Lys Ser Gln Val Val Leu Ile Met Thr Asn Met Asp Pro Val
100 105 110

Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Ser Val Val Thr Gly Gly Tyr
115 120 125

Tyr Tyr Asp Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
130 135 140

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys
145 150 155 160

Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys
165 170 175

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
180 185 190

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
195 200 205

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr
210 215 220

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Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val
225                 230                 235                 240

Asp Lys Thr Val Glu Arg Lys Ser Ser Val Glu Cys Pro Pro Cys Pro
                245                 250                 255

Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
            260                 265                 270

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
        275                 280                 285

Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val
    290                 295                 300

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
305                 310                 315                 320

Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln
                325                 330                 335

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
            340                 345                 350

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro
        355                 360                 365

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
    370                 375                 380

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
385                 390                 395                 400

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
                405                 410                 415

Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
            420                 425                 430

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
        435                 440                 445

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
    450                 455                 460

Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly
465                 470                 475                 480

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
                485                 490                 495

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
            500                 505                 510
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Arg Lys Ser Ser Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala
515 520 525

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
530 535 540

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
545 550 555 560

Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val
565 570 575

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe
580 585 590

Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly
595 600 605

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile
610 615 620

Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val
625 630 635 640

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
645 650 655

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
660 665 670

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
675 680 685

Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
690 695 700

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
705 710 715 720

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
725 730 735

Pro Gly Lys

<210> 454
<211> 2217
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 454

atggacatga gggtgcccgc tcagctcctg gggctcctgc tgctgtggct gagaggtgcg 60

cgctgtcagg tcaccttgaa ggagtctggt cctgtgctgg tgaaacccac agagaccctc 120

acgctgacct gcaccgtgtc tgggttctca ctcaacaatg ctagaatggg tgtgagctgg 180

atccgtcagc ccccagggaa ggccctggag tggcttgcac acatttttc gaatgacgaa 240

aaatcctaca gcacatctct gaagagcagg ctcaccatct ccaaggacac ctccaaaagc 300

caggtggtcc taattatgac caacatggac cctgtggaca cagccacata ttactgtgca 360

cggtcagtag taactggcgg ctactactac gacggtatgg acgtctgggg ccaagggacc 420

acggtcaccg tctctagtgc cagcaccaag ggcccctccg tgttccctct ggcccctgc 480

agcagaagca ccagcgagag cacagccgcc ctgggctgcc tggtcaagga ctacttcccc 540

gagcccgtga ccgtgtcttg gaacagcgga gccctgacca gcggcgtgca cacctttcca 600

gccgtgctgc agagcagcgg cctgtacagc ctgagcagcg tggtcaccgt gcccagcagc 660

aacttcggca cccagaccta cacctgtaac gtggaccaca agcccagcaa caccaaggtg 720

gacaagacag tggagcggaa gtccagcgtg gagtgccctc cttgtcctgc ccctcctgtg 780

gccggaccta gcgtgttcct gttcccccca aagcccaagg acaccctgat gatcagccgg 840

acccccgaag tgacctgcgt ggtggtggac gtgtcccacg aggaccccga ggtgcagttc 900

aattggtacg tggacggggt ggaggtgcac aacgccaaga ccaagccccg ggaggaacag 960

ttcaacagca ccttccgggt ggtgtccgtc ctcaccgtgg tgcaccagga ctggctgaac 1020

ggcaaagagt acaagtgcaa ggtctccaac aagggcctgc ctgcccccat cgagaaaacc 1080

atcagcaaga ccaagggcca gcctcgggag cctcaggtgt acaccctgcc ccccagccgg 1140

gaggaaatga ccaagaacca ggtgtccctg acctgcctcg tgaagggctt ctaccccagc 1200

gatatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc 1260

cccatgctgg acagcgacgg cagcttcttc ctgtactcca aactgaccgt ggacaagagc 1320

cggtggcagc agggcaacgt gttcagctgt agcgtgatgc acgaggccct gcacaaccac 1380

tacacccaga agtccctgag cctgtctcct ggcggaggcg gaggatctgg cggcggagga 1440

agtggagggg gcggatctgg tggtggaggc agcggcggag gtggaagtgg cggtggagga 1500

tccggtggag gcggctcagg tggcggcgga agcgagagaa agtcctccgt ggagtgtcca 1560

ccatgccctg ctccaccagt ggctggccct tccgtctttc tctttccacc taaacctaag 1620

gatacactca tgatctccag aactccagag gtcacatgtg tggtcgtcga tgtcagtcat 1680

gaggatcctg aagtccagtt taactggtat gtggatggcg tcgaagtcca taatgctaag 1740

acaaaacctc gcgaagaaca gtttaactcc acctttagag tcgtgagcgt gctgacagtc 1800

gtccatcagg attggctcaa tgggaaagaa tacaaatgta aagtctctaa caaaggactg 1860

cccgctccta tcgaaaagac catctccaaa acaaaggggc agcccagaga gccccaggtc 1920

tacacactcc caccctccag agaagagatg acaaaaaatc aggtgtcact cacctgtctg 1980

gtcaaggggt tttacccctc cgacattgcc gtggaatggg aatccaatgg gcagcctgaa 2040

aacaattata agactacacc tcctatgctc gactctgatg ggagtttctt tctctactct 2100

aaactcacag tggataagtc tagatggcag caggggaatg tcttttcctg ctccgtcatg 2160

catgaagctc tccacaatca ttatacacag aagtctttgt ccctgtcccc cggcaag 2217

<210> 455
<211> 1042
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 455
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
20 25 30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
50 55 60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val
85 90 95

Glu Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg
100 105 110

Tyr Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr
115 120 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu
130 135 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145 150 155 160

Asn Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg
165 170 175

Ala Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
180 185 190

Leu Tyr His Trp Asp Leu Pro Leu Thr Leu Gln Glu Glu Tyr Gly Gly
195 200 205

Trp Lys Asn Ala Thr Met Ile Asp Leu Phe Asn Asp Tyr Ala Thr Tyr
210 215 220

Cys Phe Gln Thr Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His

225 230 235 240

Asn Pro Tyr Leu Val Ala Trp His Gly Phe Gly Thr Gly Met His Ala
245 250 255

Pro Gly Glu Lys Gly Asn Leu Thr Ala Val Tyr Thr Val Gly His Asn
260 265 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asp Lys Asn Phe
275 280 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
290 295 300

Ile Glu Pro Asn Arg Thr Asp Asn Met Glu Asp Val Ile Asn Cys Gln
305 310 315 320

His Ser Met Ser Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
325 330 335

Asp Gly Asp Tyr Pro Glu Phe Met Lys Thr Gly Ala Met Ile Pro Glu
340 345 350

Phe Ser Glu Ala Glu Lys Glu Glu Val Arg Gly Thr Ala Asp Phe Phe
355 360 365

Ala Phe Ser Phe Gly Pro Asn Asn Phe Arg Pro Ser Asn Thr Val Val
370 375 380

Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Gln Val Leu Asn Trp
385 390 395 400

Ile Lys Leu Glu Tyr Asp Asp Pro Gln Ile Leu Ile Ser Glu Asn Gly
405 410 415

Trp Phe Thr Asp Ser Tyr Ile Lys Thr Glu Asp Thr Thr Ala Ile Tyr
420 425 430

Met Met Lys Asn Phe Leu Asn Gln Val Leu Gln Ala Ile Lys Phe Asp
435 440 445

Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Thr Leu Leu Asp Gly Phe
450 455 460

Glu Trp Gln Asp Ala Tyr Thr Thr Arg Arg Gly Leu Phe Tyr Val Asp
465 470 475 480

Phe Asn Ser Glu Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala His Tyr
485 490 495

Tyr Lys Gln Ile Ile Gln Asp Asn Gly Phe Pro Leu Lys Glu Ser Thr
500 505 510

```
Pro Asp Met Lys Gly Arg Phe Pro Cys Asp Phe Ser Trp Gly Val Thr
        515                 520                 525

Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln Phe Ser
    530                 535                 540

Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu Leu His
545                 550                 555                 560

Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys Thr Asp
                565                 570                 575

Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met Lys Val
            580                 585                 590

Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro Thr Gly
        595                 600                 605

Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg Cys Val
    610                 615                 620

Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr Leu Tyr
625                 630                 635                 640

Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu His Ala
                645                 650                 655

Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala Tyr Ala
            660                 665                 670

Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp Ile Thr
        675                 680                 685

Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser Gly Asn
    690                 695                 700

Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala Leu Ala
705                 710                 715                 720

Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly Ala Val
                725                 730                 735

Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro Tyr Ala
            740                 745                 750

Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu Ile Ala
        755                 760                 765

Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala Ala Met
    770                 775                 780

Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser Ser Ala
785                 790                 795                 800
```

```
Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly Thr Val
                805                 810                 815

Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met His Glu
            820                 825                 830

Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln Phe Leu
        835                 840                 845

Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val Ile Pro
    850                 855                 860

Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr Gly Asp
865                 870                 875                 880

Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala Leu Glu
                885                 890                 895

Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln Glu Val
            900                 905                 910

Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr Tyr Ala
        915                 920                 925

Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe Phe Thr
    930                 935                 940

Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys Val Ile
945                 950                 955                 960

Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys Ser Gln
                965                 970                 975

Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val Gln Lys
            980                 985                 990

Lys Pro Leu Ile Phe Leu Gly Cys  Cys Phe Phe Ser Thr  Leu Val Leu
        995                 1000                1005

Leu Leu  Ser Ile Ala Ile Phe  Gln Arg Gln Lys Arg  Arg Lys Phe
    1010                1015                1020

Trp Lys  Ala Lys Asn Leu Gln  His Ile Pro Leu Lys  Lys Gly Lys
    1025                1030                1035

Arg Val  Val Ser
    1040
```

<210> 456
<211> 1045
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 456

```
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1               5                  10                  15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
            20                  25                  30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
        35                  40                  45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
    50                  55                  60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
            100                 105                 110

Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
        115                 120                 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
    130                 135                 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
                165                 170                 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270
```

```
Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445

Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Pro Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Met Lys Gly Arg Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Phe Thr Val Ser Ser Pro Gln
    530                 535                 540

Phe Thr Asp Pro His Leu Tyr Val Trp Asn Val Thr Gly Asn Arg Leu
545                 550                 555                 560
```

```
Leu Tyr Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ser Gln Cys
                565                 570                 575

Thr Asp Tyr Val Ser Ile Lys Lys Arg Val Glu Met Leu Ala Lys Met
            580                 585                 590

Lys Val Thr His Tyr Gln Phe Ala Leu Asp Trp Thr Ser Ile Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Lys Val Asn Arg Gln Val Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Val Phe Pro Met Val Thr
625                 630                 635                 640

Leu Tyr His Pro Thr His Ser His Leu Gly Leu Pro Leu Pro Leu Leu
                645                 650                 655

Ser Ser Gly Gly Trp Leu Asn Met Asn Thr Ala Lys Ala Phe Gln Asp
            660                 665                 670

Tyr Ala Glu Leu Cys Phe Arg Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Met Tyr Asn Arg Thr
    690                 695                 700

Ser Asn Asp Thr Tyr Arg Ala Ala His Asn Leu Met Ile Ala His Ala
705                 710                 715                 720

Gln Val Trp His Leu Tyr Asp Arg Gln Tyr Arg Pro Val Gln His Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Cys Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Phe Val Asp Ser His Trp Lys Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Asp Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ser
    770                 775                 780

Val Met Lys Glu Tyr Ile Ala Ser Lys Asn Gln Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Val Leu Pro Arg Phe Thr Ala Lys Glu Ser Arg Leu Val Lys Gly
                805                 810                 815

Thr Val Asp Phe Tyr Ala Leu Asn His Phe Thr Thr Arg Phe Val Ile
            820                 825                 830

His Lys Gln Leu Asn Thr Asn Arg Ser Val Ala Asp Arg Asp Val Gln
```

835 840 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Ser Arg Leu Ala Val
850 855 860

Thr Pro Trp Gly Val Arg Lys Leu Leu Ala Trp Ile Arg Arg Asn Tyr
865 870 875 880

Arg Asp Arg Asp Ile Tyr Ile Thr Ala Asn Gly Ile Asp Asp Leu Ala
885 890 895

Leu Glu Asp Asp Gln Ile Arg Lys Tyr Tyr Leu Glu Lys Tyr Val Gln
900 905 910

Glu Ala Leu Lys Ala Tyr Leu Ile Asp Lys Val Lys Ile Lys Gly Tyr
915 920 925

Tyr Ala Phe Lys Leu Thr Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
930 935 940

Phe Thr Ser Asp Phe Arg Ala Lys Ser Ser Val Gln Phe Tyr Ser Lys
945 950 955 960

Leu Ile Ser Ser Ser Gly Leu Pro Ala Glu Asn Arg Ser Pro Ala Cys
965 970 975

Gly Gln Pro Ala Glu Asp Thr Asp Cys Thr Ile Cys Ser Phe Leu Val
980 985 990

Glu Lys Lys Pro Leu Ile Phe Phe Gly Cys Cys Phe Ile Ser Thr Leu
995 1000 1005

Ala Val Leu Leu Ser Ile Thr Val Phe His His Gln Lys Arg Arg
1010 1015 1020

Lys Phe Gln Lys Ala Arg Asn Leu Gln Asn Ile Pro Leu Lys Lys
1025 1030 1035

Gly His Ser Arg Val Phe Ser
1040 1045

<210> 457
<211> 1044
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 457
Met Lys Thr Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Ser Asp Glu Arg Asn Thr Arg Ser Arg Lys Thr Met Ser Asn
20 25 30

```
Arg Ala Leu Gln Arg Ser Ala Val Leu Ser Ala Phe Val Leu Leu Arg
        35                  40                  45

Ala Val Thr Gly Phe Ser Gly Asp Gly Lys Ala Ile Trp Asp Lys Lys
    50                  55                  60

Gln Tyr Val Ser Pro Val Asn Pro Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80

Phe Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg
            100                 105                 110

Tyr Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr
        115                 120                 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu
    130                 135                 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

Asn Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg
                165                 170                 175

Ala Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
```

305 310 315 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
325 330 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
340 345 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
355 360 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
370 375 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385 390 395 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
405 410 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
420 425 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
435 440 445

Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
450 455 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465 470 475 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
485 490 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
500 505 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
515 520 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
530 535 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545 550 555 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
565 570 575

Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
580 585 590

```
Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
625                 630                 635                 640

Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
                645                 650                 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
            660                 665                 670

Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
705                 710                 715                 720

Leu Ala Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
    770                 775                 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
                805                 810                 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
            820                 825                 830

His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
    850                 855                 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865                 870                 875                 880
```

```
Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
                885                 890                 895


Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
            900                 905                 910


Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
        915                 920                 925


Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
    930                 935                 940


Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945                 950                 955                 960


Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
                965                 970                 975


Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
            980                 985                 990


Gln Lys Lys Pro Leu Ile Phe Leu  Gly Cys Cys Phe Phe  Ser Thr Leu
        995                 1000                1005


Val Leu  Leu Leu Ser Ile Ala  Ile Phe Gln Arg Gln  Lys Arg Arg
    1010                1015                1020


Lys Phe  Trp Lys Ala Lys Asn  Leu Gln His Ile Pro  Leu Lys Lys
    1025                1030                1035


Gly Lys  Arg Val Val Ser
    1040


<210> 458
<211> 1044
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 458
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1               5                   10                  15


Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
            20                  25                  30


Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
        35                  40                  45


Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
    50                  55                  60
```

```
Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80

Phe Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg
            100                 105                 110

Tyr Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr
        115                 120                 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu
    130                 135                 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

Asn Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg
                165                 170                 175

Ala Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Thr Leu Gln Glu Glu Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Ala Thr Met Ile Asp Leu Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Thr Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Phe Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Thr Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asp Lys Asn Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350
```

```
Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445

Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
    530                 535                 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
                565                 570                 575

Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
            580                 585                 590

Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
625                 630                 635                 640
```

```
Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
                645                 650                 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
            660                 665                 670

Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
705                 710                 715                 720

Leu Ala Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
    770                 775                 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
                805                 810                 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
            820                 825                 830

His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
    850                 855                 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865                 870                 875                 880

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
                885                 890                 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
            900                 905                 910

Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
```

915 920 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
930 935 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945 950 955 960

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
965 970 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
980 985 990

Gln Lys Lys Pro Leu Ile Phe Leu Gly Cys Cys Phe Phe Ser Thr Leu
995 1000 1005

Val Leu Leu Leu Ser Ile Ala Ile Phe Gln Arg Gln Lys Arg Arg
1010 1015 1020

Lys Phe Trp Lys Ala Lys Asn Leu Gln His Ile Pro Leu Lys Lys
1025 1030 1035

Gly Lys Arg Val Val Ser
1040

<210> 459
<211> 1042
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 459
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
20 25 30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
50 55 60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
85 90 95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
100 105 110

```
Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
        115                 120                 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
    130                 135                 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
                165                 170                 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Thr Leu Gln Glu Glu Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Ala Thr Met Ile Asp Leu Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Thr Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Phe Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Thr Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asp Lys Asn Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Thr Asp Asn Met Glu Asp Val Ile Asn Cys Gln
305                 310                 315                 320

His Ser Met Ser Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Phe Met Lys Thr Gly Ala Met Ile Pro Glu
            340                 345                 350

Phe Ser Glu Ala Glu Lys Glu Glu Val Arg Gly Thr Ala Asp Phe Phe
        355                 360                 365

Ala Phe Ser Phe Gly Pro Asn Asn Phe Arg Pro Ser Asn Thr Val Val
    370                 375                 380

Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Gln Val Leu Asn Trp
```

385 390 395 400

Ile Lys Leu Glu Tyr Asp Asp Pro Gln Ile Leu Ile Ser Glu Asn Gly
405 410 415

Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala Ile Tyr
420 425 430

Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg Leu Asp
435 440 445

Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp Gly Phe
450 455 460

Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr Val Asp
465 470 475 480

Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala His Tyr
485 490 495

Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu Ser Thr
500 505 510

Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly Val Thr
515 520 525

Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln Phe Ser
530 535 540

Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu Leu His
545 550 555 560

Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys Thr Asp
565 570 575

Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met Lys Val
580 585 590

Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro Thr Gly
595 600 605

Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg Cys Val
610 615 620

Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr Leu Tyr
625 630 635 640

Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu His Ala
645 650 655

Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala Tyr Ala
660 665 670

```
Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp Ile Thr
        675                 680                 685

Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser Gly Asn
    690                 695                 700

Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala Leu Ala
705                 710                 715                 720

Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly Ala Val
                725                 730                 735

Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro Tyr Ala
            740                 745                 750

Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu Ile Ala
        755                 760                 765

Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala Ala Met
    770                 775                 780

Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser Ser Ala
785                 790                 795                 800

Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly Thr Val
                805                 810                 815

Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met His Glu
            820                 825                 830

Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln Phe Leu
        835                 840                 845

Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val Ile Pro
    850                 855                 860

Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr Gly Asp
865                 870                 875                 880

Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala Leu Glu
                885                 890                 895

Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln Glu Val
            900                 905                 910

Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr Tyr Ala
        915                 920                 925

Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe Phe Thr
    930                 935                 940

Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys Val Ile
945                 950                 955                 960
```

```
Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys Ser Gln
                965                 970                 975

Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val Gln Lys
            980                 985                 990

Lys Pro Leu Ile Phe Leu Gly Cys  Cys Phe Phe Ser Thr  Leu Val Leu
        995                 1000                1005

Leu Leu  Ser Ile Ala Ile Phe  Gln Arg Gln Lys Arg  Arg Lys Phe
    1010                1015                1020

Trp Lys  Ala Lys Asn Leu Gln  His Ile Pro Leu Lys  Lys Gly Lys
    1025                1030                1035

Arg Val  Val Ser
    1040
```

<210> 460
<211> 1042
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 460

```
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1               5                   10                  15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
            20                  25                  30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
        35                  40                  45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
    50                  55                  60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
            100                 105                 110

Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
        115                 120                 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
    130                 135                 140
```

```
Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
                165                 170                 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Thr Asp Asn Met Glu Asp Val Ile Asn Cys Gln
305                 310                 315                 320

His Ser Met Ser Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Phe Met Lys Thr Gly Ala Met Ile Pro Glu
            340                 345                 350

Phe Ser Glu Ala Glu Lys Glu Glu Val Arg Gly Thr Ala Asp Phe Phe
        355                 360                 365

Ala Phe Ser Phe Gly Pro Asn Asn Phe Arg Pro Ser Asn Thr Val Val
    370                 375                 380

Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Gln Val Leu Asn Trp
385                 390                 395                 400

Ile Lys Leu Glu Tyr Asp Asp Pro Gln Ile Leu Ile Ser Glu Asn Gly
                405                 410                 415

Trp Phe Thr Asp Ser Tyr Ile Lys Thr Glu Asp Thr Thr Ala Ile Tyr
            420                 425                 430
```

```
Met Met Lys Asn Phe Leu Asn Gln Val Leu Gln Ala Ile Lys Phe Asp
        435                 440                 445

Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Thr Leu Leu Asp Gly Phe
    450                 455                 460

Glu Trp Gln Asp Ala Tyr Thr Thr Arg Arg Gly Leu Phe Tyr Val Asp
465                 470                 475                 480

Phe Asn Ser Glu Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala His Tyr
                485                 490                 495

Tyr Lys Gln Ile Ile Gln Asp Asn Gly Phe Ser Leu Lys Glu Ser Thr
            500                 505                 510

Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly Val Thr
        515                 520                 525

Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln Phe Ser
    530                 535                 540

Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu Leu His
545                 550                 555                 560

Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys Thr Asp
                565                 570                 575

Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met Lys Val
            580                 585                 590

Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro Thr Gly
        595                 600                 605

Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg Cys Val
    610                 615                 620

Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr Leu Tyr
625                 630                 635                 640

Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu His Ala
                645                 650                 655

Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala Tyr Ala
            660                 665                 670

Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp Ile Thr
        675                 680                 685

Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser Gly Asn
    690                 695                 700

Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala Leu Ala
705                 710                 715                 720
```

```
Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly Ala Val
                725                 730                 735

Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro Tyr Ala
            740                 745                 750

Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu Ile Ala
        755                 760                 765

Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala Ala Met
    770                 775                 780

Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser Ser Ala
785                 790                 795                 800

Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly Thr Val
                805                 810                 815

Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met His Glu
            820                 825                 830

Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln Phe Leu
        835                 840                 845

Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val Ile Pro
    850                 855                 860

Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr Gly Asp
865                 870                 875                 880

Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala Leu Glu
                885                 890                 895

Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln Glu Val
            900                 905                 910

Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr Tyr Ala
        915                 920                 925

Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe Phe Thr
    930                 935                 940

Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys Val Ile
945                 950                 955                 960

Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys Ser Gln
                965                 970                 975

Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val Gln Lys
            980                 985                 990

Lys Pro Leu Ile Phe Leu Gly Cys  Cys Phe Phe Ser Thr  Leu Val Leu
```

995 1000 1005

Leu Leu Ser Ile Ala Ile Phe Gln Arg Gln Lys Arg Arg Lys Phe
1010 1015 1020

Trp Lys Ala Lys Asn Leu Gln His Ile Pro Leu Lys Lys Gly Lys
1025 1030 1035

Arg Val Val Ser
1040

<210> 461
<211> 1044
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 461
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
20 25 30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
50 55 60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
85 90 95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
100 105 110

Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
115 120 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
130 135 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145 150 155 160

Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
165 170 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
180 185 190

```
Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Tyr Ile Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Asn Gln Val Leu Gln Ala Ile Lys
        435                 440                 445

Phe Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Thr Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Thr Arg Arg Gly Leu Phe Tyr
```

```
465                 470                 475                 480

Val Asp Phe Asn Ser Glu Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Gln Asp Asn Gly Phe Pro Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Met Lys Gly Arg Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
    530                 535                 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
                565                 570                 575

Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
            580                 585                 590

Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
625                 630                 635                 640

Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
                645                 650                 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
            660                 665                 670

Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
705                 710                 715                 720

Leu Ala Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750
```

```
Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
    770                 775                 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
                805                 810                 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
            820                 825                 830

His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
    850                 855                 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865                 870                 875                 880

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
                885                 890                 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
            900                 905                 910

Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
        915                 920                 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
    930                 935                 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945                 950                 955                 960

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
                965                 970                 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
            980                 985                 990

Gln Lys Lys Pro Leu Ile Phe Leu  Gly Cys Cys Phe Phe  Ser Thr Leu
        995                 1000                1005

Val Leu  Leu Leu Ser Ile Ala  Ile Phe Gln Arg Gln  Lys Arg Arg
    1010                1015                1020

Lys Phe  Trp Lys Ala Lys Asn  Leu Gln His Ile Pro  Leu Lys Lys
    1025                1030                1035
```

Gly Lys Arg Val Val Ser
1040

<210> 462
<211> 1044
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 462
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
20 25 30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
50 55 60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
85 90 95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
100 105 110

Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
115 120 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
130 135 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145 150 155 160

Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
165 170 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
180 185 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
195 200 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
210 215 220

```
Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445

Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Pro Leu Lys Glu
            500                 505                 510
```

```
Ser Thr Pro Asp Met Lys Gly Arg Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Phe Thr Val Ser Ser Pro Gln
    530                 535                 540

Phe Thr Asp Pro His Leu Tyr Val Trp Asn Val Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu Tyr Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ser Gln Cys
                565                 570                 575

Thr Asp Tyr Val Ser Ile Lys Lys Arg Val Glu Met Leu Ala Lys Met
            580                 585                 590

Lys Val Thr His Tyr Gln Phe Ala Leu Asp Trp Thr Ser Ile Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Lys Val Asn Arg Gln Val Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
625                 630                 635                 640

Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
                645                 650                 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
            660                 665                 670

Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
705                 710                 715                 720

Leu Ala Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
    770                 775                 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785                 790                 795                 800
```

```
Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
                805                 810                 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
            820                 825                 830

His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
    850                 855                 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865                 870                 875                 880

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
                885                 890                 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
            900                 905                 910

Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
        915                 920                 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
    930                 935                 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945                 950                 955                 960

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
                965                 970                 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
            980                 985                 990

Gln Lys Lys Pro Leu Ile Phe Leu  Gly Cys Cys Phe Phe  Ser Thr Leu
        995                 1000                1005

Val Leu  Leu Leu Ser Ile Ala  Ile Phe Gln Arg Gln  Lys Arg Arg
    1010                1015                1020

Lys Phe  Trp Lys Ala Lys Asn  Leu Gln His Ile Pro  Leu Lys Lys
    1025                1030                1035

Gly Lys  Arg Val Val Ser
    1040
```

<210> 463
<211> 1044
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 463

```
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1               5                  10                  15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
            20                  25                  30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
        35                  40                  45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
    50                  55                  60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
            100                 105                 110

Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
        115                 120                 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
    130                 135                 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
                165                 170                 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270
```

```
Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445

Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Phe Thr Val Ser Ser Pro Gln
    530                 535                 540

Phe Thr Asp Pro His Leu Tyr Val Trp Asn Val Thr Gly Asn Arg Leu
```

545 550 555 560

Leu Tyr Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ser Gln Cys
565 570 575

Thr Asp Tyr Val Ser Ile Lys Lys Arg Val Glu Met Leu Ala Lys Met
580 585 590

Lys Val Thr His Tyr Gln Phe Ala Leu Asp Trp Thr Ser Ile Leu Pro
595 600 605

Thr Gly Asn Leu Ser Lys Val Asn Arg Gln Val Leu Arg Tyr Tyr Arg
610 615 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Val Phe Pro Met Val Thr
625 630 635 640

Leu Tyr His Pro Thr His Ser His Leu Gly Leu Pro Leu Pro Leu Leu
645 650 655

Ser Ser Gly Gly Trp Leu Asn Met Asn Thr Ala Lys Ala Phe Gln Asp
660 665 670

Tyr Ala Glu Leu Cys Phe Arg Glu Leu Gly Asp Leu Val Lys Leu Trp
675 680 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Met Tyr Asn Arg Thr
690 695 700

Ser Asn Asp Thr Tyr Arg Ala Ala His Asn Leu Met Ile Ala His Ala
705 710 715 720

Gln Val Trp His Leu Tyr Asp Arg Gln Tyr Arg Pro Val Gln His Gly
725 730 735

Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
740 745 750

Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
755 760 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
770 775 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785 790 795 800

Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
805 810 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
820 825 830

```
His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
    850                 855                 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865                 870                 875                 880

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
                885                 890                 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
            900                 905                 910

Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
        915                 920                 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
    930                 935                 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945                 950                 955                 960

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
                965                 970                 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
            980                 985                 990

Gln Lys Lys Pro Leu Ile Phe Leu  Gly Cys Cys Phe Phe  Ser Thr Leu
        995                 1000                1005

Val Leu  Leu Leu Ser Ile Ala  Ile Phe Gln Arg Gln  Lys Arg Arg
    1010                1015                1020

Lys Phe  Trp Lys Ala Lys Asn  Leu Gln His Ile Pro  Leu Lys Lys
    1025                1030                1035

Gly Lys  Arg Val Val Ser
    1040


<210> 464
<211> 1044
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 464
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1               5                   10                  15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
```

20 25 30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
50 55 60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
85 90 95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
100 105 110

Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
115 120 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
130 135 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145 150 155 160

Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
165 170 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
180 185 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
195 200 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
210 215 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225 230 235 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
245 250 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
260 265 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
275 280 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
290 295 300

```
Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445

Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
    530                 535                 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
                565                 570                 575

Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
            580                 585                 590
```

```
Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Val Phe Pro Met Val Thr
625                 630                 635                 640

Leu Tyr His Pro Thr His Ser His Leu Gly Leu Pro Leu Pro Leu Leu
                645                 650                 655

Ser Ser Gly Gly Trp Leu Asn Met Asn Thr Ala Lys Ala Phe Gln Asp
            660                 665                 670

Tyr Ala Glu Leu Cys Phe Arg Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Met Tyr Asn Arg Thr
    690                 695                 700

Ser Asn Asp Thr Tyr Arg Ala Ala His Asn Leu Met Ile Ala His Ala
705                 710                 715                 720

Gln Val Trp His Leu Tyr Asp Arg Gln Tyr Arg Pro Val Gln His Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Cys Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Phe Val Asp Ser His Trp Lys Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Asp Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ser
    770                 775                 780

Val Met Lys Glu Tyr Ile Ala Ser Lys Asn Gln Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Val Leu Pro Arg Phe Thr Ala Lys Glu Ser Arg Leu Val Lys Gly
                805                 810                 815

Thr Val Asp Phe Tyr Ala Leu Asn His Phe Thr Thr Arg Phe Val Ile
            820                 825                 830

His Lys Gln Leu Asn Thr Asn Arg Ser Val Ala Asp Arg Asp Val Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
    850                 855                 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865                 870                 875                 880
```

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
885 890 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
900 905 910

Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
915 920 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
930 935 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945 950 955 960

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
965 970 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
980 985 990

Gln Lys Lys Pro Leu Ile Phe Leu Gly Cys Cys Phe Phe Ser Thr Leu
995 1000 1005

Val Leu Leu Leu Ser Ile Ala Ile Phe Gln Arg Gln Lys Arg Arg
1010 1015 1020

Lys Phe Trp Lys Ala Lys Asn Leu Gln His Ile Pro Leu Lys Lys
1025 1030 1035

Gly Lys Arg Val Val Ser
1040

<210> 465
<211> 1044
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 465
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
20 25 30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
50 55 60

```
Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
            100                 105                 110

Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
        115                 120                 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
    130                 135                 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
                165                 170                 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350
```

```
Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445

Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
    530                 535                 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
                565                 570                 575

Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
            580                 585                 590

Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
```

625 630 635 640

Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
645 650 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
660 665 670

Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
675 680 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
690 695 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
705 710 715 720

Leu Ala Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly
725 730 735

Ala Val Ser Leu Ser Leu His Cys Asp Trp Ala Glu Pro Ala Asn Pro
740 745 750

Phe Val Asp Ser His Trp Lys Ala Ala Glu Arg Phe Leu Gln Phe Glu
755 760 765

Ile Ala Trp Phe Ala Asp Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ser
770 775 780

Val Met Lys Glu Tyr Ile Ala Ser Lys Asn Gln Arg Gly Leu Ser Ser
785 790 795 800

Ser Val Leu Pro Arg Phe Thr Ala Lys Glu Ser Arg Leu Val Lys Gly
805 810 815

Thr Val Asp Phe Tyr Ala Leu Asn His Phe Thr Thr Arg Phe Val Ile
820 825 830

His Lys Gln Leu Asn Thr Asn Arg Ser Val Ala Asp Arg Asp Val Gln
835 840 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Ser Arg Leu Ala Val
850 855 860

Thr Pro Trp Gly Val Arg Lys Leu Leu Ala Trp Ile Arg Arg Asn Tyr
865 870 875 880

Arg Asp Arg Asp Ile Tyr Ile Thr Ala Asn Gly Ile Asp Asp Leu Ala
885 890 895

Leu Glu Asp Asp Gln Ile Arg Lys Tyr Tyr Leu Glu Lys Tyr Val Gln
900 905 910

```
Glu Ala Leu Lys Ala Tyr Leu Ile Asp Lys Val Lys Ile Lys Gly Tyr
        915                 920                 925

Tyr Ala Phe Lys Leu Thr Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
    930                 935                 940

Phe Thr Ser Asp Phe Arg Ala Lys Ser Ser Val Gln Phe Tyr Ser Lys
945                 950                 955                 960

Leu Ile Ser Ser Ser Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
                965                 970                 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
            980                 985                 990

Gln Lys Lys Pro Leu Ile Phe Leu  Gly Cys Cys Phe Phe  Ser Thr Leu
        995                 1000                1005

Val Leu  Leu Leu Ser Ile Ala  Ile Phe Gln Arg Gln  Lys Arg Arg
    1010                1015                1020

Lys Phe  Trp Lys Ala Lys Asn  Leu Gln His Ile Pro  Leu Lys Lys
    1025                1030                1035

Gly Lys  Arg Val Val Ser
    1040
```

<210> 466
<211> 1044
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 466

```
Met Lys Thr Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1               5                   10                  15

Phe Ser Ser Asp Glu Arg Asn Thr Arg Ser Arg Lys Thr Met Ser Asn
            20                  25                  30

Arg Ala Leu Gln Arg Ser Ala Val Leu Ser Ala Phe Val Leu Leu Arg
        35                  40                  45

Ala Val Thr Gly Phe Ser Gly Asp Gly Lys Ala Ile Trp Asp Lys Lys
    50                  55                  60

Gln Tyr Val Ser Pro Val Asn Pro Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80

Phe Pro Lys Asn Phe Phe Trp Gly Ile Gly Thr Gly Ala Leu Gln Val
                85                  90                  95

Glu Gly Ser Trp Lys Lys Asp Gly Lys Gly Pro Ser Ile Trp Asp His
```

100 105 110

Phe Ile His Thr His Leu Lys Asn Val Ser Ser Thr Asn Gly Ser Ser
115 120 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Ser Ala Leu Asp Phe Ile
130 135 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145 150 155 160

Asp Gly Ile Val Thr Val Ala Asn Ala Lys Gly Leu Gln Tyr Tyr Ser
165 170 175

Thr Leu Leu Asp Ala Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
180 185 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
195 200 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
210 215 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225 230 235 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
245 250 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
260 265 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
275 280 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
290 295 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305 310 315 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
325 330 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
340 345 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
355 360 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
370 375 380

```
Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430

Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445

Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
    530                 535                 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
                565                 570                 575

Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
            580                 585                 590

Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
625                 630                 635                 640

Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
                645                 650                 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
            660                 665                 670
```

```
Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
705                 710                 715                 720

Leu Ala Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly
                725                 730                 735

Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
            740                 745                 750

Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
        755                 760                 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
    770                 775                 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785                 790                 795                 800

Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
                805                 810                 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
            820                 825                 830

His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
        835                 840                 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
    850                 855                 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865                 870                 875                 880

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
                885                 890                 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
            900                 905                 910

Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
        915                 920                 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
    930                 935                 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945                 950                 955                 960
```

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
965 970 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
980 985 990

Gln Lys Lys Pro Leu Ile Phe Leu Gly Cys Cys Phe Phe Ser Thr Leu
995 1000 1005

Val Leu Leu Leu Ser Ile Ala Ile Phe Gln Arg Gln Lys Arg Arg
1010 1015 1020

Lys Phe Trp Lys Ala Lys Asn Leu Gln His Ile Pro Leu Lys Lys
1025 1030 1035

Gly Lys Arg Val Val Ser
1040

<210> 467
<211> 1044
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 467
Met Lys Pro Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Thr Asp Glu Ile Thr Thr Arg Tyr Arg Asn Thr Met Ser Asn
20 25 30

Gly Gly Leu Gln Arg Ser Val Ile Leu Ser Ala Leu Ile Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Arg Ala Ile Trp Ser Lys Asn
50 55 60

Pro Asn Phe Thr Pro Val Asn Glu Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val
85 90 95

Glu Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg
100 105 110

Tyr Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr
115 120 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu
130 135 140

```
Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160

Asn Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg
                165                 170                 175

Ala Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190

Leu Tyr His Trp Asp Leu Pro Leu Ala Leu Gln Glu Lys Tyr Gly Gly
        195                 200                 205

Trp Lys Asn Asp Thr Ile Ile Asp Ile Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Met Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Tyr Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Ala Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asn Thr His Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Ser Glu Asn Thr Met Asp Ile Phe Lys Cys Gln
305                 310                 315                 320

Gln Ser Met Val Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Gly Met Arg Lys Lys Leu Phe Ser Val Leu
            340                 345                 350

Pro Ile Phe Ser Glu Ala Glu Lys His Glu Met Arg Gly Thr Ala Asp
        355                 360                 365

Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Lys Pro Leu Asn Thr
    370                 375                 380

Met Ala Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Glu Ala Leu
385                 390                 395                 400

Asn Trp Ile Lys Leu Glu Tyr Asn Asn Pro Arg Ile Leu Ile Ala Glu
                405                 410                 415

Asn Gly Trp Phe Thr Asp Ser Arg Val Lys Thr Glu Asp Thr Thr Ala
            420                 425                 430
```

```
Ile Tyr Met Met Lys Asn Phe Leu Ser Gln Val Leu Gln Ala Ile Arg
        435                 440                 445

Leu Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Ser Leu Leu Asp
    450                 455                 460

Gly Phe Glu Trp Gln Asp Ala Tyr Thr Ile Arg Arg Gly Leu Phe Tyr
465                 470                 475                 480

Val Asp Phe Asn Ser Lys Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala
                485                 490                 495

His Tyr Tyr Lys Gln Ile Ile Arg Glu Asn Gly Phe Ser Leu Lys Glu
            500                 505                 510

Ser Thr Pro Asp Val Gln Gly Gln Phe Pro Cys Asp Phe Ser Trp Gly
        515                 520                 525

Val Thr Glu Ser Val Leu Lys Pro Glu Ser Val Ala Ser Ser Pro Gln
    530                 535                 540

Phe Ser Asp Pro His Leu Tyr Val Trp Asn Ala Thr Gly Asn Arg Leu
545                 550                 555                 560

Leu His Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ala Gln Cys
                565                 570                 575

Thr Asp Phe Val Asn Ile Lys Lys Gln Leu Glu Met Leu Ala Arg Met
            580                 585                 590

Lys Val Thr His Tyr Arg Phe Ala Leu Asp Trp Ala Ser Val Leu Pro
        595                 600                 605

Thr Gly Asn Leu Ser Ala Val Asn Arg Gln Ala Leu Arg Tyr Tyr Arg
    610                 615                 620

Cys Val Val Ser Glu Gly Leu Lys Leu Gly Ile Ser Ala Met Val Thr
625                 630                 635                 640

Leu Tyr Tyr Pro Thr His Ala His Leu Gly Leu Pro Glu Pro Leu Leu
                645                 650                 655

His Ala Asp Gly Trp Leu Asn Pro Ser Thr Ala Glu Ala Phe Gln Ala
            660                 665                 670

Tyr Ala Gly Leu Cys Phe Gln Glu Leu Gly Asp Leu Val Lys Leu Trp
        675                 680                 685

Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp Ile Tyr Asn Arg Ser
    690                 695                 700

Gly Asn Asp Thr Tyr Gly Ala Ala His Asn Leu Leu Val Ala His Ala
```

705 710 715 720

Leu Ala Trp Arg Leu Tyr Asp Gln Gln Phe Arg Pro Ser Gln Arg Gly
725 730 735

Ala Val Ser Leu Ser Leu His Ala Asp Trp Ala Glu Pro Ala Asn Pro
740 745 750

Tyr Ala Asp Ser His Trp Arg Ala Ala Glu Arg Phe Leu Gln Phe Glu
755 760 765

Ile Ala Trp Phe Ala Glu Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ala
770 775 780

Ala Met Arg Glu Tyr Ile Ala Ser Lys His Arg Arg Gly Leu Ser Ser
785 790 795 800

Ser Ala Leu Pro Arg Leu Thr Glu Ala Glu Arg Arg Leu Leu Lys Gly
805 810 815

Thr Val Asp Phe Cys Ala Leu Asn His Phe Thr Thr Arg Phe Val Met
820 825 830

His Glu Gln Leu Ala Gly Ser Arg Tyr Asp Ser Asp Arg Asp Ile Gln
835 840 845

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Thr Arg Leu Ala Val
850 855 860

Ile Pro Trp Gly Val Arg Lys Leu Leu Arg Trp Val Arg Arg Asn Tyr
865 870 875 880

Gly Asp Met Asp Ile Tyr Ile Thr Ala Ser Gly Ile Asp Asp Gln Ala
885 890 895

Leu Glu Asp Asp Arg Leu Arg Lys Tyr Tyr Leu Gly Lys Tyr Leu Gln
900 905 910

Glu Val Leu Lys Ala Tyr Leu Ile Asp Lys Val Arg Ile Lys Gly Tyr
915 920 925

Tyr Ala Phe Lys Leu Ala Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
930 935 940

Phe Thr Ser Asp Phe Lys Ala Lys Ser Ser Ile Gln Phe Tyr Asn Lys
945 950 955 960

Val Ile Ser Ser Arg Gly Phe Pro Phe Glu Asn Ser Ser Ser Arg Cys
965 970 975

Ser Gln Thr Gln Glu Asn Thr Glu Cys Thr Val Cys Leu Phe Leu Val
980 985 990

```
Gln Lys Lys Pro Leu Ile Phe Leu  Gly Cys Cys Phe Phe  Ser Thr Leu
        995                 1000                1005


Val Leu  Leu Leu Ser Ile Ala  Ile Phe Gln Arg Gln  Lys Arg Arg
    1010                1015                1020


Lys Phe  Trp Lys Ala Lys Asn  Leu Gln His Ile Pro  Leu Lys Lys
    1025                1030                1035


Gly Lys  Arg Val Val Ser
    1040
```

<210> 468
<211> 1043
<212> PRT
<213> Mus musculus

<400> 468

```
Met Lys Thr Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1               5                   10                  15


Phe Ser Ser Asp Glu Arg Asn Thr Arg Ser Arg Lys Thr Met Ser Asn
            20                  25                  30


Arg Ala Leu Gln Arg Ser Ala Val Leu Ser Ala Phe Val Leu Leu Arg
        35                  40                  45


Ala Val Thr Gly Phe Ser Gly Asp Gly Lys Ala Ile Trp Asp Lys Lys
    50                  55                  60


Gln Tyr Val Ser Pro Val Asn Pro Ser Gln Leu Phe Leu Tyr Asp Thr
65                  70                  75                  80


Phe Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val
                85                  90                  95


Glu Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg
            100                 105                 110


Tyr Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr
        115                 120                 125


Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu
    130                 135                 140


Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145                 150                 155                 160


Asn Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg
                165                 170                 175


Ala Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr
            180                 185                 190


Leu Tyr His Trp Asp Leu Pro Leu Thr Leu Gln Glu Glu Tyr Gly Gly
```

```
        195                 200                 205

Trp Lys Asn Ala Thr Met Ile Asp Leu Phe Asn Asp Tyr Ala Thr Tyr
    210                 215                 220

Cys Phe Gln Thr Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His
225                 230                 235                 240

Asn Pro Tyr Leu Val Ala Trp His Gly Phe Gly Thr Gly Met His Ala
                245                 250                 255

Pro Gly Glu Lys Gly Asn Leu Thr Ala Val Tyr Thr Val Gly His Asn
            260                 265                 270

Leu Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asp Lys Asn Phe
        275                 280                 285

Arg Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp
    290                 295                 300

Ile Glu Pro Asn Arg Thr Asp Asn Met Glu Asp Val Ile Asn Cys Gln
305                 310                 315                 320

His Ser Met Ser Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly
                325                 330                 335

Asp Gly Asp Tyr Pro Glu Phe Met Lys Thr Gly Ala Met Ile Pro Glu
            340                 345                 350

Phe Ser Glu Ala Glu Lys Glu Glu Val Arg Gly Thr Ala Asp Phe Phe
        355                 360                 365

Ala Phe Ser Phe Gly Pro Asn Asn Phe Arg Pro Ser Asn Thr Val Val
    370                 375                 380

Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Gln Val Leu Asn Trp
385                 390                 395                 400

Ile Lys Leu Glu Tyr Asp Asp Pro Gln Ile Leu Ile Ser Glu Asn Gly
                405                 410                 415

Trp Phe Thr Asp Ser Tyr Ile Lys Thr Glu Asp Thr Thr Ala Ile Tyr
            420                 425                 430

Met Met Lys Asn Phe Leu Asn Gln Val Leu Gln Ala Ile Lys Phe Asp
        435                 440                 445

Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Thr Leu Leu Asp Gly Phe
    450                 455                 460

Glu Trp Gln Asp Ala Tyr Thr Thr Arg Arg Gly Leu Phe Tyr Val Asp
465                 470                 475                 480
```

```
Phe Asn Ser Glu Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala His Tyr
                485                 490                 495

Tyr Lys Gln Ile Ile Gln Asp Asn Gly Phe Pro Leu Lys Glu Ser Thr
            500                 505                 510

Pro Asp Met Lys Gly Arg Phe Pro Cys Asp Phe Ser Trp Gly Val Thr
        515                 520                 525

Glu Ser Val Leu Lys Pro Glu Phe Thr Val Ser Ser Pro Gln Phe Thr
    530                 535                 540

Asp Pro His Leu Tyr Val Trp Asn Val Thr Gly Asn Arg Leu Leu Tyr
545                 550                 555                 560

Arg Val Glu Gly Val Arg Leu Lys Thr Arg Pro Ser Gln Cys Thr Asp
                565                 570                 575

Tyr Val Ser Ile Lys Lys Arg Val Glu Met Leu Ala Lys Met Lys Val
            580                 585                 590

Thr His Tyr Gln Phe Ala Leu Asp Trp Thr Ser Ile Leu Pro Thr Gly
        595                 600                 605

Asn Leu Ser Lys Val Asn Arg Gln Val Leu Arg Tyr Tyr Arg Cys Val
    610                 615                 620

Val Ser Glu Gly Leu Lys Leu Gly Val Phe Pro Met Val Thr Leu Tyr
625                 630                 635                 640

His Pro Thr His Ser His Leu Gly Leu Pro Leu Pro Leu Leu Ser Ser
                645                 650                 655

Gly Gly Trp Leu Asn Met Asn Thr Ala Lys Ala Phe Gln Asp Tyr Ala
            660                 665                 670

Glu Leu Cys Phe Arg Glu Leu Gly Asp Leu Val Lys Leu Trp Ile Thr
        675                 680                 685

Ile Asn Glu Pro Asn Arg Leu Ser Asp Met Tyr Asn Arg Thr Ser Asn
    690                 695                 700

Asp Thr Tyr Arg Ala Ala His Asn Leu Met Ile Ala His Ala Gln Val
705                 710                 715                 720

Trp His Leu Tyr Asp Arg Gln Tyr Arg Pro Val Gln His Gly Ala Val
                725                 730                 735

Ser Leu Ser Leu His Cys Asp Trp Ala Glu Pro Ala Asn Pro Phe Val
            740                 745                 750

Asp Ser His Trp Lys Ala Ala Glu Arg Phe Leu Gln Phe Glu Ile Ala
        755                 760                 765
```

```
Trp Phe Ala Asp Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ser Val Met
    770                 775                 780

Lys Glu Tyr Ile Ala Ser Lys Asn Gln Arg Gly Leu Ser Ser Ser Val
785                 790                 795                 800

Leu Pro Arg Phe Thr Ala Lys Glu Ser Arg Leu Val Lys Gly Thr Val
                805                 810                 815

Asp Phe Tyr Ala Leu Asn His Phe Thr Thr Arg Phe Val Ile His Lys
            820                 825                 830

Gln Leu Asn Thr Asn Arg Ser Val Ala Asp Arg Asp Val Gln Phe Leu
        835                 840                 845

Gln Asp Ile Thr Arg Leu Ser Ser Pro Ser Arg Leu Ala Val Thr Pro
    850                 855                 860

Trp Gly Val Arg Lys Leu Leu Ala Trp Ile Arg Arg Asn Tyr Arg Asp
865                 870                 875                 880

Arg Asp Ile Tyr Ile Thr Ala Asn Gly Ile Asp Asp Leu Ala Leu Glu
                885                 890                 895

Asp Asp Gln Ile Arg Lys Tyr Tyr Leu Glu Lys Tyr Val Gln Glu Ala
            900                 905                 910

Leu Lys Ala Tyr Leu Ile Asp Lys Val Lys Ile Lys Gly Tyr Tyr Ala
        915                 920                 925

Phe Lys Leu Thr Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe Phe Thr
    930                 935                 940

Ser Asp Phe Arg Ala Lys Ser Ser Val Gln Phe Tyr Ser Lys Leu Ile
945                 950                 955                 960

Ser Ser Ser Gly Leu Pro Ala Glu Asn Arg Ser Pro Ala Cys Gly Gln
                965                 970                 975

Pro Ala Glu Asp Thr Asp Cys Thr Ile Cys Ser Phe Leu Val Glu Lys
            980                 985                 990

Lys Pro Leu Ile Phe Phe Gly Cys  Cys Phe Ile Ser Thr  Leu Ala Val
        995                 1000                1005

Leu Leu  Ser Ile Thr Val Phe  His His Gln Lys Arg  Arg Lys Phe
    1010                1015                1020

Gln Lys  Ala Arg Asn Leu Gln  Asn Ile Pro Leu Lys  Lys Gly His
    1025                1030                1035

Ser Arg  Val Phe Ser
    1040
```

<210> 469
<211> 3132
<212> DNA
<213> Mus musculus

<400> 469
atgaagacag gctgtgcagc agggtctccg gggaatgaat ggattttctt cagctctgat 60

gaaagaaaca cacgctctag gaaaacaatg tccaacaggg cactgcaaag atctgccgtg 120

ctgtctgcgt ttgttctgct gcgagctgtt accggcttct ccggagacgg gaaagcaata 180

tgggataaaa aacagtacgt gagtccggta aacccaagtc agctgttcct ctatgacact 240

ttccctaaaa acttttcctg gggcgttggg accggagcat ttcaagtgga agggagttgg 300

aagacagatg gaagaggacc ctcgatctgg gatcggtacg tctactcaca cctgagaggt 360

gtcaacggca cagacagatc cactgacagt tacatctttc tggaaaaaga cttgttggct 420

ctggattttt taggagtttc tttttatcag ttctcaatct cctggccacg gttgtttccc 480

aatggaacag tagcagcagt gaatgcgcaa ggtctccggt actaccgtgc acttctggac 540

tcgctggtac ttaggaatat cgagcccatt gttaccttgt accattggga tttgcctctg 600

acgctccagg aagaatatgg gggctggaaa aatgcaacta tgatagatct cttcaacgac 660

tatgccacat actgcttcca gacctttgga gaccgtgtca aatattggat tacaattcac 720

aacccttacc ttgttgcttg gcatgggttt ggcacaggta tgcatgcacc aggagagaag 780

ggaaatttaa cagctgtcta cactgtggga cacaacctga tcaaggcaca ttcgaaagtg 840

tggcataact acgacaaaaa cttccgccct catcagaagg gttggctctc catcaccttg 900

gggtcccatt ggatagagcc aaacagaaca gacaacatgg aggacgtgat caactgccag 960

cactccatgt cctctgtgct tggatggttc gccaacccca tccacgggga cggcgactac 1020

cctgagttca tgaagacggg cgccatgatc cccgagttct ctgaggcaga gaaggaggag 1080

gtgaggggca cggctgattt ctttgccttt tccttcgggc ccaacaactt caggccctca 1140

aacaccgtgg tgaaaatggg acaaaatgta tcactcaact taaggcaggt gctgaactgg 1200

attaaactgg aatacgatga ccctcaaatc ttgatttcgg agaacggctg gttcacagat 1260

agctatataa agacagagga caccacggcc atctacatga tgaagaattt cctaaaccag 1320

gttcttcaag caataaaatt tgatgaaatc cgcgtgtttg gttatacggc ctggactctc 1380

ctggatggct ttgagtggca ggatgcctat acgacccgac gagggctgtt ttatgtggac 1440

tttaacagtg agcagaaaga gaggaaaccc aagtcctcgg ctcattacta caagcagatc 1500

atacaagaca acggcttccc tttgaaagag tccacgccag acatgaaggg tcggttcccc 1560

tgtgatttct cttggggagt cactgagtct gttcttaagc ccgagtttac ggtctcctcc 1620

ccgcagttta ccgatcctca cctgtatgtg tggaatgtca ctggcaacag attgctctac 1680

cgagtggaag gggtaaggct gaaaacaaga ccatcccagt gcacagatta tgtgagcatc 1740

aaaaaacgag ttgaaatgtt ggcaaaaatg aaagtcaccc actaccagtt tgctctggac 1800

tggacctcta tccttcccac tggcaatctg tccaaagtta acagacaagt gttaaggtac 1860

tataggtgtg tggtgagcga aggactgaag ctgggcgtct tccccatggt gacgttgtac 1920

cacccaaccc actcccatct cggcctcccc ctgccacttc tgagcagtgg ggggtggcta 1980

aacatgaaca cagccaaggc cttccaggac tacgctgagc tgtgcttccg ggagttgggg 2040

gacttggtga agctctggat caccatcaat gagcctaaca ggctgagtga catgtacaac 2100

cgcacgagta atgacaccta ccgtgcagcc cacaacctga tgatcgccca tgcccaggtc 2160

tggcacctct atgataggca gtataggccg gtccagcatg gggctgtgtc gctgtcctta 2220

cattgcgact gggcagaacc tgccaacccc tttgtggatt cacactggaa ggcagccgag 2280

cgcttcctcc agtttgagat cgcctggttt gcagatccgc tcttcaagac tggcgactat 2340

ccatcggtta tgaaggaata catcgcctcc aagaaccagc gagggctgtc tagctcagtc 2400

ctgccgcgct tcaccgcgaa ggagagcagg ctggtgaagg gtaccgtcga cttctacgca 2460

ctgaaccact tcactacgag gttcgtgata cacaagcagc tgaacaccaa ccgctcagtt 2520

gcagacaggg acgtccagtt cctgcaggac atcacccgcc taagctcgcc cagccgcctg 2580

gctgtaacac cctggggagt gcgcaagctc cttgcgtgga tccggaggaa ctacagagac 2640

agggatatct acatcacagc caatggcatc gatgacctgg ctctagagga tgatcagatc 2700

cgaaagtact acttggagaa gtatgtccag gaggctctga aagcatatct cattgacaag 2760

gtcaaaatca aaggctacta tgcattcaaa ctgactgaag agaaatctaa gcctagattt 2820

ggatttttca cctctgactt cagagctaag tcctctgtcc agttttacag caagctgatc 2880

agcagcagtg gcctccccgc tgagaacaga agtcctgcgt gtggtcagcc tgcggaagac 2940

acagactgca ccatttgctc atttctcgtg gagaagaaac cactcatctt cttcggttgc 3000

tgcttcatct ccactctggc tgtactgcta tccatcaccg tttttcatca tcaaaagaga 3060

agaaaattcc agaaagcaag gaacttacaa aatataccat tgaagaaagg ccacagcaga 3120

gttttcagct aa 3132

<210> 470
<211> 439
<212> PRT
<213> Mus musculus

<400> 470
Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val Glu
1 5 10 15

Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg Tyr
20 25 30

Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr Asp
35 40 45

Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu Gly
50 55 60

Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro Asn
65 70 75 80

Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg Ala

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                85                  90                  95

Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr Leu
            100                 105                 110

Tyr His Trp Asp Leu Pro Leu Thr Leu Gln Glu Glu Tyr Gly Gly Trp
        115                 120                 125

Lys Asn Ala Thr Met Ile Asp Leu Phe Asn Asp Tyr Ala Thr Tyr Cys
    130                 135                 140

Phe Gln Thr Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His Asn
145                 150                 155                 160

Pro Tyr Leu Val Ala Trp His Gly Phe Gly Thr Gly Met His Ala Pro
                165                 170                 175

Gly Glu Lys Gly Asn Leu Thr Ala Val Tyr Thr Val Gly His Asn Leu
            180                 185                 190

Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asp Lys Asn Phe Arg
        195                 200                 205

Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp Ile
    210                 215                 220

Glu Pro Asn Arg Thr Asp Asn Met Glu Asp Val Ile Asn Cys Gln His
225                 230                 235                 240

Ser Met Ser Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly Asp
                245                 250                 255

Gly Asp Tyr Pro Glu Phe Met Lys Thr Gly Ala Met Ile Pro Glu Phe
            260                 265                 270

Ser Glu Ala Glu Lys Glu Glu Val Arg Gly Thr Ala Asp Phe Phe Ala
        275                 280                 285

Phe Ser Phe Gly Pro Asn Asn Phe Arg Pro Ser Asn Thr Val Val Lys
    290                 295                 300

Met Gly Gln Asn Val Ser Leu Asn Leu Arg Gln Val Leu Asn Trp Ile
305                 310                 315                 320

Lys Leu Glu Tyr Asp Asp Pro Gln Ile Leu Ile Ser Glu Asn Gly Trp
                325                 330                 335

Phe Thr Asp Ser Tyr Ile Lys Thr Glu Asp Thr Thr Ala Ile Tyr Met
            340                 345                 350

Met Lys Asn Phe Leu Asn Gln Val Leu Gln Ala Ile Lys Phe Asp Glu
        355                 360                 365
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Ile Arg Val Phe Gly Tyr Thr Ala Trp Thr Leu Leu Asp Gly Phe Glu
370 375 380

Trp Gln Asp Ala Tyr Thr Thr Arg Arg Gly Leu Phe Tyr Val Asp Phe
385 390 395 400

Asn Ser Glu Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala His Tyr Tyr
405 410 415

Lys Gln Ile Ile Gln Asp Asn Gly Phe Pro Leu Lys Glu Ser Thr Pro
420 425 430

Asp Met Lys Gly Arg Phe Pro
435

<210> 471
<211> 538
<212> PRT
<213> Mus musculus

<400> 471
Phe Pro Leu Lys Glu Ser Thr Pro Asp Met Lys Gly Arg Phe Pro Cys
1 5 10 15

Asp Phe Ser Trp Gly Val Thr Glu Ser Val Leu Lys Pro Glu Phe Thr
20 25 30

Val Ser Ser Pro Gln Phe Thr Asp Pro His Leu Tyr Val Trp Asn Val
35 40 45

Thr Gly Asn Arg Leu Leu Tyr Arg Val Glu Gly Val Arg Leu Lys Thr
50 55 60

Arg Pro Ser Gln Cys Thr Asp Tyr Val Ser Ile Lys Lys Arg Val Glu
65 70 75 80

Met Leu Ala Lys Met Lys Val Thr His Tyr Gln Phe Ala Leu Asp Trp
85 90 95

Thr Ser Ile Leu Pro Thr Gly Asn Leu Ser Lys Val Asn Arg Gln Val
100 105 110

Leu Arg Tyr Tyr Arg Cys Val Val Ser Glu Gly Leu Lys Leu Gly Val
115 120 125

Phe Pro Met Val Thr Leu Tyr His Pro Thr His Ser His Leu Gly Leu
130 135 140

Pro Leu Pro Leu Leu Ser Ser Gly Gly Trp Leu Asn Met Asn Thr Ala
145 150 155 160

Lys Ala Phe Gln Asp Tyr Ala Glu Leu Cys Phe Arg Glu Leu Gly Asp
165 170 175

Leu Val Lys Leu Trp Ile Thr Ile Asn Glu Pro Asn Arg Leu Ser Asp

180 185 190

Met Tyr Asn Arg Thr Ser Asn Asp Thr Tyr Arg Ala Ala His Asn Leu
195 200 205

Met Ile Ala His Ala Gln Val Trp His Leu Tyr Asp Arg Gln Tyr Arg
210 215 220

Pro Val Gln His Gly Ala Val Ser Leu Ser Leu His Cys Asp Trp Ala
225 230 235 240

Glu Pro Ala Asn Pro Phe Val Asp Ser His Trp Lys Ala Ala Glu Arg
245 250 255

Phe Leu Gln Phe Glu Ile Ala Trp Phe Ala Asp Pro Leu Phe Lys Thr
260 265 270

Gly Asp Tyr Pro Ser Val Met Lys Glu Tyr Ile Ala Ser Lys Asn Gln
275 280 285

Arg Gly Leu Ser Ser Ser Val Leu Pro Arg Phe Thr Ala Lys Glu Ser
290 295 300

Arg Leu Val Lys Gly Thr Val Asp Phe Tyr Ala Leu Asn His Phe Thr
305 310 315 320

Thr Arg Phe Val Ile His Lys Gln Leu Asn Thr Asn Arg Ser Val Ala
325 330 335

Asp Arg Asp Val Gln Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro
340 345 350

Ser Arg Leu Ala Val Thr Pro Trp Gly Val Arg Lys Leu Leu Ala Trp
355 360 365

Ile Arg Arg Asn Tyr Arg Asp Arg Asp Ile Tyr Ile Thr Ala Asn Gly
370 375 380

Ile Asp Asp Leu Ala Leu Glu Asp Asp Gln Ile Arg Lys Tyr Tyr Leu
385 390 395 400

Glu Lys Tyr Val Gln Glu Ala Leu Lys Ala Tyr Leu Ile Asp Lys Val
405 410 415

Lys Ile Lys Gly Tyr Tyr Ala Phe Lys Leu Thr Glu Glu Lys Ser Lys
420 425 430

Pro Arg Phe Gly Phe Phe Thr Ser Asp Phe Arg Ala Lys Ser Ser Val
435 440 445

Gln Phe Tyr Ser Lys Leu Ile Ser Ser Ser Gly Leu Pro Ala Glu Asn
450 455 460

Arg Ser Pro Ala Cys Gly Gln Pro Ala Glu Asp Thr Asp Cys Thr Ile
465 470 475 480

Cys Ser Phe Leu Val Glu Lys Lys Pro Leu Ile Phe Phe Gly Cys Cys
485 490 495

Phe Ile Ser Thr Leu Ala Val Leu Leu Ser Ile Thr Val Phe His His
500 505 510

Gln Lys Arg Arg Lys Phe Gln Lys Ala Arg Asn Leu Gln Asn Ile Pro
515 520 525

Leu Lys Lys Gly His Ser Arg Val Phe Ser
530 535

<210> 472
<211> 193
<212> PRT
<213> Mus musculus

<400> 472
Met Lys Thr Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Ser Asp Glu Arg Asn Thr Arg Ser Arg Lys Thr Met Ser Asn
20 25 30

Arg Ala Leu Gln Arg Ser Ala Val Leu Ser Ala Phe Val Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Lys Ala Ile Trp Asp Lys Lys
50 55 60

Gln Tyr Val Ser Pro Val Asn Pro Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val
85 90 95

Glu Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg
100 105 110

Tyr Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr
115 120 125

Asp Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu
130 135 140

Gly Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro
145 150 155 160

Asn Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg
165 170 175

Ala Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr

180 185 190

Leu

<210> 473
<211> 221
<212> PRT
<213> Mus musculus

<400> 473
Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val Glu
1 5 10 15

Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg Tyr
20 25 30

Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr Asp
35 40 45

Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu Gly
50 55 60

Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro Asn
65 70 75 80

Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg Ala
85 90 95

Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr Leu
100 105 110

Tyr His Trp Asp Leu Pro Leu Thr Leu Gln Glu Glu Tyr Gly Gly Trp
115 120 125

Lys Asn Ala Thr Met Ile Asp Leu Phe Asn Asp Tyr Ala Thr Tyr Cys
130 135 140

Phe Gln Thr Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His Asn
145 150 155 160

Pro Tyr Leu Val Ala Trp His Gly Phe Gly Thr Gly Met His Ala Pro
165 170 175

Gly Glu Lys Gly Asn Leu Thr Ala Val Tyr Thr Val Gly His Asn Leu
180 185 190

Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asp Lys Asn Phe Arg
195 200 205

Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser
210 215 220

<210> 474
<211> 223

<212> PRT
<213> Mus musculus

<400> 474
Tyr His Trp Asp Leu Pro Leu Thr Leu Gln Glu Glu Tyr Gly Gly Trp
1 5 10 15

Lys Asn Ala Thr Met Ile Asp Leu Phe Asn Asp Tyr Ala Thr Tyr Cys
20 25 30

Phe Gln Thr Phe Gly Asp Arg Val Lys Tyr Trp Ile Thr Ile His Asn
35 40 45

Pro Tyr Leu Val Ala Trp His Gly Phe Gly Thr Gly Met His Ala Pro
50 55 60

Gly Glu Lys Gly Asn Leu Thr Ala Val Tyr Thr Val Gly His Asn Leu
65 70 75 80

Ile Lys Ala His Ser Lys Val Trp His Asn Tyr Asp Lys Asn Phe Arg
85 90 95

Pro His Gln Lys Gly Trp Leu Ser Ile Thr Leu Gly Ser His Trp Ile
100 105 110

Glu Pro Asn Arg Thr Asp Asn Met Glu Asp Val Ile Asn Cys Gln His
115 120 125

Ser Met Ser Ser Val Leu Gly Trp Phe Ala Asn Pro Ile His Gly Asp
130 135 140

Gly Asp Tyr Pro Glu Phe Met Lys Thr Gly Ala Met Ile Pro Glu Phe
145 150 155 160

Ser Glu Ala Glu Lys Glu Glu Val Arg Gly Thr Ala Asp Phe Phe Ala
165 170 175

Phe Ser Phe Gly Pro Asn Asn Phe Arg Pro Ser Asn Thr Val Val Lys
180 185 190

Met Gly Gln Asn Val Ser Leu Asn Leu Arg Gln Val Leu Asn Trp Ile
195 200 205

Lys Leu Glu Tyr Asp Asp Pro Gln Ile Leu Ile Ser Glu Asn Gly
210 215 220

<210> 475
<211> 205
<212> PRT
<213> Mus musculus

<400> 475
Ser His Trp Ile Glu Pro Asn Arg Thr Asp Asn Met Glu Asp Val Ile
1 5 10 15

Asn Cys Gln His Ser Met Ser Ser Val Leu Gly Trp Phe Ala Asn Pro

20 25 30

Ile His Gly Asp Gly Asp Tyr Pro Glu Phe Met Lys Thr Gly Ala Met
35 40 45

Ile Pro Glu Phe Ser Glu Ala Glu Lys Glu Glu Val Arg Gly Thr Ala
50 55 60

Asp Phe Phe Ala Phe Ser Phe Gly Pro Asn Asn Phe Arg Pro Ser Asn
65 70 75 80

Thr Val Val Lys Met Gly Gln Asn Val Ser Leu Asn Leu Arg Gln Val
85 90 95

Leu Asn Trp Ile Lys Leu Glu Tyr Asp Asp Pro Gln Ile Leu Ile Ser
100 105 110

Glu Asn Gly Trp Phe Thr Asp Ser Tyr Ile Lys Thr Glu Asp Thr Thr
115 120 125

Ala Ile Tyr Met Met Lys Asn Phe Leu Asn Gln Val Leu Gln Ala Ile
130 135 140

Lys Phe Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Thr Leu Leu
145 150 155 160

Asp Gly Phe Glu Trp Gln Asp Ala Tyr Thr Thr Arg Arg Gly Leu Phe
165 170 175

Tyr Val Asp Phe Asn Ser Glu Gln Lys Glu Arg Lys Pro Lys Ser Ser
180 185 190

Ala His Tyr Tyr Lys Gln Ile Ile Gln Asp Asn Gly Phe
195 200 205

<210> 476
<211> 104
<212> PRT
<213> Mus musculus

<400> 476
Gly Trp Phe Thr Asp Ser Tyr Ile Lys Thr Glu Asp Thr Thr Ala Ile
1 5 10 15

Tyr Met Met Lys Asn Phe Leu Asn Gln Val Leu Gln Ala Ile Lys Phe
20 25 30

Asp Glu Ile Arg Val Phe Gly Tyr Thr Ala Trp Thr Leu Leu Asp Gly
35 40 45

Phe Glu Trp Gln Asp Ala Tyr Thr Thr Arg Arg Gly Leu Phe Tyr Val
50 55 60

Asp Phe Asn Ser Glu Gln Lys Glu Arg Lys Pro Lys Ser Ser Ala His
65 70 75 80

Tyr Tyr Lys Gln Ile Ile Gln Asp Asn Gly Phe Pro Leu Lys Glu Ser
85 90 95

Thr Pro Asp Met Lys Gly Arg Phe
100

<210> 477
<211> 126
<212> PRT
<213> Mus musculus

<400> 477
Pro Leu Lys Glu Ser Thr Pro Asp Met Lys Gly Arg Phe Pro Cys Asp
1 5 10 15

Phe Ser Trp Gly Val Thr Glu Ser Val Leu Lys Pro Glu Phe Thr Val
20 25 30

Ser Ser Pro Gln Phe Thr Asp Pro His Leu Tyr Val Trp Asn Val Thr
35 40 45

Gly Asn Arg Leu Leu Tyr Arg Val Glu Gly Val Arg Leu Lys Thr Arg
50 55 60

Pro Ser Gln Cys Thr Asp Tyr Val Ser Ile Lys Lys Arg Val Glu Met
65 70 75 80

Leu Ala Lys Met Lys Val Thr His Tyr Gln Phe Ala Leu Asp Trp Thr
85 90 95

Ser Ile Leu Pro Thr Gly Asn Leu Ser Lys Val Asn Arg Gln Val Leu
100 105 110

Arg Tyr Tyr Arg Cys Val Val Ser Glu Gly Leu Lys Leu Gly
115 120 125

<210> 478
<211> 216
<212> PRT
<213> Mus musculus

<400> 478
Pro Cys Asp Phe Ser Trp Gly Val Thr Glu Ser Val Leu Lys Pro Glu
1 5 10 15

Phe Thr Val Ser Ser Pro Gln Phe Thr Asp Pro His Leu Tyr Val Trp
20 25 30

Asn Val Thr Gly Asn Arg Leu Leu Tyr Arg Val Glu Gly Val Arg Leu
35 40 45

Lys Thr Arg Pro Ser Gln Cys Thr Asp Tyr Val Ser Ile Lys Lys Arg
50 55 60

Val Glu Met Leu Ala Lys Met Lys Val Thr His Tyr Gln Phe Ala Leu

65 70 75 80

Asp Trp Thr Ser Ile Leu Pro Thr Gly Asn Leu Ser Lys Val Asn Arg
85 90 95

Gln Val Leu Arg Tyr Tyr Arg Cys Val Val Ser Glu Gly Leu Lys Leu
100 105 110

Gly Val Phe Pro Met Val Thr Leu Tyr His Pro Thr His Ser His Leu
115 120 125

Gly Leu Pro Leu Pro Leu Leu Ser Ser Gly Gly Trp Leu Asn Met Asn
130 135 140

Thr Ala Lys Ala Phe Gln Asp Tyr Ala Glu Leu Cys Phe Arg Glu Leu
145 150 155 160

Gly Asp Leu Val Lys Leu Trp Ile Thr Ile Asn Glu Pro Asn Arg Leu
165 170 175

Ser Asp Met Tyr Asn Arg Thr Ser Asn Asp Thr Tyr Arg Ala Ala His
180 185 190

Asn Leu Met Ile Ala His Ala Gln Val Trp His Leu Tyr Asp Arg Gln
195 200 205

Tyr Arg Pro Val Gln His Gly Ala
210 215

<210> 479
<211> 218
<212> PRT
<213> Mus musculus

<400> 479
Gly Val Phe Pro Met Val Thr Leu Tyr His Pro Thr His Ser His Leu
1 5 10 15

Gly Leu Pro Leu Pro Leu Leu Ser Ser Gly Gly Trp Leu Asn Met Asn
20 25 30

Thr Ala Lys Ala Phe Gln Asp Tyr Ala Glu Leu Cys Phe Arg Glu Leu
35 40 45

Gly Asp Leu Val Lys Leu Trp Ile Thr Ile Asn Glu Pro Asn Arg Leu
50 55 60

Ser Asp Met Tyr Asn Arg Thr Ser Asn Asp Thr Tyr Arg Ala Ala His
65 70 75 80

Asn Leu Met Ile Ala His Ala Gln Val Trp His Leu Tyr Asp Arg Gln
85 90 95

Tyr Arg Pro Val Gln His Gly Ala Val Ser Leu Ser Leu His Cys Asp
100 105 110

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Trp Ala Glu Pro Ala Asn Pro Phe Val Asp Ser His Trp Lys Ala Ala
        115                 120                 125

Glu Arg Phe Leu Gln Phe Glu Ile Ala Trp Phe Ala Asp Pro Leu Phe
    130                 135                 140

Lys Thr Gly Asp Tyr Pro Ser Val Met Lys Glu Tyr Ile Ala Ser Lys
145                 150                 155                 160

Asn Gln Arg Gly Leu Ser Ser Ser Val Leu Pro Arg Phe Thr Ala Lys
                165                 170                 175

Glu Ser Arg Leu Val Lys Gly Thr Val Asp Phe Tyr Ala Leu Asn His
            180                 185                 190

Phe Thr Thr Arg Phe Val Ile His Lys Gln Leu Asn Thr Asn Arg Ser
        195                 200                 205

Val Ala Asp Arg Asp Val Gln Phe Leu Gln
    210                 215
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<210> 480
<211> 229
<212> PRT
<213> Mus musculus

<400> 480

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Ala Val Ser Leu Ser Leu His Cys Asp Trp Ala Glu Pro Ala Asn Pro
1               5                   10                  15

Phe Val Asp Ser His Trp Lys Ala Ala Glu Arg Phe Leu Gln Phe Glu
            20                  25                  30

Ile Ala Trp Phe Ala Asp Pro Leu Phe Lys Thr Gly Asp Tyr Pro Ser
        35                  40                  45

Val Met Lys Glu Tyr Ile Ala Ser Lys Asn Gln Arg Gly Leu Ser Ser
    50                  55                  60

Ser Val Leu Pro Arg Phe Thr Ala Lys Glu Ser Arg Leu Val Lys Gly
65                  70                  75                  80

Thr Val Asp Phe Tyr Ala Leu Asn His Phe Thr Thr Arg Phe Val Ile
                85                  90                  95

His Lys Gln Leu Asn Thr Asn Arg Ser Val Ala Asp Arg Asp Val Gln
            100                 105                 110

Phe Leu Gln Asp Ile Thr Arg Leu Ser Ser Pro Ser Arg Leu Ala Val
        115                 120                 125

Thr Pro Trp Gly Val Arg Lys Leu Leu Ala Trp Ile Arg Arg Asn Tyr
    130                 135                 140
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Arg Asp Arg Asp Ile Tyr Ile Thr Ala Asn Gly Ile Asp Asp Leu Ala
145 150 155 160

Leu Glu Asp Asp Gln Ile Arg Lys Tyr Tyr Leu Glu Lys Tyr Val Gln
165 170 175

Glu Ala Leu Lys Ala Tyr Leu Ile Asp Lys Val Lys Ile Lys Gly Tyr
180 185 190

Tyr Ala Phe Lys Leu Thr Glu Glu Lys Ser Lys Pro Arg Phe Gly Phe
195 200 205

Phe Thr Ser Asp Phe Arg Ala Lys Ser Ser Val Gln Phe Tyr Ser Lys
210 215 220

Leu Ile Ser Ser Ser
225

<210> 481
<211> 81
<212> PRT
<213> Mus musculus

<400> 481
Met Lys Thr Gly Cys Ala Ala Gly Ser Pro Gly Asn Glu Trp Ile Phe
1 5 10 15

Phe Ser Ser Asp Glu Arg Asn Thr Arg Ser Arg Lys Thr Met Ser Asn
20 25 30

Arg Ala Leu Gln Arg Ser Ala Val Leu Ser Ala Phe Val Leu Leu Arg
35 40 45

Ala Val Thr Gly Phe Ser Gly Asp Gly Lys Ala Ile Trp Asp Lys Lys
50 55 60

Gln Tyr Val Ser Pro Val Asn Pro Ser Gln Leu Phe Leu Tyr Asp Thr
65 70 75 80

Phe

<210> 482
<211> 112
<212> PRT
<213> Mus musculus

<400> 482
Pro Lys Asn Phe Ser Trp Gly Val Gly Thr Gly Ala Phe Gln Val Glu
1 5 10 15

Gly Ser Trp Lys Thr Asp Gly Arg Gly Pro Ser Ile Trp Asp Arg Tyr
20 25 30

Val Tyr Ser His Leu Arg Gly Val Asn Gly Thr Asp Arg Ser Thr Asp
35 40 45

Ser Tyr Ile Phe Leu Glu Lys Asp Leu Leu Ala Leu Asp Phe Leu Gly
50 55 60

Val Ser Phe Tyr Gln Phe Ser Ile Ser Trp Pro Arg Leu Phe Pro Asn
65 70 75 80

Gly Thr Val Ala Ala Val Asn Ala Gln Gly Leu Arg Tyr Tyr Arg Ala
85 90 95

Leu Leu Asp Ser Leu Val Leu Arg Asn Ile Glu Pro Ile Val Thr Leu
100 105 110

<210> 483
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Thr or absent

<400> 483
Arg Ile Lys Ser Lys Xaa Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro Val
1 5 10 15

Lys Gly