SEQUENCE LISTING

<110> Almo, Steven C
Seidel, Ronald D III
Chaparro, Rodolfo J
Hillerich, Brandan S
Garforth, Scott J

<120> Syntac Polypeptides and Uses Thereof

<130> 96700/2236

<150> 62/013715
<151> 2014-06-18

<160> 102

<170> PatentIn version 3.5

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<220>
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Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
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Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
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Gly Gly Gly Ser

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

Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly Glu Arg Ile Glu Lys
35 40 45

Val Glu His Ser Asp Leu Ser Phe Ser Lys Asp Trp Ser Phe Tyr Leu
50 55 60

Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys Asp Glu Tyr Ala Cys

65 70 75 80

Arg Val Asn His Val Thr Leu Ser Gln Pro Lys Ile Val Lys Trp Asp
85 90 95

Arg Asp Met

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Gly Ser His Ser Met Arg Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly
1 5 10 15

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

Phe Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro Arg
35 40 45

Ala Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr
50 55 60

Arg Lys Val Lys Ala His Ser Gln Thr His Arg Val Asp Leu Gly Thr
65 70 75 80

Leu Arg Gly Tyr Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Val Gln
85 90 95

Arg Met Tyr Gly Cys Asp Val Gly Ser Asp Trp Arg Phe Leu Arg Gly
100 105 110

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Tyr His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu
        115                 120                 125

Asp Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Thr Thr Lys
    130                 135                 140

His Lys Trp Glu Ala Ala His Val Ala Glu Gln Leu Arg Ala Tyr Leu
145                 150                 155                 160

Glu Gly Thr Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys
                165                 170                 175

Glu Thr Leu Gln Arg Thr Asp Ala Pro Lys Thr His Met Thr His His
            180                 185                 190

Ala Val Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Ser Phe
        195                 200                 205

Tyr Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln
    210                 215                 220

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

Phe Gln Lys Trp Ala Ala Val Val Val Pro Ser Gly Gln Glu Gln Arg
                245                 250                 255

Tyr Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr Leu
            260                 265                 270

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


Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
        35                  40                  45


Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
    50                  55                  60


Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65                  70                  75                  80


Ser Lys Asp Trp Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro
                85                  90                  95


Thr Glu Lys Asp Glu Tyr Ala Cys Arg Val Asn His Val Thr Leu Ser
            100                 105                 110


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


Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Phe
    130                 135                 140


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


Val Thr Met Glu Cys Arg Phe Pro Val Glu Arg Glu Leu Asp Leu Leu
```

```
                165                 170                 175

Ala Leu Val Val Tyr Trp Glu Lys Glu Asp Glu Gln Val Ile Gln Phe
            180                 185                 190

Val Ala Gly Glu Glu Asp Leu Lys Pro Gln His Ser Asn Phe Arg Gly
        195                 200                 205

Arg Ala Ser Leu Pro Lys Asp Gln Leu Leu Lys Gly Asn Ala Ala Leu
    210                 215                 220

Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr Cys Cys Ile
225                 230                 235                 240

Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Leu Lys Val Asn
                245                 250                 255

Ala Pro Tyr Arg Lys Ile Asn Gln Arg Ile Ser Val Asp Pro Ala Thr
            260                 265                 270

Ser Glu His Glu Leu Ile Cys Gln Ala Glu Gly Tyr Pro Glu Ala Glu
        275                 280                 285

Val Ile Trp Thr Asn Ser Asp His Gln Pro Val Ser Gly Lys Arg Ser
    290                 295                 300

Val Thr Thr Ser Arg Thr Glu Gly Met Leu Leu Asn Val Thr Ser Ser
305                 310                 315                 320

Leu Arg Val Asn Ala Thr Ala Asn Asp Val Phe Tyr Cys Thr Phe Trp
                325                 330                 335

Arg Ser Gln Pro Gly Gln Asn His Thr Ala Glu Leu Ile Ile Pro Glu
            340                 345                 350

Leu Pro Ala Thr His Pro Pro Gln Asn Arg Thr Ser Gly Ser Gly Ala
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        355                 360                 365

Thr Asn Phe Ser Leu Leu Lys Gln Ala Gly Asp Val Glu Glu Asn Pro
    370                 375                 380

Gly Pro Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser
385                 390                 395                 400

Leu Ser Gly Leu Glu Ala Gly Ser His Ser Met Arg Tyr Phe Phe Thr
                405                 410                 415

Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ala Val Gly
            420                 425                 430

Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala Ala Ser
        435                 440                 445

Gln Arg Met Glu Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly Pro Glu
    450                 455                 460

Tyr Trp Asp Gly Glu Thr Arg Lys Val Lys Ala His Ser Gln Thr His
465                 470                 475                 480

Arg Val Asp Leu Gly Thr Leu Arg Gly Cys Tyr Asn Gln Ser Glu Ala
                485                 490                 495

Gly Ser His Thr Val Gln Arg Met Tyr Gly Cys Asp Val Gly Ser Asp
            500                 505                 510

Trp Arg Phe Leu Arg Gly Tyr His Gln Tyr Ala Tyr Asp Gly Lys Asp
        515                 520                 525

Tyr Ile Ala Leu Lys Glu Asp Leu Arg Ser Trp Thr Ala Ala Asp Met
    530                 535                 540

Ala Ala Gln Thr Thr Lys His Lys Trp Glu Ala Ala His Val Ala Glu
```

```
545                 550                 555                 560

Gln Leu Arg Ala Tyr Leu Glu Gly Thr Cys Val Glu Trp Leu Arg Arg
                565                 570                 575

Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Thr Asp Ala Pro Lys
            580                 585                 590

Thr His Met Thr His His Ala Val Ser Asp His Glu Ala Thr Leu Arg
        595                 600                 605

Cys Trp Ala Leu Ser Phe Tyr Pro Ala Glu Ile Thr Leu Thr Trp Gln
    610                 615                 620

Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu Thr Arg
625                 630                 635                 640

Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala Val Val Val Pro
                645                 650                 655

Ser Gly Gln Glu Gln Arg Tyr Thr Cys His Val Gln His Glu Gly Leu
            660                 665                 670

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

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
    690                 695                 700

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
705                 710                 715                 720

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
                725                 730                 735

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

740 745 750

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
755 760 765

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
770 775 780

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
785 790 795 800

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
805 810 815

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
820 825 830

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
835 840 845

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
850 855 860

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

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
885 890 895

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
900 905 910

Gly Lys Gly Gly Ser His His His His His His His His
915 920 925

<210> 7

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Leu Leu Phe Gly Tyr Pro Val Tyr Val Gly Cys Gly Gly Ser Gly Gly
1               5                  10                  15


Gly Gly Ser Gly Gly Gly Gly Ser Ile Gln Arg Thr Pro Lys Ile Gln
            20                  25                  30


Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn
        35                  40                  45


Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu
    50                  55                  60


Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe
65                  70                  75                  80


Ser Lys Asp Trp Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro
                85                  90                  95


Thr Glu Lys Asp Glu Tyr Ala Cys Arg Val Asn His Val Thr Leu Ser
            100                 105                 110


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


Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser
    130                 135                 140


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

```
Glu Glu Asn Pro Gly Pro Met Ser Arg Ser Val Ala Leu Ala Val Leu
                165                 170                 175

Ala Leu Leu Ser Leu Ser Gly Leu Glu Ala Phe Thr Ile Thr Ala Pro
            180                 185                 190

Lys Asp Leu Tyr Val Val Glu Tyr Gly Ser Asn Val Thr Met Glu Cys
        195                 200                 205

Arg Phe Pro Val Glu Arg Glu Leu Asp Leu Leu Ala Leu Val Val Tyr
    210                 215                 220

Trp Glu Lys Glu Asp Glu Gln Val Ile Gln Phe Val Ala Gly Glu Glu
225                 230                 235                 240

Asp Leu Lys Pro Gln His Ser Asn Phe Arg Gly Arg Ala Ser Leu Pro
                245                 250                 255

Lys Asp Gln Leu Leu Lys Gly Asn Ala Ala Leu Gln Ile Thr Asp Val
            260                 265                 270

Lys Leu Gln Asp Ala Gly Val Tyr Cys Cys Ile Ile Ser Tyr Gly Gly
        275                 280                 285

Ala Asp Tyr Lys Arg Ile Thr Leu Lys Val Asn Ala Pro Tyr Arg Lys
    290                 295                 300

Ile Asn Gln Arg Ile Ser Val Asp Pro Ala Thr Ser Glu His Glu Leu
305                 310                 315                 320

Ile Cys Gln Ala Glu Gly Tyr Pro Glu Ala Glu Val Ile Trp Thr Asn
                325                 330                 335

Ser Asp His Gln Pro Val Ser Gly Lys Arg Ser Val Thr Thr Ser Arg
            340                 345                 350
```

```
Thr Glu Gly Met Leu Leu Asn Val Thr Ser Ser Leu Arg Val Asn Ala
        355                 360                 365

Thr Ala Asn Asp Val Phe Tyr Cys Thr Phe Trp Arg Ser Gln Pro Gly
    370                 375                 380

Gln Asn His Thr Ala Glu Leu Ile Ile Pro Glu Leu Pro Ala Thr His
385                 390                 395                 400

Pro Pro Gln Asn Arg Thr Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
                405                 410                 415

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Ser His Ser Met Arg
            420                 425                 430

Tyr Phe Phe Thr Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe
        435                 440                 445

Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser
    450                 455                 460

Asp Ala Ala Ser Gln Arg Met Glu Pro Arg Ala Pro Trp Ile Glu Gln
465                 470                 475                 480

Glu Gly Pro Glu Tyr Trp Asp Gly Glu Thr Arg Lys Val Lys Ala His
                485                 490                 495

Ser Gln Thr His Arg Val Asp Leu Gly Thr Leu Arg Gly Cys Tyr Asn
            500                 505                 510

Gln Ser Glu Ala Gly Ser His Thr Val Gln Arg Met Tyr Gly Cys Asp
        515                 520                 525

Val Gly Ser Asp Trp Arg Phe Leu Arg Gly Tyr His Gln Tyr Ala Tyr
    530                 535                 540
```

```
Asp Gly Lys Asp Tyr Ile Ala Leu Lys Glu Asp Leu Arg Ser Trp Thr
545                 550                 555                 560


Ala Ala Asp Met Ala Ala Gln Thr Thr Lys His Lys Trp Glu Ala Ala
                565                 570                 575


His Val Ala Glu Gln Leu Arg Ala Tyr Leu Glu Gly Thr Cys Val Glu
            580                 585                 590


Trp Leu Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Thr
        595                 600                 605


Asp Ala Pro Lys Thr His Met Thr His His Ala Val Ser Asp His Glu
    610                 615                 620


Ala Thr Leu Arg Cys Trp Ala Leu Ser Phe Tyr Pro Ala Glu Ile Thr
625                 630                 635                 640


Leu Thr Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu
                645                 650                 655


Val Glu Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala
            660                 665                 670


Val Val Val Pro Ser Gly Gln Glu Gln Arg Tyr Thr Cys His Val Gln
        675                 680                 685


His Glu Gly Leu Pro Lys Pro Leu Thr Leu Arg Trp Glu Pro Ala Ala
    690                 695                 700


Ala Gly Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
705                 710                 715                 720


Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
                725                 730                 735
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```
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
            740                 745                 750

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
        755                 760                 765

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
    770                 775                 780

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
785                 790                 795                 800

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
                805                 810                 815

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
            820                 825                 830

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
        835                 840                 845

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
    850                 855                 860

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
865                 870                 875                 880

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
                885                 890                 895

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
            900                 905                 910

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
        915                 920                 925
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Ser Leu Ser Pro Gly Lys Gly Gly Ser His His His His His His His
    930   935   940

His
945

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<223> Repeat n times where n is an integer of at least 1

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Gly Ser Gly Gly Ser
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<222> (1)..(4)
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Gly Gly Gly Ser
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<400> 10

Gly Gly Ser Gly
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<210> 11
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<220>
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<400> 11

Gly Gly Ser Gly Gly
1 5

<210> 12
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<220>
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<400> 12

Gly Ser Gly Ser Gly
1 5

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<220>
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<400> 13

Gly Ser Gly Gly Gly
1 5

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<400> 14

Gly Gly Gly Ser Gly
1 5

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<400> 15

Gly Ser Ser Ser Gly
1 5

<210> 16
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<400> 16

Gly Cys Gly Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

1 5 10 15

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<400> 17

Leu Leu Phe Gly Tyr Pro Val Tyr Val
1 5

<210> 18
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<400> 18

Lys Tyr Gln Ala Val Thr Thr Thr Leu
1 5

<210> 19
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<213> Artificial Sequence

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<400> 19

Val Tyr Leu Lys Thr Asn Val Phe Leu
1 5

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Thr Tyr Leu Lys Thr Asn Leu Phe Leu
1 5

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

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Phe Val Arg Phe Asp Ser Asp Ala Asp Asn Pro Arg Phe Glu Pro Arg
        35                  40                  45

Ala Pro Trp Met Glu Gln Glu Gly Pro Glu Tyr Trp Glu Glu Gln Thr
    50                  55                  60

Gln Arg Ala Lys Ser Asp Glu Gln Trp Phe Arg Val Ser Leu Arg Thr
65                  70                  75                  80

Ala Gln Arg Tyr Tyr Asn Gln Ser Lys Gly Gly Ser His Thr Phe Gln
                85                  90                  95

Arg Met Phe Gly Cys Asp Val Gly Ser Asp Trp Arg Leu Leu Arg Gly
            100                 105                 110

Tyr Gln Gln Phe Ala Tyr Asp Gly Arg Asp Tyr Ile Ala Leu Asn Glu
        115                 120                 125

Asp Leu Lys Thr Trp Thr Ala Ala Asp Thr Ala Ala Leu Ile Thr Arg
    130                 135                 140

Arg Lys Trp Glu Gln Ala Gly Asp Ala Glu Tyr Tyr Arg Ala Tyr Leu
145                 150                 155                 160

Glu Gly Glu Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Leu Gly Asn
                165                 170                 175

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

Pro Arg Ser Gln Val Asp Val Thr Leu Arg Cys Trp Ala Leu Gly Phe
        195                 200                 205

Tyr Pro Ala Asp Ile Thr Leu Thr Trp Gln Leu Asn Gly Glu Asp Leu
    210                 215                 220
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```
Thr Gln Asp Met Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly Thr
225                 230                 235                 240


Phe Gln Lys Trp Ala Ala Val Val Val Pro Leu Gly Lys Glu Gln Asn
                245                 250                 255


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


Arg Trp
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<400> 23

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

<210> 26
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<400> 26

His His His His His
1 5

<210> 27
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<400> 27

His His His His His His
1 5

<210> 28
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Trp Ser His Pro Gln Phe Glu Lys
1 5

<210> 29
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<212> PRT
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<400> 29

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
1 5

<210> 30
<211> 5
<212> PRT
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<220>
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<400> 30

Arg Tyr Ile Arg Ser
1 5

<210> 31
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<220>
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<400> 31

Phe His His Thr
1

<210> 32

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Ala

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1 5

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<400> 34

Glu Asn Leu Tyr Thr Gln Ser

1 5

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

<220>
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<400> 35

Asp Asp Asp Asp Lys
1 5

<210> 36
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<400> 36

Leu Val Pro Arg
1

<210> 37
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<400> 37

Leu Glu Val Leu Phe Gln Gly Pro
1 5

<210> 38
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<212> PRT

<213> Artificial Sequence

<220>
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<400> 38

Cys Gly Leu Val Pro Ala Gly Ser Gly Pro
1 5 10

<210> 39
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<220>
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<400> 39

Ser Leu Leu Lys Ser Arg Met Val Pro Asn Phe Asn
1 5 10

<210> 40
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<220>
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<400> 40

Ser Leu Leu Ile Ala Arg Arg Met Pro Asn Phe Asn
1 5 10

<210> 41
<211> 12
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<220>
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<400> 41

Ser Lys Leu Val Gln Ala Ser Ala Ser Gly Val Asn
1 5 10

<210> 42
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
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<400> 42

Ser Ser Tyr Leu Lys Ala Ser Asp Ala Pro Asp Asn
1 5 10

<210> 43
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<213> Artificial Sequence

<220>
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<400> 43

Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Asn
1 5 10

<210> 44
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<213> Artificial Sequence

<220>
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<400> 44

Ser Leu Arg Pro Leu Ala Leu Trp Arg Ser Phe Asn
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<210> 45

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<400> 45

Ser Pro Gln Gly Ile Ala Gly Gln Arg Asn Phe Asn
1 5 10

<210> 46
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<400> 46

Asp Val Asp Glu Arg Asp Val Arg Gly Phe Ala Ser Phe Leu
1 5 10

<210> 47
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<220>
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<400> 47

Ser Leu Pro Leu Gly Leu Trp Ala Pro Asn Phe Asn
1 5 10

<210> 48
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<213> Artificial Sequence

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<400> 48

Ser Leu Leu Ile Phe Arg Ser Trp Ala Asn Phe Asn
1 5 10

<210> 49
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 49

Ser Gly Val Val Ile Ala Thr Val Ile Val Ile Thr
1 5 10

<210> 50
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<212> PRT
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<220>
<223> Synthetic peptide

<400> 50

Ser Leu Gly Pro Gln Gly Ile Trp Gly Gln Phe Asn
1 5 10

<210> 51
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 51

Lys Lys Ser Pro Gly Arg Val Val Gly Gly Ser Val
1 5 10

<210> 52
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 52

Pro Gln Gly Leu Leu Gly Ala Pro Gly Ile Leu Gly
1 5 10

<210> 53
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 53

His Gly Pro Glu Gly Leu Arg Val Gly Phe Tyr Glu Ser Asp Val Met
1 5 10 15

Gly Arg Gly His Ala Arg Leu Val His Val Glu Glu Pro His Thr
20 25 30

<210> 54
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 54

Gly Pro Gln Gly Leu Ala Gly Gln Arg Gly Ile Val
1 5 10

<210> 55

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

<220>
<223> Synthetic peptide

<400> 55

Gly Gly Ser Gly Gln Arg Gly Arg Lys Ala Leu Glu
1 5 10

<210> 56
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 56

Ser Leu Ser Ala Leu Leu Ser Ser Asp Ile Phe Asn
1 5 10

<210> 57
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 57

Ser Leu Pro Arg Phe Lys Ile Ile Gly Gly Phe Asn
1 5 10

<210> 58
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 58

Ser Leu Leu Gly Ile Ala Val Pro Gly Asn Phe Asn
1 5 10

<210> 59
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 59

Phe Phe Lys Asn Ile Val Thr Pro Arg Thr Pro Pro
1 5 10

<210> 60
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 60

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

Pro Gly Pro

<210> 61
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 61

Glu Gly Arg Gly Ser Leu Leu Thr Cys Gly Asp Val Glu Glu Asn Pro
1 5 10 15

Gly Pro

<210> 62
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 62

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

Asn Pro Gly Pro
20

<210> 63
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 63

Val Lys Gln Thr Leu Asn Phe Asp Leu Leu Lys Leu Ala Gly Asp Val
1 5 10 15

Glu Ser Asn Pro Gly Pro
20

<210> 64
<211> 22
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 64

Gly Ser Gly Ala Thr Asn Phe Ser Leu Leu Lys Gln Ala Gly Asp Val
1 5 10 15

Glu Glu Asn Pro Gly Pro
20

<210> 65
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 65

Gly Ser Gly Glu Gly Arg Gly Ser Leu Leu Thr Cys Gly Asp Val Glu
1 5 10 15

Glu Asn Pro Gly Pro
20

<210> 66
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 66

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

Val Glu Ser Asn Pro Gly Pro

20

<210> 67
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 67

Gly Ser Gly Val Lys Gln Thr Leu Asn Phe Asp Leu Leu Lys Leu Ala
1 5 10 15

Gly Asp Val Glu Ser Asn Pro Gly Pro
20 25

<210> 68
<211> 20
<212> PRT
<213> Homo sapiens

<400> 68

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1 5 10 15

Gly Leu Glu Ala
20

<210> 69
<211> 225
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 69

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1 5 10 15

```
Gly Leu Glu Ala Ala Cys Pro Trp Ala Val Ser Gly Ala Arg Ala Ser
            20                  25                  30

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

Pro Asp Asp Pro Ala Gly Leu Leu Asp Leu Arg Gln Gly Met Phe Ala
    50                  55                  60

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

Tyr Ser Asp Pro Gly Leu Ala Gly Val Ser Leu Thr Gly Gly Leu Ser
                85                  90                  95

Tyr Lys Glu Asp Thr Lys Glu Leu Val Val Ala Lys Ala Gly Val Tyr
            100                 105                 110

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

Ser Gly Ser Val Ser Leu Ala Leu His Leu Gln Pro Leu Arg Ser Ala
    130                 135                 140

Ala Gly Ala Ala Ala Leu Ala Leu Thr Val Asp Leu Pro Pro Ala Ser
145                 150                 155                 160

Ser Glu Ala Arg Asn Ser Ala Phe Gly Phe Gln Gly Arg Leu Leu His
                165                 170                 175

Leu Ser Ala Gly Gln Arg Leu Gly Val His Leu His Thr Glu Ala Arg
            180                 185                 190

Ala Arg His Ala Trp Gln Leu Thr Gln Gly Ala Thr Val Leu Gly Leu
        195                 200                 205
```

Phe Arg Val Thr Pro Glu Ile Pro Ala Gly Leu Pro Ser Pro Arg Ser
210 215 220

Glu
225

<210> 70
<211> 939
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 70

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1 5 10 15

Gly Leu Glu Ala Val Tyr Leu Lys Thr Asn Val Phe Leu Gly Cys Gly
20 25 30

Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Met Ile Gln Lys
35 40 45

Thr Pro Gln Ile Gln Val Tyr Ser Arg His Pro Pro Glu Asn Gly Lys
50 55 60

Pro Asn Ile Leu Asn Cys Tyr Val Thr Gln Phe His Pro Pro His Ile
65 70 75 80

Glu Ile Gln Met Leu Lys Asn Gly Lys Lys Ile Pro Lys Val Glu Met
85 90 95

Ser Asp Met Ser Phe Ser Lys Asp Trp Ser Phe Tyr Ile Leu Ala His
100 105 110

```
Thr Glu Phe Thr Pro Thr Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys
        115                 120                 125

His Ala Ser Met Ala Glu Pro Lys Thr Val Tyr Trp Asp Arg Asp Met
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

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

Gly Ala Arg Ala Ser Pro Gly Ser Ala Ala Ser Pro Arg Leu Arg Glu
            180                 185                 190

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

Gln Gly Met Phe Ala Gln Leu Val Ala Gln Asn Val Leu Leu Ile Asp
    210                 215                 220

Gly Pro Leu Ser Trp Tyr Ser Asp Pro Gly Leu Ala Gly Val Ser Leu
225                 230                 235                 240

Thr Gly Gly Leu Ser Tyr Lys Glu Asp Thr Lys Glu Leu Val Val Ala
                245                 250                 255

Lys Ala Gly Val Tyr Tyr Val Phe Phe Gln Leu Glu Leu Arg Arg Val
            260                 265                 270

Val Ala Gly Glu Gly Ser Gly Ser Val Ser Leu Ala Leu His Leu Gln
        275                 280                 285

Pro Leu Arg Ser Ala Ala Gly Ala Ala Ala Leu Ala Leu Thr Val Asp
    290                 295                 300
```

```
Leu Pro Pro Ala Ser Ser Glu Ala Arg Asn Ser Ala Phe Gly Phe Gln
305                 310                 315                 320


Gly Arg Leu Leu His Leu Ser Ala Gly Gln Arg Leu Gly Val His Leu
                325                 330                 335


His Thr Glu Ala Arg Ala Arg His Ala Trp Gln Leu Thr Gln Gly Ala
            340                 345                 350


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


Pro Ser Pro Arg Ser Glu Ser Gly Ser Gly Ala Thr Asn Phe Ser Leu
    370                 375                 380


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


Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser Gly Leu Glu
                405                 410                 415


Ala Gly Pro His Ser Leu Arg Tyr Phe Val Thr Ala Val Ser Arg Pro
            420                 425                 430


Gly Leu Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr
        435                 440                 445


Gln Phe Val Arg Phe Asp Ser Asp Ala Asp Asn Pro Arg Phe Glu Pro
    450                 455                 460


Arg Ala Pro Trp Met Glu Gln Glu Gly Pro Glu Tyr Trp Glu Glu Gln
465                 470                 475                 480


Thr Gln Arg Ala Lys Ser Asp Glu Gln Trp Phe Arg Val Ser Leu Arg
                485                 490                 495
```

```
Thr Ala Gln Arg Cys Tyr Asn Gln Ser Lys Gly Gly Ser His Thr Phe
            500                 505                 510

Gln Arg Met Phe Gly Cys Asp Val Gly Ser Asp Trp Arg Leu Leu Arg
        515                 520                 525

Gly Tyr Gln Gln Phe Ala Tyr Asp Gly Arg Asp Tyr Ile Ala Leu Asn
    530                 535                 540

Glu Asp Leu Lys Thr Trp Thr Ala Ala Asp Thr Ala Ala Leu Ile Thr
545                 550                 555                 560

Arg Arg Lys Trp Glu Gln Ala Gly Asp Ala Glu Tyr Tyr Arg Ala Tyr
                565                 570                 575

Leu Glu Gly Glu Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Leu Gly
            580                 585                 590

Asn Glu Thr Leu Leu Arg Thr Asp Ser Pro Lys Ala His Val Thr Tyr
        595                 600                 605

His Pro Arg Ser Gln Val Asp Val Thr Leu Arg Cys Trp Ala Leu Gly
    610                 615                 620

Phe Tyr Pro Ala Asp Ile Thr Leu Thr Trp Gln Leu Asn Gly Glu Asp
625                 630                 635                 640

Leu Thr Gln Asp Met Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly
                645                 650                 655

Thr Phe Gln Lys Trp Ala Ala Val Val Val Pro Leu Gly Lys Glu Gln
            660                 665                 670

Asn Tyr Thr Cys His Val His His Lys Gly Leu Pro Glu Pro Leu Thr
        675                 680                 685
```

```
Leu Arg Trp Ala Ala Ala Gly Gly Pro Arg Gly Pro Thr Ile Lys Pro
    690                 695                 700

Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser
705                 710                 715                 720

Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu
                725                 730                 735

Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro
            740                 745                 750

Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
        755                 760                 765

Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val
    770                 775                 780

Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
785                 790                 795                 800

Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr
                805                 810                 815

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

Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys
        835                 840                 845

Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn
    850                 855                 860

Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp
865                 870                 875                 880
```

Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys
885 890 895

Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly
900 905 910

Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
915 920 925

Gly Gly Ser His His His His His His His His
930 935

<210> 71
<211> 939
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 71

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1 5 10 15

Gly Leu Glu Ala Val Tyr Leu Lys Thr Asn Val Phe Leu Gly Cys Gly
20 25 30

Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Met Ile Gln Lys
35 40 45

Thr Pro Gln Ile Gln Val Tyr Ser Arg His Pro Pro Glu Asn Gly Lys
50 55 60

Pro Asn Ile Leu Asn Cys Tyr Val Thr Gln Phe His Pro Pro His Ile
65 70 75 80

Glu Ile Gln Met Leu Lys Asn Gly Lys Lys Ile Pro Lys Val Glu Met
85 90 95

```
Ser Asp Met Ser Phe Ser Lys Asp Trp Ser Phe Tyr Ile Leu Ala His
            100                 105                 110

Thr Glu Phe Thr Pro Thr Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys
        115                 120                 125

His Ala Ser Met Ala Glu Pro Lys Thr Val Tyr Trp Asp Arg Asp Met
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

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

Gly Ala Arg Ala Ser Pro Gly Ser Ala Ala Ser Pro Arg Leu Arg Glu
            180                 185                 190

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

Gln Gly Met Phe Ala Cys Leu Val Ala Gln Asn Val Leu Leu Ile Asp
    210                 215                 220

Gly Pro Leu Ser Trp Tyr Ser Asp Pro Gly Leu Ala Gly Val Ser Leu
225                 230                 235                 240

Thr Gly Gly Leu Ser Tyr Lys Glu Asp Thr Lys Glu Leu Val Val Ala
                245                 250                 255

Lys Ala Gly Val Tyr Tyr Val Phe Phe Gln Leu Glu Leu Arg Arg Val
            260                 265                 270

Val Ala Gly Glu Gly Ser Gly Ser Val Ser Leu Ala Leu His Leu Gln
        275                 280                 285
```

```
Pro Leu Arg Ser Ala Ala Gly Ala Ala Ala Leu Ala Leu Thr Val Asp
    290                 295                 300

Leu Pro Pro Ala Ser Ser Glu Ala Arg Asn Ser Ala Phe Gly Phe Gln
305                 310                 315                 320

Gly Arg Leu Leu His Leu Ser Ala Gly Gln Arg Leu Gly Val His Leu
                325                 330                 335

His Thr Glu Ala Arg Ala Arg His Ala Trp Gln Leu Thr Gln Gly Ala
            340                 345                 350

Thr Val Leu Gly Leu Phe Arg Val Thr Pro Glu Ile Cys Ala Gly Leu
        355                 360                 365

Pro Ser Pro Arg Ser Glu Ser Gly Ser Gly Ala Thr Asn Phe Ser Leu
    370                 375                 380

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

Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser Gly Leu Glu
                405                 410                 415

Ala Gly Pro His Ser Leu Arg Tyr Phe Val Thr Ala Val Ser Arg Pro
            420                 425                 430

Gly Leu Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr
        435                 440                 445

Gln Phe Val Arg Phe Asp Ser Asp Ala Asp Asn Pro Arg Phe Glu Pro
    450                 455                 460

Arg Ala Pro Trp Met Glu Gln Glu Gly Pro Glu Tyr Trp Glu Glu Gln
465                 470                 475                 480
```

```
Thr Gln Arg Ala Lys Ser Asp Glu Gln Trp Phe Arg Val Ser Leu Arg
                485                 490                 495

Thr Ala Gln Arg Cys Tyr Asn Gln Ser Lys Gly Gly Ser His Thr Phe
            500                 505                 510

Gln Arg Met Phe Gly Cys Asp Val Gly Ser Asp Trp Arg Leu Leu Arg
        515                 520                 525

Gly Tyr Gln Gln Phe Ala Tyr Asp Gly Arg Asp Tyr Ile Ala Leu Asn
    530                 535                 540

Glu Asp Leu Lys Thr Trp Thr Ala Ala Asp Thr Ala Ala Leu Ile Thr
545                 550                 555                 560

Arg Arg Lys Trp Glu Gln Ala Gly Asp Ala Glu Tyr Tyr Arg Ala Tyr
                565                 570                 575

Leu Glu Gly Glu Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Leu Gly
            580                 585                 590

Asn Glu Thr Leu Leu Arg Thr Asp Ser Pro Lys Ala His Val Thr Tyr
        595                 600                 605

His Pro Arg Ser Gln Val Asp Val Thr Leu Arg Cys Trp Ala Leu Gly
    610                 615                 620

Phe Tyr Pro Ala Asp Ile Thr Leu Thr Trp Gln Leu Asn Gly Glu Asp
625                 630                 635                 640

Leu Thr Gln Asp Met Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly
                645                 650                 655

Thr Phe Gln Lys Trp Ala Ala Val Val Val Pro Leu Gly Lys Glu Gln
            660                 665                 670
```

```
Asn Tyr Thr Cys His Val His His Lys Gly Leu Pro Glu Pro Leu Thr
        675                 680                 685

Leu Arg Trp Ala Ala Ala Gly Gly Pro Arg Gly Pro Thr Ile Lys Pro
    690                 695                 700

Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser
705                 710                 715                 720

Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu
                725                 730                 735

Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro
            740                 745                 750

Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
        755                 760                 765

Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val
    770                 775                 780

Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
785                 790                 795                 800

Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr
                805                 810                 815

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

Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys
        835                 840                 845

Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn
    850                 855                 860
```

```
Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp
865                 870                 875                 880


Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys
                885                 890                 895


Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly
            900                 905                 910


Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
        915                 920                 925


Gly Gly Ser His His His His His His His His
    930                 935


<210>  72
<211>  225
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic polypeptide

<400>  72

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1               5                   10                  15


Gly Leu Glu Ala Ala Cys Pro Trp Ala Val Ser Gly Ala Arg Ala Ser
            20                  25                  30


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


Pro Asp Asp Pro Ala Gly Leu Leu Asp Leu Arg Gln Gly Met Phe Ala
    50                  55                  60
```

```
Cys Leu Val Ala Gln Asn Val Leu Leu Ile Asp Gly Pro Leu Ser Trp
65                  70                  75                  80

Tyr Ser Asp Pro Gly Leu Ala Gly Val Ser Leu Thr Gly Gly Leu Ser
                85                  90                  95

Tyr Lys Glu Asp Thr Lys Glu Leu Val Val Ala Lys Ala Gly Val Tyr
            100                 105                 110

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

Ser Gly Ser Val Ser Leu Ala Leu His Leu Gln Pro Leu Arg Ser Ala
    130                 135                 140

Ala Gly Ala Ala Ala Leu Ala Leu Thr Val Asp Leu Pro Pro Ala Ser
145                 150                 155                 160

Ser Glu Ala Arg Asn Ser Ala Phe Gly Phe Gln Gly Arg Leu Leu His
                165                 170                 175

Leu Ser Ala Gly Gln Arg Leu Gly Val His Leu His Thr Glu Ala Arg
            180                 185                 190

Ala Arg His Ala Trp Gln Leu Thr Gln Gly Ala Thr Val Leu Gly Leu
        195                 200                 205

Phe Arg Val Thr Pro Glu Ile Cys Ala Gly Leu Pro Ser Pro Arg Ser
    210                 215                 220

Glu
225
```

<210> 73
<211> 939
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 73

```
Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1               5                   10                  15


Gly Leu Glu Ala Val Tyr Leu Lys Thr Asn Val Phe Leu Gly Cys Gly
            20                  25                  30


Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Met Ile Gln Lys
        35                  40                  45


Thr Pro Gln Ile Gln Val Tyr Ser Arg His Pro Pro Glu Asn Gly Lys
    50                  55                  60


Pro Asn Ile Leu Asn Cys Tyr Val Thr Gln Phe His Pro Pro His Ile
65                  70                  75                  80


Glu Ile Gln Met Leu Lys Asn Gly Lys Lys Ile Pro Lys Val Glu Met
                85                  90                  95


Ser Asp Met Ser Phe Ser Lys Asp Trp Ser Phe Tyr Ile Leu Ala His
            100                 105                 110


Thr Glu Phe Thr Pro Thr Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys
        115                 120                 125


His Ala Ser Met Ala Glu Pro Lys Thr Val Tyr Trp Asp Arg Asp Met
    130                 135                 140


Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160


Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Cys Pro Trp Ala Val Ser
                165                 170                 175
```

```
Gly Ala Arg Ala Ser Pro Gly Ser Ala Ala Ser Pro Arg Leu Arg Glu
            180                 185                 190

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

Gln Gly Met Phe Ala Cys Leu Val Ala Gln Asn Val Leu Leu Ile Asp
    210                 215                 220

Gly Pro Leu Ser Trp Tyr Ser Asp Pro Gly Leu Ala Gly Val Ser Leu
225                 230                 235                 240

Thr Gly Gly Leu Ser Tyr Lys Glu Asp Thr Lys Glu Leu Val Val Ala
                245                 250                 255

Lys Ala Gly Val Tyr Tyr Val Phe Phe Gln Leu Glu Leu Arg Arg Val
            260                 265                 270

Val Ala Gly Glu Gly Ser Gly Ser Val Ser Leu Ala Leu His Leu Gln
        275                 280                 285

Pro Leu Arg Ser Ala Ala Gly Ala Ala Ala Leu Ala Leu Thr Val Asp
    290                 295                 300

Leu Pro Pro Ala Ser Ser Glu Ala Arg Asn Ser Ala Phe Gly Phe Gln
305                 310                 315                 320

Gly Arg Leu Leu His Leu Ser Ala Gly Gln Arg Leu Gly Val His Leu
                325                 330                 335

His Thr Glu Ala Arg Ala Arg His Ala Trp Gln Leu Thr Gln Gly Ala
            340                 345                 350

Thr Val Leu Gly Leu Phe Arg Val Thr Cys Glu Ile Pro Ala Gly Leu
        355                 360                 365
```

```
Pro Ser Pro Arg Ser Glu Ser Gly Ser Gly Ala Thr Asn Phe Ser Leu
    370                 375                 380

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

Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser Gly Leu Glu
                405                 410                 415

Ala Gly Pro His Ser Leu Arg Tyr Phe Val Thr Ala Val Ser Arg Pro
            420                 425                 430

Gly Leu Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr
        435                 440                 445

Gln Phe Val Arg Phe Asp Ser Asp Ala Asp Asn Pro Arg Phe Glu Pro
    450                 455                 460

Arg Ala Pro Trp Met Glu Gln Glu Gly Pro Glu Tyr Trp Glu Glu Gln
465                 470                 475                 480

Thr Gln Arg Ala Lys Ser Asp Glu Gln Trp Phe Arg Val Ser Leu Arg
                485                 490                 495

Thr Ala Gln Arg Cys Tyr Asn Gln Ser Lys Gly Gly Ser His Thr Phe
            500                 505                 510

Gln Arg Met Phe Gly Cys Asp Val Gly Ser Asp Trp Arg Leu Leu Arg
        515                 520                 525

Gly Tyr Gln Gln Phe Ala Tyr Asp Gly Arg Asp Tyr Ile Ala Leu Asn
    530                 535                 540

Glu Asp Leu Lys Thr Trp Thr Ala Ala Asp Thr Ala Ala Leu Ile Thr
545                 550                 555                 560
```

```
Arg Arg Lys Trp Glu Gln Ala Gly Asp Ala Glu Tyr Tyr Arg Ala Tyr
                565                 570                 575

Leu Glu Gly Glu Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Leu Gly
            580                 585                 590

Asn Glu Thr Leu Leu Arg Thr Asp Ser Pro Lys Ala His Val Thr Tyr
        595                 600                 605

His Pro Arg Ser Gln Val Asp Val Thr Leu Arg Cys Trp Ala Leu Gly
    610                 615                 620

Phe Tyr Pro Ala Asp Ile Thr Leu Thr Trp Gln Leu Asn Gly Glu Asp
625                 630                 635                 640

Leu Thr Gln Asp Met Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly
                645                 650                 655

Thr Phe Gln Lys Trp Ala Ala Val Val Val Pro Leu Gly Lys Glu Gln
            660                 665                 670

Asn Tyr Thr Cys His Val His His Lys Gly Leu Pro Glu Pro Leu Thr
        675                 680                 685

Leu Arg Trp Ala Ala Ala Gly Gly Pro Arg Gly Pro Thr Ile Lys Pro
    690                 695                 700

Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser
705                 710                 715                 720

Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu
                725                 730                 735

Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro
            740                 745                 750
```

```
Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
        755                 760                 765

Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val
    770                 775                 780

Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
785                 790                 795                 800

Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr
                805                 810                 815

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

Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys
        835                 840                 845

Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn
    850                 855                 860

Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp
865                 870                 875                 880

Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys
                885                 890                 895

Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly
            900                 905                 910

Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
        915                 920                 925

Gly Gly Ser His His His His His His His His
    930                 935
```

<210> 74
<211> 225
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 74

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1 5 10 15

Gly Leu Glu Ala Ala Cys Pro Trp Ala Val Ser Gly Ala Arg Ala Ser
20 25 30

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

Pro Asp Asp Pro Ala Gly Leu Leu Asp Leu Arg Gln Gly Met Phe Ala
50 55 60

Cys Leu Val Ala Gln Asn Val Leu Leu Ile Asp Gly Pro Leu Ser Trp
65 70 75 80

Tyr Ser Asp Pro Gly Leu Ala Gly Val Ser Leu Thr Gly Gly Leu Ser
85 90 95

Tyr Lys Glu Asp Thr Lys Glu Leu Val Val Ala Lys Ala Gly Val Tyr
100 105 110

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

Ser Gly Ser Val Ser Leu Ala Leu His Leu Gln Pro Leu Arg Ser Ala
130 135 140

```
Ala Gly Ala Ala Ala Leu Ala Leu Thr Val Asp Leu Pro Pro Ala Ser
145                 150                 155                 160


Ser Glu Ala Arg Asn Ser Ala Phe Gly Phe Gln Gly Arg Leu Leu His
                165                 170                 175


Leu Ser Ala Gly Gln Arg Leu Gly Val His Leu His Thr Glu Ala Arg
            180                 185                 190


Ala Arg His Ala Trp Gln Leu Thr Gln Gly Ala Thr Val Leu Gly Leu
        195                 200                 205


Phe Arg Val Thr Cys Glu Ile Pro Ala Gly Leu Pro Ser Pro Arg Ser
    210                 215                 220


Glu
225


<210>  75
<211>  939
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic polypeptide

<400>  75

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1               5                   10                  15


Gly Leu Glu Ala Val Tyr Leu Lys Thr Asn Val Phe Leu Gly Cys Gly
            20                  25                  30


Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Met Ile Gln Lys
        35                  40                  45


Thr Pro Gln Ile Gln Val Tyr Ser Arg His Pro Pro Glu Asn Gly Lys
    50                  55                  60
```

```
Pro Asn Ile Leu Asn Cys Tyr Val Thr Gln Phe His Pro Pro His Ile
65                  70                  75                  80

Glu Ile Gln Met Leu Lys Asn Gly Lys Lys Ile Pro Lys Val Glu Met
                85                  90                  95

Ser Asp Met Ser Phe Ser Lys Asp Trp Ser Phe Tyr Ile Leu Ala His
            100                 105                 110

Thr Glu Phe Thr Pro Thr Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys
        115                 120                 125

His Ala Ser Met Ala Glu Pro Lys Thr Val Tyr Trp Asp Arg Asp Met
    130                 135                 140

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

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

Gly Ala Arg Ala Ser Pro Gly Ser Ala Ala Ser Pro Arg Leu Arg Glu
            180                 185                 190

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

Cys Gly Met Phe Ala Gln Leu Val Ala Gln Asn Val Leu Leu Ile Asp
    210                 215                 220

Gly Pro Leu Ser Trp Tyr Ser Asp Pro Gly Cys Ala Gly Val Ser Leu
225                 230                 235                 240

Thr Gly Gly Leu Ser Tyr Lys Glu Asp Thr Lys Glu Leu Val Val Ala
                245                 250                 255
```

```
Lys Ala Gly Val Tyr Tyr Val Phe Phe Gln Leu Glu Leu Arg Arg Val
            260                 265                 270

Val Ala Gly Glu Gly Ser Gly Ser Val Ser Leu Ala Leu His Leu Gln
        275                 280                 285

Pro Leu Arg Ser Ala Ala Gly Ala Ala Ala Leu Ala Leu Thr Val Asp
    290                 295                 300

Leu Pro Pro Ala Ser Ser Glu Ala Arg Asn Ser Ala Phe Gly Phe Gln
305                 310                 315                 320

Gly Arg Leu Leu His Leu Ser Ala Gly Gln Arg Leu Gly Val His Leu
                325                 330                 335

His Thr Glu Ala Arg Ala Arg His Ala Trp Gln Leu Thr Gln Gly Ala
            340                 345                 350

Thr Val Leu Gly Leu Phe Arg Val Thr Pro Glu Ile Cys Ala Gly Leu
        355                 360                 365

Pro Ser Pro Arg Ser Glu Ser Gly Ser Gly Ala Thr Asn Phe Ser Leu
    370                 375                 380

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

Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser Gly Leu Glu
                405                 410                 415

Ala Gly Pro His Ser Leu Arg Tyr Phe Val Thr Ala Val Ser Arg Pro
            420                 425                 430

Gly Leu Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr
        435                 440                 445
```

```
Gln Phe Val Arg Phe Asp Ser Asp Ala Asp Asn Pro Arg Phe Glu Pro
    450                 455                 460

Arg Ala Pro Trp Met Glu Gln Glu Gly Pro Glu Tyr Trp Glu Glu Gln
465                 470                 475                 480

Thr Gln Arg Ala Lys Ser Asp Glu Gln Trp Phe Arg Val Ser Leu Arg
                485                 490                 495

Thr Ala Gln Arg Cys Tyr Asn Gln Ser Lys Gly Gly Ser His Thr Phe
            500                 505                 510

Gln Arg Met Phe Gly Cys Asp Val Gly Ser Asp Trp Arg Leu Leu Arg
        515                 520                 525

Gly Tyr Gln Gln Phe Ala Tyr Asp Gly Arg Asp Tyr Ile Ala Leu Asn
    530                 535                 540

Glu Asp Leu Lys Thr Trp Thr Ala Ala Asp Thr Ala Ala Leu Ile Thr
545                 550                 555                 560

Arg Arg Lys Trp Glu Gln Ala Gly Asp Ala Glu Tyr Tyr Arg Ala Tyr
                565                 570                 575

Leu Glu Gly Glu Cys Val Glu Trp Leu Arg Arg Tyr Leu Glu Leu Gly
            580                 585                 590

Asn Glu Thr Leu Leu Arg Thr Asp Ser Pro Lys Ala His Val Thr Tyr
        595                 600                 605

His Pro Arg Ser Gln Val Asp Val Thr Leu Arg Cys Trp Ala Leu Gly
    610                 615                 620

Phe Tyr Pro Ala Asp Ile Thr Leu Thr Trp Gln Leu Asn Gly Glu Asp
625                 630                 635                 640
```

```
Leu Thr Gln Asp Met Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly
                645                 650                 655

Thr Phe Gln Lys Trp Ala Ala Val Val Val Pro Leu Gly Lys Glu Gln
            660                 665                 670

Asn Tyr Thr Cys His Val His His Lys Gly Leu Pro Glu Pro Leu Thr
        675                 680                 685

Leu Arg Trp Ala Ala Ala Gly Gly Pro Arg Gly Pro Thr Ile Lys Pro
    690                 695                 700

Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser
705                 710                 715                 720

Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu
                725                 730                 735

Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro
            740                 745                 750

Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
        755                 760                 765

Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val
    770                 775                 780

Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
785                 790                 795                 800

Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr
                805                 810                 815

Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu
            820                 825                 830
```

```
Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys
        835                 840                 845

Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn
    850                 855                 860

Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp
865                 870                 875                 880

Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys
                885                 890                 895

Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly
            900                 905                 910

Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
        915                 920                 925

Gly Gly Ser His His His His His His His His
    930                 935
```

<210> 76
<211> 225
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 76

```
Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1               5                   10                  15

Gly Leu Glu Ala Ala Cys Pro Trp Ala Val Ser Gly Ala Arg Ala Ser
            20                  25                  30
```

```
Pro Gly Ser Ala Ala Ser Pro Arg Leu Arg Glu Gly Pro Glu Leu Ser
        35                  40                  45

Pro Asp Asp Pro Ala Gly Leu Leu Asp Leu Arg Cys Gly Met Phe Ala
    50                  55                  60

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

Tyr Ser Asp Pro Gly Cys Ala Gly Val Ser Leu Thr Gly Gly Leu Ser
                85                  90                  95

Tyr Lys Glu Asp Thr Lys Glu Leu Val Val Ala Lys Ala Gly Val Tyr
            100                 105                 110

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

Ser Gly Ser Val Ser Leu Ala Leu His Leu Gln Pro Leu Arg Ser Ala
    130                 135                 140

Ala Gly Ala Ala Ala Leu Ala Leu Thr Val Asp Leu Pro Pro Ala Ser
145                 150                 155                 160

Ser Glu Ala Arg Asn Ser Ala Phe Gly Phe Gln Gly Arg Leu Leu His
                165                 170                 175

Leu Ser Ala Gly Gln Arg Leu Gly Val His Leu His Thr Glu Ala Arg
            180                 185                 190

Ala Arg His Ala Trp Gln Leu Thr Gln Gly Ala Thr Val Leu Gly Leu
        195                 200                 205

Phe Arg Val Thr Pro Glu Ile Cys Ala Gly Leu Pro Ser Pro Arg Ser
    210                 215                 220
```

Glu
225

<210> 77
<211> 1285
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 77

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1 5 10 15

Gly Leu Glu Ala Val Tyr Leu Lys Thr Asn Val Phe Leu Gly Cys Gly
20 25 30

Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Met Ile Gln Lys
35 40 45

Thr Pro Gln Ile Gln Val Tyr Ser Arg His Pro Pro Glu Asn Gly Lys
50 55 60

Pro Asn Ile Leu Asn Cys Tyr Val Thr Gln Phe His Pro Pro His Ile
65 70 75 80

Glu Ile Gln Met Leu Lys Asn Gly Lys Lys Ile Pro Lys Val Glu Met
85 90 95

Ser Asp Met Ser Phe Ser Lys Asp Trp Ser Phe Tyr Ile Leu Ala His
100 105 110

Thr Glu Phe Thr Pro Thr Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys
115 120 125

His Ala Ser Met Ala Glu Pro Lys Thr Val Tyr Trp Asp Arg Asp Met
130 135 140

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145                 150                 155                 160

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

Leu Arg Gln Gly Met Phe Ala Gln Leu Val Ala Gln Asn Val Leu Leu
            180                 185                 190

Ile Asp Gly Pro Leu Ser Trp Tyr Ser Asp Pro Gly Leu Ala Gly Val
        195                 200                 205

Ser Leu Thr Gly Gly Leu Ser Tyr Lys Glu Asp Thr Lys Glu Leu Val
    210                 215                 220

Val Ala Lys Ala Gly Val Tyr Tyr Val Phe Phe Gln Leu Glu Leu Arg
225                 230                 235                 240

Arg Val Val Ala Gly Glu Gly Ser Gly Ser Val Ser Leu Ala Leu His
                245                 250                 255

Leu Gln Pro Leu Arg Ser Ala Ala Gly Ala Ala Ala Leu Ala Leu Thr
            260                 265                 270

Val Asp Leu Pro Pro Ala Ser Ser Glu Ala Arg Asn Ser Ala Phe Gly
        275                 280                 285

Phe Gln Gly Arg Leu Leu His Leu Ser Ala Gly Gln Arg Leu Gly Val
    290                 295                 300

His Leu His Thr Glu Ala Arg Ala Arg His Ala Trp Gln Leu Thr Gln
305                 310                 315                 320

Gly Ala Thr Val Leu Gly Leu Phe Arg Val Thr Pro Glu Ile Pro Ala
                325                 330                 335
```

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
            340                 345                 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Pro Ala Gly Leu Leu Asp
        355                 360                 365

Leu Arg Gln Gly Met Phe Ala Gln Leu Val Ala Gln Asn Val Leu Leu
    370                 375                 380

Ile Asp Gly Pro Leu Ser Trp Tyr Ser Asp Pro Gly Leu Ala Gly Val
385                 390                 395                 400

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

Val Ala Lys Ala Gly Val Tyr Tyr Val Phe Phe Gln Leu Glu Leu Arg
            420                 425                 430

Arg Val Val Ala Gly Glu Gly Ser Gly Ser Val Ser Leu Ala Leu His
        435                 440                 445

Leu Gln Pro Leu Arg Ser Ala Ala Gly Ala Ala Ala Leu Ala Leu Thr
    450                 455                 460

Val Asp Leu Pro Pro Ala Ser Ser Glu Ala Arg Asn Ser Ala Phe Gly
465                 470                 475                 480

Phe Gln Gly Arg Leu Leu His Leu Ser Ala Gly Gln Arg Leu Gly Val
                485                 490                 495

His Leu His Thr Glu Ala Arg Ala Arg His Ala Trp Gln Leu Thr Gln
            500                 505                 510

Gly Ala Thr Val Leu Gly Leu Phe Arg Val Thr Pro Glu Ile Pro Ala
        515                 520                 525
```

```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
    530                 535                 540

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Pro Ala Gly Leu Leu Asp
545                 550                 555                 560

Leu Arg Gln Gly Met Phe Ala Gln Leu Val Ala Gln Asn Val Leu Leu
                565                 570                 575

Ile Asp Gly Pro Leu Ser Trp Tyr Ser Asp Pro Gly Leu Ala Gly Val
            580                 585                 590

Ser Leu Thr Gly Gly Leu Ser Tyr Lys Glu Asp Thr Lys Glu Leu Val
        595                 600                 605

Val Ala Lys Ala Gly Val Tyr Tyr Val Phe Phe Gln Leu Glu Leu Arg
    610                 615                 620

Arg Val Val Ala Gly Glu Gly Ser Gly Ser Val Ser Leu Ala Leu His
625                 630                 635                 640

Leu Gln Pro Leu Arg Ser Ala Ala Gly Ala Ala Ala Leu Ala Leu Thr
                645                 650                 655

Val Asp Leu Pro Pro Ala Ser Ser Glu Ala Arg Asn Ser Ala Phe Gly
            660                 665                 670

Phe Gln Gly Arg Leu Leu His Leu Ser Ala Gly Gln Arg Leu Gly Val
        675                 680                 685

His Leu His Thr Glu Ala Arg Ala Arg His Ala Trp Gln Leu Thr Gln
    690                 695                 700

Gly Ala Thr Val Leu Gly Leu Phe Arg Val Thr Pro Glu Ile Pro Ala
705                 710                 715                 720
```

```
Ser Gly Ser Gly Ala Thr Asn Phe Ser Leu Leu Lys Gln Ala Gly Asp
                725                 730                 735

Val Glu Glu Asn Pro Gly Pro Met Ser Arg Ser Val Ala Leu Ala Val
            740                 745                 750

Leu Ala Leu Leu Ser Leu Ser Gly Leu Glu Ala Gly Pro His Ser Leu
        755                 760                 765

Arg Tyr Phe Val Thr Ala Val Ser Arg Pro Gly Leu Gly Glu Pro Arg
    770                 775                 780

Phe Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp
785                 790                 795                 800

Ser Asp Ala Asp Asn Pro Arg Phe Glu Pro Arg Ala Pro Trp Met Glu
                805                 810                 815

Gln Glu Gly Pro Glu Tyr Trp Glu Glu Gln Thr Gln Arg Ala Lys Ser
            820                 825                 830

Asp Glu Gln Trp Phe Arg Val Ser Leu Arg Thr Ala Gln Arg Cys Tyr
        835                 840                 845

Asn Gln Ser Lys Gly Gly Ser His Thr Phe Gln Arg Met Phe Gly Cys
    850                 855                 860

Asp Val Gly Ser Asp Trp Arg Leu Leu Arg Gly Tyr Gln Gln Phe Ala
865                 870                 875                 880

Tyr Asp Gly Arg Asp Tyr Ile Ala Leu Asn Glu Asp Leu Lys Thr Trp
                885                 890                 895

Thr Ala Ala Asp Thr Ala Ala Leu Ile Thr Arg Arg Lys Trp Glu Gln
            900                 905                 910
```

```
Ala Gly Asp Ala Glu Tyr Tyr Arg Ala Tyr Leu Glu Gly Glu Cys Val
        915                 920                 925

Glu Trp Leu Arg Arg Tyr Leu Glu Leu Gly Asn Glu Thr Leu Leu Arg
    930                 935                 940

Thr Asp Ser Pro Lys Ala His Val Thr Tyr His Pro Arg Ser Gln Val
945                 950                 955                 960

Asp Val Thr Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Asp Ile
                965                 970                 975

Thr Leu Thr Trp Gln Leu Asn Gly Glu Asp Leu Thr Gln Asp Met Glu
            980                 985                 990

Leu Val Glu Thr Arg Pro Ala Gly  Asp Gly Thr Phe Gln  Lys Trp Ala
        995                 1000                1005

Ala Val  Val Val Pro Leu Gly  Lys Glu Gln Asn Tyr  Thr Cys His
    1010                1015                1020

Val His  His Lys Gly Leu Pro  Glu Pro Leu Thr Leu  Arg Trp Ala
    1025                1030                1035

Ala Ala  Gly Gly Pro Arg Gly  Pro Thr Ile Lys Pro  Cys Pro Pro
    1040                1045                1050

Cys Lys  Cys Pro Ala Pro Asn  Leu Leu Gly Gly Pro  Ser Val Phe
    1055                1060                1065

Ile Phe  Pro Pro Lys Ile Lys  Asp Val Leu Met Ile  Ser Leu Ser
    1070                1075                1080

Pro Ile  Val Thr Cys Val Val  Val Asp Val Ser Glu  Asp Asp Pro
    1085                1090                1095
```

```
Asp Val  Gln Ile Ser Trp Phe  Val Asn Asn Val Glu  Val His Thr
    1100                1105                1110

Ala Gln  Thr Gln Thr His Arg  Glu Asp Tyr Asn Ser  Thr Leu Arg
    1115                1120                1125

Val Val  Ser Ala Leu Pro Ile  Gln His Gln Asp Trp  Met Ser Gly
    1130                1135                1140

Lys Glu  Phe Lys Cys Lys Val  Asn Asn Lys Asp Leu  Pro Ala Pro
    1145                1150                1155

Ile Glu  Arg Thr Ile Ser Lys  Pro Lys Gly Ser Val  Arg Ala Pro
    1160                1165                1170

Gln Val  Tyr Val Leu Pro Pro  Pro Glu Glu Glu Met  Thr Lys Lys
    1175                1180                1185

Gln Val  Thr Leu Thr Cys Met  Val Thr Asp Phe Met  Pro Glu Asp
    1190                1195                1200

Ile Tyr  Val Glu Trp Thr Asn  Asn Gly Lys Thr Glu  Leu Asn Tyr
    1205                1210                1215

Lys Asn  Thr Glu Pro Val Leu  Asp Ser Asp Gly Ser  Tyr Phe Met
    1220                1225                1230

Tyr Ser  Lys Leu Arg Val Glu  Lys Lys Asn Trp Val  Glu Arg Asn
    1235                1240                1245

Ser Tyr  Ser Cys Ser Val Val  His Glu Gly Leu His  Asn His His
    1250                1255                1260

Thr Thr  Lys Ser Phe Ser Arg  Thr Pro Gly Lys Gly  Gly Ser His
    1265                1270                1275
```

His His His His His His His
    1280   1285

<210> 78
<211> 119
<212> PRT
<213> Homo sapiens

<400> 78

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1   5   10   15

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

His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn Cys Tyr Val Ser
        35   40   45

Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly Glu
    50   55   60

Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe Ser Lys Asp Trp
65   70   75   80

Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys Asp
                85   90   95

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

Val Lys Trp Asp Arg Asp Met
        115

<210> 79
<211> 119
<212> PRT

<213> Pan troglodytes

<400> 79

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1 5 10 15

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

His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn Cys Tyr Val Ser
35 40 45

Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly Glu
50 55 60

Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe Ser Lys Asp Trp
65 70 75 80

Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys Asp
85 90 95

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

Val Lys Trp Asp Arg Asp Met
115

<210> 80
<211> 119
<212> PRT
<213> Macaca mulatta

<400> 80

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1 5 10 15

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

20 25 30

His Pro Pro Glu Asn Gly Lys Pro Asn Phe Leu Asn Cys Tyr Val Ser
35 40 45

Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly Glu
50 55 60

Lys Met Gly Lys Val Glu His Ser Asp Leu Ser Phe Ser Lys Asp Trp
65 70 75 80

Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro Asn Glu Lys Asp
85 90 95

Glu Tyr Ala Cys Arg Val Asn His Val Thr Leu Ser Gly Pro Arg Thr
100 105 110

Val Lys Trp Asp Arg Asp Met
115

<210> 81
<211> 118
<212> PRT
<213> Bos taurus

<400> 81

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

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

His Pro Pro Glu Asp Gly Lys Pro Asn Tyr Leu Asn Cys Tyr Val Tyr
35 40 45

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

```
Lys Ile Lys Ser Glu Gln Ser Asp Leu Ser Phe Ser Lys Asp Trp Ser
65                  70                  75                  80


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


Tyr Ser Cys Arg Val Lys His Val Thr Leu Glu Gln Pro Arg Ile Val
            100                 105                 110


Lys Trp Asp Arg Asp Leu
        115
```

<210> 82
<211> 119
<212> PRT
<213> Mus musculus

<400> 82

```
Met Ala Arg Ser Val Thr Leu Val Phe Leu Val Leu Val Ser Leu Thr
1               5                   10                  15


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


His Pro Pro Glu Asn Gly Lys Pro Asn Ile Leu Asn Cys Tyr Val Thr
        35                  40                  45


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


Lys Ile Pro Lys Val Glu Met Ser Asp Met Ser Phe Ser Lys Asp Trp
65                  70                  75                  80


Ser Phe Tyr Ile Leu Ala His Thr Glu Phe Thr Pro Thr Glu Thr Asp
                85                  90                  95
```

```
Thr Tyr Ala Cys Arg Val Lys His Ala Ser Met Ala Glu Pro Lys Thr
            100                 105                 110


Val Tyr Trp Asp Arg Asp Met
        115
```

<210> 83
<211> 227
<212> PRT
<213> Homo sapiens

<400> 83

```
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

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> 84
<211> 325
<212> PRT
<213> Homo sapiens

<400> 84

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

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

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

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu

```
    50                  55                  60

Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr
65                  70                  75                  80

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

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

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

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

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

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

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
```

245 250 255

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

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

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

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

Leu Ser Pro Gly Lys
325

<210> 85
<211> 246
<212> PRT
<213> Homo sapiens

<400> 85

His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Leu Lys Thr
1 5 10 15

Pro Leu Gly Asp Thr Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
20 25 30

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
35 40 45

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

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

```
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
                85                  90                  95

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
            100                 105                 110

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
        115                 120                 125

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

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn
145                 150                 155                 160

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

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
            180                 185                 190

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

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

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

Ser Leu Ser Pro Gly Lys
                245
```

<210> 86
<211> 383

<212> PRT
<213> Homo sapiens

<400> 86

```
Pro Thr Lys Ala Pro Asp Val Phe Pro Ile Ile Ser Gly Cys Arg His
1               5                  10                  15

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

His Pro Thr Ser Val Thr Val Thr Trp Tyr Met Gly Thr Gln Ser Gln
        35                  40                  45

Pro Gln Arg Thr Phe Pro Glu Ile Gln Arg Arg Asp Ser Tyr Tyr Met
    50                  55                  60

Thr Ser Ser Gln Leu Ser Thr Pro Leu Gln Gln Trp Arg Gln Gly Glu
65                  70                  75                  80

Tyr Lys Cys Val Val Gln His Thr Ala Ser Lys Ser Lys Lys Glu Ile
                85                  90                  95

Phe Arg Trp Pro Glu Ser Pro Lys Ala Gln Ala Ser Ser Val Pro Thr
            100                 105                 110

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

Ala Thr Thr Arg Asn Thr Gly Arg Gly Gly Glu Glu Lys Lys Lys Glu
    130                 135                 140

Lys Glu Lys Glu Glu Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu Cys
145                 150                 155                 160

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

```
Gln Asp Leu Trp Leu Arg Asp Lys Ala Thr Phe Thr Cys Phe Val Val
            180                 185                 190

Gly Ser Asp Leu Lys Asp Ala His Leu Thr Trp Glu Val Ala Gly Lys
        195                 200                 205

Val Pro Thr Gly Gly Val Glu Glu Gly Leu Leu Glu Arg His Ser Asn
    210                 215                 220

Gly Ser Gln Ser Gln His Ser Arg Leu Thr Leu Pro Arg Ser Leu Trp
225                 230                 235                 240

Asn Ala Gly Thr Ser Val Thr Cys Thr Leu Asn His Pro Ser Leu Pro
                245                 250                 255

Pro Gln Arg Leu Met Ala Leu Arg Glu Pro Ala Ala Gln Ala Pro Val
            260                 265                 270

Lys Leu Ser Leu Asn Leu Leu Ala Ser Ser Asp Pro Pro Glu Ala Ala
        275                 280                 285

Ser Trp Leu Leu Cys Glu Val Ser Gly Phe Ser Pro Pro Asn Ile Leu
    290                 295                 300

Leu Met Trp Leu Glu Asp Gln Arg Glu Val Asn Thr Ser Gly Phe Ala
305                 310                 315                 320

Pro Ala Arg Pro Pro Pro Gln Pro Arg Ser Thr Thr Phe Trp Ala Trp
                325                 330                 335

Ser Val Leu Arg Val Pro Ala Pro Pro Ser Pro Gln Pro Ala Thr Tyr
            340                 345                 350

Thr Cys Val Val Ser His Glu Asp Ser Arg Thr Leu Leu Asn Ala Ser
        355                 360                 365
```

Arg Ser Leu Glu Val Ser Tyr Val Thr Asp His Gly Pro Met Lys
370 375 380

<210> 87
<211> 276
<212> PRT
<213> Homo sapiens

<400> 87

Val Thr Ser Thr Leu Thr Ile Lys Glx Ser Asp Trp Leu Gly Glu Ser
1 5 10 15

Met Phe Thr Cys Arg Val Asp His Arg Gly Leu Thr Phe Gln Gln Asn
20 25 30

Ala Ser Ser Met Cys Val Pro Asp Gln Asp Thr Ala Ile Arg Val Phe
35 40 45

Ala Ile Pro Pro Ser Phe Ala Ser Ile Phe Leu Thr Lys Ser Thr Lys
50 55 60

Leu Thr Cys Leu Val Thr Asp Leu Thr Thr Tyr Asx Ser Val Thr Ile
65 70 75 80

Ser Trp Thr Arg Glu Glu Asn Gly Ala Val Lys Thr His Thr Asn Ile
85 90 95

Ser Glu Ser His Pro Asn Ala Thr Phe Ser Ala Val Gly Glu Ala Ser
100 105 110

Ile Cys Glu Asp Asx Asp Trp Ser Gly Glu Arg Phe Thr Cys Thr Val
115 120 125

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

```
Lys Gly Val Ala Leu His Arg Pro Asx Val Tyr Leu Leu Pro Pro Ala
145                 150                 155                 160


Arg Glx Glx Leu Asn Leu Arg Glu Ser Ala Thr Ile Thr Cys Leu Val
                165                 170                 175


Thr Gly Phe Ser Pro Ala Asp Val Phe Val Glu Trp Met Gln Arg Gly
            180                 185                 190


Glu Pro Leu Ser Pro Gln Lys Tyr Val Thr Ser Ala Pro Met Pro Glu
        195                 200                 205


Pro Gln Ala Pro Gly Arg Tyr Phe Ala His Ser Ile Leu Thr Val Ser
    210                 215                 220


Glu Glu Glu Trp Asn Thr Gly Gly Thr Tyr Thr Cys Val Val Ala His
225                 230                 235                 240


Glu Ala Leu Pro Asn Arg Val Thr Glu Arg Thr Val Asp Lys Ser Thr
                245                 250                 255


Gly Lys Pro Thr Leu Tyr Asn Val Ser Leu Val Met Ser Asp Thr Ala
            260                 265                 270


Gly Thr Cys Tyr
        275


<210>  88
<211>  353
<212>  PRT
<213>  Homo sapiens

<400>  88

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


Gln Pro Asp Gly Asn Val Val Ile Ala Cys Leu Val Gln Gly Phe Phe
```

```
            20                  25                  30

Pro Gln Glu Pro Leu Ser Val Thr Trp Ser Glu Ser Gly Gln Gly Val
        35                  40                  45

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

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

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

Val Thr Val Pro Cys Pro Val Pro Ser Thr Pro Pro Thr Pro Ser Pro
            100                 105                 110

Ser Thr Pro Pro Thr Pro Ser Pro Ser Cys Cys His Pro Arg Leu Ser
        115                 120                 125

Leu His Arg Pro Ala Leu Glu Asp Leu Leu Leu Gly Ser Glu Ala Asn
    130                 135                 140

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

Thr Trp Thr Pro Ser Ser Gly Lys Ser Ala Val Gln Gly Pro Pro Glu
                165                 170                 175

Arg Asp Leu Cys Gly Cys Tyr Ser Val Ser Ser Val Leu Pro Gly Cys
            180                 185                 190

Ala Glu Pro Trp Asn His Gly Lys Thr Phe Thr Cys Thr Ala Ala Tyr
        195                 200                 205

Pro Glu Ser Lys Thr Pro Leu Thr Ala Thr Leu Ser Lys Ser Gly Asn
```

210 215 220

Thr Phe Arg Pro Glu Val His Leu Leu Pro Pro Pro Ser Glu Glu Leu
225 230 235 240

Ala Leu Asn Glu Leu Val Thr Leu Thr Cys Leu Ala Arg Gly Phe Ser
245 250 255

Pro Lys Asp Val Leu Val Arg Trp Leu Gln Gly Ser Gln Glu Leu Pro
260 265 270

Arg Glu Lys Tyr Leu Thr Trp Ala Ser Arg Gln Glu Pro Ser Gln Gly
275 280 285

Thr Thr Thr Phe Ala Val Thr Ser Ile Leu Arg Val Ala Ala Glu Asp
290 295 300

Trp Lys Lys Gly Asp Thr Phe Ser Cys Met Val Gly His Glu Ala Leu
305 310 315 320

Pro Leu Ala Phe Thr Gln Lys Thr Ile Asp Arg Leu Ala Gly Lys Pro
325 330 335

Thr His Val Asn Val Ser Val Val Met Ala Glu Val Asp Gly Thr Cys
340 345 350

Tyr

<210> 89
<211> 222
<212> PRT
<213> Homo sapiens

<400> 89

Ala Asp Pro Cys Asp Ser Asn Pro Arg Gly Val Ser Ala Tyr Leu Ser
1 5 10 15

```
Arg Pro Ser Pro Phe Asp Leu Phe Ile Arg Lys Ser Pro Thr Ile Thr
            20                  25                  30

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

Trp Ser Arg Ala Ser Gly Lys Pro Val Asn His Ser Thr Arg Lys Glu
    50                  55                  60

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

Gly Thr Arg Asp Trp Ile Glu Gly Glu Thr Tyr Gln Cys Arg Val Thr
                85                  90                  95

His Pro His Leu Pro Arg Ala Leu Met Arg Ser Thr Thr Lys Thr Ser
            100                 105                 110

Gly Pro Arg Ala Ala Pro Glu Val Tyr Ala Phe Ala Thr Pro Glu Trp
        115                 120                 125

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

Met Pro Glu Asp Ile Ser Val Gln Trp Leu His Asn Glu Val Gln Leu
145                 150                 155                 160

Pro Asp Ala Arg His Ser Thr Thr Gln Pro Arg Lys Thr Lys Gly Ser
                165                 170                 175

Gly Phe Phe Val Phe Ser Arg Leu Glu Val Thr Arg Ala Glu Trp Glu
            180                 185                 190

Gln Lys Asp Glu Phe Ile Cys Arg Ala Val His Glu Ala Ala Ser Pro
        195                 200                 205
```

```
Ser Gln Thr Val Gln Arg Ala Val Ser Val Asn Pro Gly Lys
    210                 215                 220


<210>  90
<211>  327
<212>  PRT
<213>  Homo sapiens

<400>  90

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 Ser Leu Gly Thr Lys Thr
65                  70                  75                  80


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


Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
            100                 105                 110


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


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

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


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


Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            180                 185                 190


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


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


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


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


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


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


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


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


Leu Ser Leu Ser Leu Gly Lys
                325
```

<210> 91
<211> 365
<212> PRT
<213> Homo sapiens

<400> 91

```
Met Ala Val Met Ala Pro Arg Thr Leu Leu Leu Leu Leu Ser Gly Ala
1               5                   10                  15


Leu Ala Leu Thr Gln Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe
            20                  25                  30


Phe Thr Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ala
        35                  40                  45


Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala
    50                  55                  60


Ala Ser Gln Lys Met Glu Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly
65                  70                  75                  80


Pro Glu Tyr Trp Asp Gln Glu Thr Arg Asn Met Lys Ala His Ser Gln
                85                  90                  95


Thr Asp Arg Ala Asn Leu Gly Thr Leu Arg Gly Tyr Tyr Asn Gln Ser
            100                 105                 110


Glu Asp Gly Ser His Thr Ile Gln Ile Met Tyr Gly Cys Asp Val Gly
        115                 120                 125


Pro Asp Gly Arg Phe Leu Arg Gly Tyr Arg Gln Asp Ala Tyr Asp Gly
    130                 135                 140


Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala
145                 150                 155                 160
```

```
Asp Met Ala Ala Gln Ile Thr Lys Arg Lys Trp Glu Ala Val His Ala
                165                 170                 175

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

Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Thr Asp Pro
        195                 200                 205

Pro Lys Thr His Met Thr His His Pro Ile Ser Asp His Glu Ala Thr
    210                 215                 220

Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr
225                 230                 235                 240

Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu
                245                 250                 255

Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala Val Val
            260                 265                 270

Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln His Glu
        275                 280                 285

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

Thr Ile Pro Ile Val Gly Ile Ile Ala Gly Leu Val Leu Leu Gly Ala
305                 310                 315                 320

Val Ile Thr Gly Ala Val Val Ala Ala Val Met Trp Arg Arg Lys Ser
                325                 330                 335

Ser Asp Arg Lys Gly Gly Ser Tyr Thr Gln Ala Ala Ser Ser Asp Ser
            340                 345                 350
```

```
Ala Gln Gly Ser Asp Val Ser Leu Thr Ala Cys Lys Val
        355                 360                 365
```

<210> 92
<211> 362
<212> PRT
<213> Homo sapiens

<400> 92

```
Met Leu Val Met Ala Pro Arg Thr Val Leu Leu Leu Leu Ser Ala Ala
1               5                   10                  15

Leu Ala Leu Thr Glu Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe
            20                  25                  30

Tyr Thr Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ser
        35                  40                  45

Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala
    50                  55                  60

Ala Ser Pro Arg Glu Glu Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly
65                  70                  75                  80

Pro Glu Tyr Trp Asp Arg Asn Thr Gln Ile Tyr Lys Ala Gln Ala Gln
                85                  90                  95

Thr Asp Arg Glu Ser Leu Arg Asn Leu Arg Gly Tyr Tyr Asn Gln Ser
            100                 105                 110

Glu Ala Gly Ser His Thr Leu Gln Ser Met Tyr Gly Cys Asp Val Gly
        115                 120                 125

Pro Asp Gly Arg Leu Leu Arg Gly His Asp Gln Tyr Ala Tyr Asp Gly
    130                 135                 140

Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala
```

```
145                 150                 155                 160

Asp Thr Ala Ala Gln Ile Thr Gln Arg Lys Trp Glu Ala Ala Arg Glu
                165                 170                 175

Ala Glu Gln Arg Arg Ala Tyr Leu Glu Gly Glu Cys Val Glu Trp Leu
            180                 185                 190

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

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

Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr
225                 230                 235                 240

Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu
                245                 250                 255

Thr Arg Pro Ala Gly Asp Arg Thr Phe Gln Lys Trp Ala Ala Val Val
            260                 265                 270

Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln His Glu
        275                 280                 285

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

Thr Val Pro Ile Val Gly Ile Val Ala Gly Leu Ala Val Leu Ala Val
305                 310                 315                 320

Val Val Ile Gly Ala Val Val Ala Ala Val Met Cys Arg Arg Lys Ser
                325                 330                 335

Ser Gly Gly Lys Gly Gly Ser Tyr Ser Gln Ala Ala Cys Ser Asp Ser
```

340 345 350

Ala Gln Gly Ser Asp Val Ser Leu Thr Ala
355 360

<210> 93
<211> 366
<212> PRT
<213> Homo sapiens

<400> 93

Met Arg Val Met Ala Pro Arg Ala Leu Leu Leu Leu Leu Ser Gly Gly
1 5 10 15

Leu Ala Leu Thr Glu Thr Trp Ala Cys Ser His Ser Met Arg Tyr Phe
20 25 30

Asp Thr Ala Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ser
35 40 45

Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala
50 55 60

Ala Ser Pro Arg Gly Glu Pro Arg Ala Pro Trp Val Glu Gln Glu Gly
65 70 75 80

Pro Glu Tyr Trp Asp Arg Glu Thr Gln Asn Tyr Lys Arg Gln Ala Gln
85 90 95

Ala Asp Arg Val Ser Leu Arg Asn Leu Arg Gly Tyr Tyr Asn Gln Ser
100 105 110

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

Pro Asp Gly Arg Leu Leu Arg Gly Tyr Asp Gln Ser Ala Tyr Asp Gly
130 135 140

```
Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala
145                 150                 155                 160

Asp Thr Ala Ala Gln Ile Thr Gln Arg Lys Leu Glu Ala Ala Arg Ala
                165                 170                 175

Ala Glu Gln Leu Arg Ala Tyr Leu Glu Gly Thr Cys Val Glu Trp Leu
            180                 185                 190

Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Ala Glu Pro
        195                 200                 205

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

Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr
225                 230                 235                 240

Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu
                245                 250                 255

Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala Val Val
            260                 265                 270

Val Pro Ser Gly Gln Glu Gln Arg Tyr Thr Cys His Met Gln His Glu
        275                 280                 285

Gly Leu Gln Glu Pro Leu Thr Leu Ser Trp Glu Pro Ser Ser Gln Pro
    290                 295                 300

Thr Ile Pro Ile Met Gly Ile Val Ala Gly Leu Ala Val Leu Val Val
305                 310                 315                 320

Leu Ala Val Leu Gly Ala Val Val Thr Ala Met Met Cys Arg Arg Lys
                325                 330                 335
```

```
Ser Ser Gly Gly Lys Gly Gly Ser Cys Ser Gln Ala Ala Cys Ser Asn
            340                 345                 350

Ser Ala Gln Gly Ser Asp Glu Ser Leu Ile Thr Cys Lys Ala
        355                 360                 365
```

<210> 94
<211> 290
<212> PRT
<213> Homo sapiens

<400> 94

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

Arg Ala Phe Thr Ile Thr Ala Pro Lys Asp Leu Tyr Val Val Glu Tyr
            20                  25                  30

Gly Ser Asn Val Thr Met Glu Cys Arg Phe Pro Val Glu Arg Glu Leu
        35                  40                  45

Asp Leu Leu Ala Leu Val Val Tyr Trp Glu Lys Glu Asp Glu Gln Val
    50                  55                  60

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

Phe Arg Gly Arg Ala Ser Leu Pro Lys Asp Gln Leu Leu Lys Gly Asn
                85                  90                  95

Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr
            100                 105                 110

Cys Cys Ile Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Leu
        115                 120                 125
```

```
Lys Val Asn Ala Pro Tyr Arg Lys Ile Asn Gln Arg Ile Ser Val Asp
    130                 135                 140

Pro Ala Thr Ser Glu His Glu Leu Ile Cys Gln Ala Glu Gly Tyr Pro
145                 150                 155                 160

Glu Ala Glu Val Ile Trp Thr Asn Ser Asp His Gln Pro Val Ser Gly
                165                 170                 175

Lys Arg Ser Val Thr Thr Ser Arg Thr Glu Gly Met Leu Leu Asn Val
            180                 185                 190

Thr Ser Ser Leu Arg Val Asn Ala Thr Ala Asn Asp Val Phe Tyr Cys
        195                 200                 205

Thr Phe Trp Arg Ser Gln Pro Gly Gln Asn His Thr Ala Glu Leu Ile
    210                 215                 220

Ile Pro Glu Leu Pro Ala Thr His Pro Pro Gln Asn Arg Thr His Trp
225                 230                 235                 240

Val Leu Leu Gly Ser Ile Leu Leu Phe Leu Ile Val Val Ser Thr Val
                245                 250                 255

Leu Leu Phe Leu Arg Lys Gln Val Arg Met Leu Asp Val Glu Lys Cys
            260                 265                 270

Gly Val Glu Asp Thr Ser Ser Lys Asn Arg Asn Asp Thr Gln Phe Glu
        275                 280                 285

Glu Thr
    290
```

<210> 95
<211> 290
<212> PRT

<213> Homo sapiens

<400> 95

```
Met Arg Ile Phe Ala Val Phe Ile Phe Met Thr Tyr Trp His Leu Leu
1               5                  10                  15


Asn Ala Phe Thr Val Thr Val Pro Lys Asp Leu Tyr Val Val Glu Tyr
            20                  25                  30


Gly Ser Asn Met Thr Ile Glu Cys Lys Phe Pro Val Glu Lys Gln Leu
        35                  40                  45


Asp Leu Ala Ala Leu Ile Val Tyr Trp Glu Met Glu Asp Lys Asn Ile
    50                  55                  60


Ile Gln Phe Val His Gly Glu Glu Asp Leu Lys Val Gln His Ser Ser
65                  70                  75                  80


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


Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr
            100                 105                 110


Arg Cys Met Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Val
        115                 120                 125


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


Asp Pro Val Thr Ser Glu His Glu Leu Thr Cys Gln Ala Glu Gly Tyr
145                 150                 155                 160


Pro Lys Ala Glu Val Ile Trp Thr Ser Ser Asp His Gln Val Leu Ser
                165                 170                 175
```

```
Gly Lys Thr Thr Thr Thr Asn Ser Lys Arg Glu Glu Lys Leu Phe Asn
            180                 185                 190


Val Thr Ser Thr Leu Arg Ile Asn Thr Thr Thr Asn Glu Ile Phe Tyr
        195                 200                 205


Cys Thr Phe Arg Arg Leu Asp Pro Glu Glu Asn His Thr Ala Glu Leu
    210                 215                 220


Val Ile Pro Glu Leu Pro Leu Ala His Pro Pro Asn Glu Arg Thr His
225                 230                 235                 240


Leu Val Ile Leu Gly Ala Ile Leu Leu Cys Leu Gly Val Ala Leu Thr
                245                 250                 255


Phe Ile Phe Arg Leu Arg Lys Gly Arg Met Met Asp Val Lys Lys Cys
            260                 265                 270


Gly Ile Gln Asp Thr Asn Ser Lys Lys Gln Ser Asp Thr His Leu Glu
        275                 280                 285


Glu Thr
    290
```

<210> 96
<211> 254
<212> PRT
<213> Homo sapiens

<400> 96

```
Met Glu Tyr Ala Ser Asp Ala Ser Leu Asp Pro Glu Ala Pro Trp Pro
1               5                   10                  15


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


Ala Gly Leu Leu Leu Leu Leu Leu Leu Ala Ala Ala Cys Ala Val Phe
```

```
        35                  40                  45

Leu Ala Cys Pro Trp Ala Val Ser Gly Ala Arg Ala Ser Pro Gly Ser
    50                  55                  60

Ala Ala Ser Pro Arg Leu Arg Glu Gly Pro Glu Leu Ser Pro Asp Asp
65                  70                  75                  80

Pro Ala Gly Leu Leu Asp Leu Arg Gln Gly Met Phe Ala Gln Leu Val
                85                  90                  95

Ala Gln Asn Val Leu Leu Ile Asp Gly Pro Leu Ser Trp Tyr Ser Asp
            100                 105                 110

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

Asp Thr Lys Glu Leu Val Val Ala Lys Ala Gly Val Tyr Tyr Val Phe
    130                 135                 140

Phe Gln Leu Glu Leu Arg Arg Val Val Ala Gly Glu Gly Ser Gly Ser
145                 150                 155                 160

Val Ser Leu Ala Leu His Leu Gln Pro Leu Arg Ser Ala Ala Gly Ala
                165                 170                 175

Ala Ala Leu Ala Leu Thr Val Asp Leu Pro Pro Ala Ser Ser Glu Ala
            180                 185                 190

Arg Asn Ser Ala Phe Gly Phe Gln Gly Arg Leu Leu His Leu Ser Ala
        195                 200                 205

Gly Gln Arg Leu Gly Val His Leu His Thr Glu Ala Arg Ala Arg His
    210                 215                 220

Ala Trp Gln Leu Thr Gln Gly Ala Thr Val Leu Gly Leu Phe Arg Val
```

225 230 235 240

Thr Pro Glu Ile Pro Ala Gly Leu Pro Ser Pro Arg Ser Glu
245 250

<210> 97
<211> 302
<212> PRT
<213> Homo sapiens

<400> 97

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
1 5 10 15

Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
20 25 30

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

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

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
65 70 75 80

Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
85 90 95

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
100 105 110

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
115 120 125

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
130 135 140

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

Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
                165                 170                 175

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
            180                 185                 190

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
        195                 200                 205

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
    210                 215                 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225                 230                 235                 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
                245                 250                 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
            260                 265                 270

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
        275                 280                 285

Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr Gly His Val
    290                 295                 300
```

<210> 98
<211> 183
<212> PRT
<213> Homo sapiens

<400> 98

```
Met Glu Arg Val Gln Pro Leu Glu Glu Asn Val Gly Asn Ala Ala Arg
1               5                   10                  15

Pro Arg Phe Glu Arg Asn Lys Leu Leu Leu Val Ala Ser Val Ile Gln
            20                  25                  30

Gly Leu Gly Leu Leu Leu Cys Phe Thr Tyr Ile Cys Leu His Phe Ser
        35                  40                  45

Ala Leu Gln Val Ser His Arg Tyr Pro Arg Ile Gln Ser Ile Lys Val
    50                  55                  60

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

Lys Glu Asp Glu Ile Met Lys Val Gln Asn Asn Ser Val Ile Ile Asn
                85                  90                  95

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

Val Asn Ile Ser Leu His Tyr Gln Lys Asp Glu Glu Pro Leu Phe Gln
        115                 120                 125

Leu Lys Lys Val Arg Ser Val Asn Ser Leu Met Val Ala Ser Leu Thr
    130                 135                 140

Tyr Lys Asp Lys Val Tyr Leu Asn Val Thr Thr Asp Asn Thr Ser Leu
145                 150                 155                 160

Asp Asp Phe His Val Asn Gly Gly Glu Leu Ile Leu Ile His Gln Asn
                165                 170                 175

Pro Gly Glu Phe Cys Val Leu
            180
```

<210> 99
<211> 273
<212> PRT
<213> Homo sapiens

<400> 99

```
Met Ile Phe Leu Leu Leu Met Leu Ser Leu Glu Leu Gln Leu His Gln
1               5                   10                  15


Ile Ala Ala Leu Phe Thr Val Thr Val Pro Lys Glu Leu Tyr Ile Ile
            20                  25                  30


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


His Val Asn Leu Gly Ala Ile Thr Ala Ser Leu Gln Lys Val Glu Asn
    50                  55                  60


Asp Thr Ser Pro His Arg Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu
65                  70                  75                  80


Pro Leu Gly Lys Ala Ser Phe His Ile Pro Gln Val Gln Val Arg Asp
                85                  90                  95


Glu Gly Gln Tyr Gln Cys Ile Ile Ile Tyr Gly Val Ala Trp Asp Tyr
            100                 105                 110


Lys Tyr Leu Thr Leu Lys Val Lys Ala Ser Tyr Arg Lys Ile Asn Thr
        115                 120                 125


His Ile Leu Lys Val Pro Glu Thr Asp Glu Val Glu Leu Thr Cys Gln
    130                 135                 140


Ala Thr Gly Tyr Pro Leu Ala Glu Val Ser Trp Pro Asn Val Ser Val
145                 150                 155                 160
```

```
Pro Ala Asn Thr Ser His Ser Arg Thr Pro Glu Gly Leu Tyr Gln Val
                165                 170                 175

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

Val Phe Trp Asn Thr His Val Arg Glu Leu Thr Leu Ala Ser Ile Asp
        195                 200                 205

Leu Gln Ser Gln Met Glu Pro Arg Thr His Pro Thr Trp Leu Leu His
    210                 215                 220

Ile Phe Ile Pro Phe Cys Ile Ile Ala Phe Ile Phe Ile Ala Thr Val
225                 230                 235                 240

Ile Ala Leu Arg Lys Gln Leu Cys Gln Lys Leu Tyr Ser Ser Lys Asp
                245                 250                 255

Thr Thr Lys Arg Pro Val Thr Thr Thr Lys Arg Glu Val Asn Ser Ala
            260                 265                 270

Ile
```

<210> 100
<211> 288
<212> PRT
<213> Homo sapiens

<400> 100

```
Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr
1               5                   10                  15

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

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
```

```
        35                  40                  45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
    50                  55                  60

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

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
                85                  90                  95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
            100                 105                 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
        115                 120                 125

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

Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile
145                 150                 155                 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
                165                 170                 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp
            180                 185                 190

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

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg
    210                 215                 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro
```

225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
260 265 270

Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val
275 280 285

<210> 101
<211> 329
<212> PRT
<213> Homo sapiens

<400> 101

Met Asp Pro Gln Cys Thr Met Gly Leu Ser Asn Ile Leu Phe Val Met
1 5 10 15

Ala Phe Leu Leu Ser Gly Ala Ala Pro Leu Lys Ile Gln Ala Tyr Phe
20 25 30

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

Ser Leu Ser Glu Leu Val Val Phe Trp Gln Asp Gln Glu Asn Leu Val
50 55 60

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

Lys Tyr Met Gly Arg Thr Ser Phe Asp Ser Asp Ser Trp Thr Leu Arg
85 90 95

Leu His Asn Leu Gln Ile Lys Asp Lys Gly Leu Tyr Gln Cys Ile Ile
100 105 110

```
His His Lys Lys Pro Thr Gly Met Ile Arg Ile His Gln Met Asn Ser
        115                 120                 125

Glu Leu Ser Val Leu Ala Asn Phe Ser Gln Pro Glu Ile Val Pro Ile
    130                 135                 140

Ser Asn Ile Thr Glu Asn Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile
145                 150                 155                 160

His Gly Tyr Pro Glu Pro Lys Lys Met Ser Val Leu Leu Arg Thr Lys
                165                 170                 175

Asn Ser Thr Ile Glu Tyr Asp Gly Ile Met Gln Lys Ser Gln Asp Asn
            180                 185                 190

Val Thr Glu Leu Tyr Asp Val Ser Ile Ser Leu Ser Val Ser Phe Pro
        195                 200                 205

Asp Val Thr Ser Asn Met Thr Ile Phe Cys Ile Leu Glu Thr Asp Lys
    210                 215                 220

Thr Arg Leu Leu Ser Ser Pro Phe Ser Ile Glu Leu Glu Asp Pro Gln
225                 230                 235                 240

Pro Pro Pro Asp His Ile Pro Trp Ile Thr Ala Val Leu Pro Thr Val
                245                 250                 255

Ile Ile Cys Val Met Val Phe Cys Leu Ile Leu Trp Lys Trp Lys Lys
            260                 265                 270

Lys Lys Arg Pro Arg Asn Ser Tyr Lys Cys Gly Thr Asn Thr Met Glu
        275                 280                 285

Arg Glu Glu Ser Glu Gln Thr Lys Lys Arg Glu Lys Ile His Ile Pro
    290                 295                 300
```

```
Glu Arg Ser Asp Glu Ala Gln Arg Val Phe Lys Ser Ser Lys Thr Ser
305                 310                 315                 320


Ser Cys Asp Lys Ser Asp Thr Cys Phe
                325
```

<210> 102
<211> 281
<212> PRT
<213> Homo sapiens

<400> 102

```
Met Gln Gln Pro Phe Asn Tyr Pro Tyr Pro Gln Ile Tyr Trp Val Asp
1               5                   10                  15


Ser Ser Ala Ser Ser Pro Trp Ala Pro Pro Gly Thr Val Leu Pro Cys
            20                  25                  30


Pro Thr Ser Val Pro Arg Arg Pro Gly Gln Arg Arg Pro Pro Pro Pro
        35                  40                  45


Pro Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro Pro Leu Pro
    50                  55                  60


Pro Leu Pro Leu Pro Pro Leu Lys Lys Arg Gly Asn His Ser Thr Gly
65                  70                  75                  80


Leu Cys Leu Leu Val Met Phe Phe Met Val Leu Val Ala Leu Val Gly
                85                  90                  95


Leu Gly Leu Gly Met Phe Gln Leu Phe His Leu Gln Lys Glu Leu Ala
            100                 105                 110


Glu Leu Arg Glu Ser Thr Ser Gln Met His Thr Ala Ser Ser Leu Glu
        115                 120                 125
```

```
Lys Gln Ile Gly His Pro Ser Pro Pro Pro Glu Lys Lys Glu Leu Arg
    130                 135                 140

Lys Val Ala His Leu Thr Gly Lys Ser Asn Ser Arg Ser Met Pro Leu
145                 150                 155                 160

Glu Trp Glu Asp Thr Tyr Gly Ile Val Leu Leu Ser Gly Val Lys Tyr
                165                 170                 175

Lys Lys Gly Gly Leu Val Ile Asn Glu Thr Gly Leu Tyr Phe Val Tyr
            180                 185                 190

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

His Lys Val Tyr Met Arg Asn Ser Lys Tyr Pro Gln Asp Leu Val Met
    210                 215                 220

Met Glu Gly Lys Met Met Ser Tyr Cys Thr Thr Gly Gln Met Trp Ala
225                 230                 235                 240

Arg Ser Ser Tyr Leu Gly Ala Val Phe Asn Leu Thr Ser Ala Asp His
                245                 250                 255

Leu Tyr Val Asn Val Ser Glu Leu Ser Leu Val Asn Phe Glu Glu Ser
            260                 265                 270

Gln Thr Phe Phe Gly Leu Tyr Lys Leu
        275                 280
```