SEQUENCE LISTING

<110> CODIAK BIOSCIENCES

<120> EXTRACELLULAR VESICLE CONJUGATES AND USES THEREOF

<130> 4000.037PC03

<150> US 62/822,014
<151> 2019-03-21

<150> US 62/835,439
<151> 2019-04-17

<160> 231

<170> PatentIn version 3.5

<210> 1
<211> 879
<212> PRT
<213> Homo sapiens

<400> 1

Met Gly Arg Leu Ala Ser Arg Pro Leu Leu Leu Ala Leu Leu Ser Leu
1 5 10 15

Ala Leu Cys Arg Gly Arg Val Val Arg Val Pro Thr Ala Thr Leu Val
20 25 30

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

Asp Gly Pro Ser Glu Gln Asn Phe Asp Trp Ser Phe Ser Ser Leu Gly
50 55 60

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

Gln Leu Tyr Gln Glu Arg Leu Gln Arg Gly Glu Ile Leu Leu Arg Arg
85 90 95

Thr Ala Asn Asp Ala Val Glu Leu His Ile Lys Asn Val Gln Pro Ser
100 105 110

Asp Gln Gly His Tyr Lys Cys Ser Thr Pro Ser Thr Asp Ala Thr Val

```
        115                 120                 125

Gln Gly Asn Tyr Glu Asp Thr Val Gln Val Lys Val Leu Ala Asp Ser
    130                 135                 140

Leu His Val Gly Pro Ser Ala Arg Pro Pro Pro Ser Leu Ser Leu Arg
145                 150                 155                 160

Glu Gly Glu Pro Phe Glu Leu Arg Cys Thr Ala Ala Ser Ala Ser Pro
                165                 170                 175

Leu His Thr His Leu Ala Leu Leu Trp Glu Val His Arg Gly Pro Ala
            180                 185                 190

Arg Arg Ser Val Leu Ala Leu Thr His Glu Gly Arg Phe His Pro Gly
        195                 200                 205

Leu Gly Tyr Glu Gln Arg Tyr His Ser Gly Asp Val Arg Leu Asp Thr
    210                 215                 220

Val Gly Ser Asp Ala Tyr Arg Leu Ser Val Ser Arg Ala Leu Ser Ala
225                 230                 235                 240

Asp Gln Gly Ser Tyr Arg Cys Ile Val Ser Glu Trp Ile Ala Glu Gln
                245                 250                 255

Gly Asn Trp Gln Glu Ile Gln Glu Lys Ala Val Glu Val Ala Thr Val
            260                 265                 270

Val Ile Gln Pro Ser Val Leu Arg Ala Ala Val Pro Lys Asn Val Ser
        275                 280                 285

Val Ala Glu Gly Lys Glu Leu Asp Leu Thr Cys Asn Ile Thr Thr Asp
    290                 295                 300

Arg Ala Asp Asp Val Arg Pro Glu Val Thr Trp Ser Phe Ser Arg Met
305                 310                 315                 320

Pro Asp Ser Thr Leu Pro Gly Ser Arg Val Leu Ala Arg Leu Asp Arg
                325                 330                 335
```

```
Asp Ser Leu Val His Ser Ser Pro His Val Ala Leu Ser His Val Asp
            340                 345                 350

Ala Arg Ser Tyr His Leu Leu Val Arg Asp Val Ser Lys Glu Asn Ser
        355                 360                 365

Gly Tyr Tyr Tyr Cys His Val Ser Leu Trp Ala Pro Gly His Asn Arg
    370                 375                 380

Ser Trp His Lys Val Ala Glu Ala Val Ser Ser Pro Ala Gly Val Gly
385                 390                 395                 400

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

Val Pro Gly Phe Ala Asp Asp Pro Thr Glu Leu Ala Cys Arg Val Val
            420                 425                 430

Asp Thr Lys Ser Gly Glu Ala Asn Val Arg Phe Thr Val Ser Trp Tyr
        435                 440                 445

Tyr Arg Met Asn Arg Arg Ser Asp Asn Val Val Thr Ser Glu Leu Leu
    450                 455                 460

Ala Val Met Asp Gly Asp Trp Thr Leu Lys Tyr Gly Glu Arg Ser Lys
465                 470                 475                 480

Gln Arg Ala Gln Asp Gly Asp Phe Ile Phe Ser Lys Glu His Thr Asp
                485                 490                 495

Thr Phe Asn Phe Arg Ile Gln Arg Thr Thr Glu Glu Asp Arg Gly Asn
            500                 505                 510

Tyr Tyr Cys Val Val Ser Ala Trp Thr Lys Gln Arg Asn Asn Ser Trp
        515                 520                 525

Val Lys Ser Lys Asp Val Phe Ser Lys Pro Val Asn Ile Phe Trp Ala
    530                 535                 540

Leu Glu Asp Ser Val Leu Val Val Lys Ala Arg Gln Pro Lys Pro Phe
```

545 550 555 560

Phe Ala Ala Gly Asn Thr Phe Glu Met Thr Cys Lys Val Ser Ser Lys
565 570 575

Asn Ile Lys Ser Pro Arg Tyr Ser Val Leu Ile Met Ala Glu Lys Pro
580 585 590

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

Asp Gln Asp Ser Val Val Lys Leu Glu Asn Trp Thr Asp Ala Ser Arg
610 615 620

Val Asp Gly Val Val Leu Glu Lys Val Gln Glu Asp Glu Phe Arg Tyr
625 630 635 640

Arg Met Tyr Gln Thr Gln Val Ser Asp Ala Gly Leu Tyr Arg Cys Met
645 650 655

Val Thr Ala Trp Ser Pro Val Arg Gly Ser Leu Trp Arg Glu Ala Ala
660 665 670

Thr Ser Leu Ser Asn Pro Ile Glu Ile Asp Phe Gln Thr Ser Gly Pro
675 680 685

Ile Phe Asn Ala Ser Val His Ser Asp Thr Pro Ser Val Ile Arg Gly
690 695 700

Asp Leu Ile Lys Leu Phe Cys Ile Ile Thr Val Glu Gly Ala Ala Leu
705 710 715 720

Asp Pro Asp Asp Met Ala Phe Asp Val Ser Trp Phe Ala Val His Ser
725 730 735

Phe Gly Leu Asp Lys Ala Pro Val Leu Leu Ser Ser Leu Asp Arg Lys
740 745 750

Gly Ile Val Thr Thr Ser Arg Arg Asp Trp Lys Ser Asp Leu Ser Leu
755 760 765

```
Glu Arg Val Ser Val Leu Glu Phe Leu Leu Gln Val His Gly Ser Glu
    770                 775                 780

Asp Gln Asp Phe Gly Asn Tyr Tyr Cys Ser Val Thr Pro Trp Val Lys
785                 790                 795                 800

Ser Pro Thr Gly Ser Trp Gln Lys Glu Ala Glu Ile His Ser Lys Pro
                805                 810                 815

Val Phe Ile Thr Val Lys Met Asp Val Leu Asn Ala Phe Lys Tyr Pro
            820                 825                 830

Leu Leu Ile Gly Val Gly Leu Ser Thr Val Ile Gly Leu Leu Ser Cys
        835                 840                 845

Leu Ile Gly Tyr Cys Ser Ser His Trp Cys Cys Lys Lys Glu Val Gln
    850                 855                 860

Glu Thr Arg Arg Glu Arg Arg Arg Leu Met Ser Met Glu Met Asp
865                 870                 875
```

<210> 2
<211> 192
<212> PRT
<213> Homo sapiens

<400> 2

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Gly Pro Ile Phe Asn Ala Ser Val His Ser Asp Thr Pro Ser Val Ile
1               5                   10                  15

Arg Gly Asp Leu Ile Lys Leu Phe Cys Ile Ile Thr Val Glu Gly Ala
            20                  25                  30

Ala Leu Asp Pro Asp Asp Met Ala Phe Asp Val Ser Trp Phe Ala Val
        35                  40                  45

His Ser Phe Gly Leu Asp Lys Ala Pro Val Leu Leu Ser Ser Leu Asp
    50                  55                  60

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

Ser Leu Glu Arg Val Ser Val Leu Glu Phe Leu Leu Gln Val His Gly
85 90 95

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

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

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

Tyr Pro Leu Leu Ile Gly Val Gly Leu Ser Thr Val Ile Gly Leu Leu
145 150 155 160

Ser Cys Leu Ile Gly Tyr Cys Ser Ser His Trp Cys Cys Lys Lys Glu
165 170 175

Val Gln Glu Thr Arg Arg Glu Arg Arg Arg Leu Met Ser Met Glu Met
180 185 190

<210> 3
<211> 385
<212> PRT
<213> Homo sapiens

<400> 3

Met Ala Ala Ala Leu Phe Val Leu Leu Gly Phe Ala Leu Leu Gly Thr
1 5 10 15

His Gly Ala Ser Gly Ala Ala Gly Phe Val Gln Ala Pro Leu Ser Gln
20 25 30

Gln Arg Trp Val Gly Gly Ser Val Glu Leu His Cys Glu Ala Val Gly
35 40 45

Ser Pro Val Pro Glu Ile Gln Trp Trp Phe Glu Gly Gln Gly Pro Asn
50 55 60

Asp Thr Cys Ser Gln Leu Trp Asp Gly Ala Arg Leu Asp Arg Val His

```
65                  70                  75                  80

Ile His Ala Thr Tyr His Gln His Ala Ala Ser Thr Ile Ser Ile Asp
                85                  90                  95

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

Asp Pro Asp Arg Asn His Leu Thr Arg Ala Pro Arg Val Lys Trp Val
        115                 120                 125

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

Thr Val Glu Asp Leu Gly Ser Lys Ile Leu Leu Thr Cys Ser Leu Asn
145                 150                 155                 160

Asp Ser Ala Thr Glu Val Thr Gly His Arg Trp Leu Lys Gly Gly Val
                165                 170                 175

Val Leu Lys Glu Asp Ala Leu Pro Gly Gln Lys Thr Glu Phe Lys Val
            180                 185                 190

Asp Ser Asp Asp Gln Trp Gly Glu Tyr Ser Cys Val Phe Leu Pro Glu
        195                 200                 205

Pro Met Gly Thr Ala Asn Ile Gln Leu His Gly Pro Pro Arg Val Lys
    210                 215                 220

Ala Val Lys Ser Ser Glu His Ile Asn Glu Gly Glu Thr Ala Met Leu
225                 230                 235                 240

Val Cys Lys Ser Glu Ser Val Pro Pro Val Thr Asp Trp Ala Trp Tyr
                245                 250                 255

Lys Ile Thr Asp Ser Glu Asp Lys Ala Leu Met Asn Gly Ser Glu Ser
            260                 265                 270

Arg Phe Phe Val Ser Ser Ser Gln Gly Arg Ser Glu Leu His Ile Glu
        275                 280                 285
```

```
Asn Leu Asn Met Glu Ala Asp Pro Gly Gln Tyr Arg Cys Asn Gly Thr
    290                 295                 300

Ser Ser Lys Gly Ser Asp Gln Ala Ile Ile Thr Leu Arg Val Arg Ser
305                 310                 315                 320

His Leu Ala Ala Leu Trp Pro Phe Leu Gly Ile Val Ala Glu Val Leu
                325                 330                 335

Val Leu Val Thr Ile Ile Phe Ile Tyr Glu Lys Arg Arg Lys Pro Glu
            340                 345                 350

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

Gly Gln His Gln Asn Asp Lys Gly Lys Asn Val Arg Gln Arg Asn Ser
    370                 375                 380

Ser
385
```

<210> 4
<211> 613
<212> PRT
<213> Homo sapiens

<400> 4

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

Leu Leu Leu Met Leu Gly Met Gly Cys Trp Ala Arg Glu Val Leu Val
            20                  25                  30

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

Cys Asn Val Thr Gly Tyr Glu Gly Pro Ala Gln Gln Asn Phe Glu Trp
    50                  55                  60

Phe Leu Tyr Arg Pro Glu Ala Pro Asp Thr Ala Leu Gly Ile Val Ser
65                  70                  75                  80
```

```
Thr Lys Asp Thr Gln Phe Ser Tyr Ala Val Phe Lys Ser Arg Val Val
                85                  90                  95

Ala Gly Glu Val Gln Val Gln Arg Leu Gln Gly Asp Ala Val Val Leu
            100                 105                 110

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

Thr Pro Ser Thr Asp Thr Arg Tyr Leu Gly Ser Tyr Ser Gly Lys Val
    130                 135                 140

Glu Leu Arg Val Leu Pro Asp Val Leu Gln Val Ser Ala Ala Pro Pro
145                 150                 155                 160

Gly Pro Arg Gly Arg Gln Ala Pro Thr Ser Pro Pro Arg Met Thr Val
                165                 170                 175

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

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

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

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

Gly Glu Leu Arg Leu Gly Lys Glu Gly Thr Asp Arg Tyr Arg Met Val
                245                 250                 255

Val Gly Gly Ala Gln Ala Gly Asp Ala Gly Thr Tyr His Cys Thr Ala
            260                 265                 270

Ala Glu Trp Ile Gln Asp Pro Asp Gly Ser Trp Ala Gln Ile Ala Glu
        275                 280                 285
```

```
Lys Arg Ala Val Leu Ala His Val Asp Val Gln Thr Leu Ser Ser Gln
    290                 295                 300

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

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

Arg His Ala Ala Tyr Ser Val Gly Trp Glu Met Ala Pro Ala Gly Ala
            340                 345                 350

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

Ser Leu Gly Pro Gly Tyr Glu Gly Arg His Ile Ala Met Glu Lys Val
    370                 375                 380

Ala Ser Arg Thr Tyr Arg Leu Arg Leu Glu Ala Ala Arg Pro Gly Asp
385                 390                 395                 400

Ala Gly Thr Tyr Arg Cys Leu Ala Lys Ala Tyr Val Arg Gly Ser Gly
                405                 410                 415

Thr Arg Leu Arg Glu Ala Ala Ser Ala Arg Ser Arg Pro Leu Pro Val
            420                 425                 430

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

Gly Gly Thr Val Tyr Arg Gly Glu Thr Ala Ser Leu Leu Cys Asn Ile
    450                 455                 460

Ser Val Arg Gly Gly Pro Pro Gly Leu Arg Leu Ala Ala Ser Trp Trp
465                 470                 475                 480

Val Glu Arg Pro Glu Asp Gly Glu Leu Ser Ser Val Pro Ala Gln Leu
                485                 490                 495

Val Gly Gly Val Gly Gln Asp Gly Val Ala Glu Leu Gly Val Arg Pro
            500                 505                 510
```

```
Gly Gly Gly Pro Val Ser Val Glu Leu Val Gly Pro Arg Ser His Arg
        515                 520                 525

Leu Arg Leu His Ser Leu Gly Pro Glu Asp Glu Gly Val Tyr His Cys
    530                 535                 540

Ala Pro Ser Ala Trp Val Gln His Ala Asp Tyr Ser Trp Tyr Gln Ala
545                 550                 555                 560

Gly Ser Ala Arg Ser Gly Pro Val Thr Val Tyr Pro Tyr Met His Ala
                565                 570                 575

Leu Asp Thr Leu Phe Val Pro Leu Leu Val Gly Thr Gly Val Ala Leu
            580                 585                 590

Val Thr Gly Ala Thr Val Leu Gly Thr Ile Thr Cys Cys Phe Met Lys
        595                 600                 605

Arg Leu Arg Lys Arg
    610
```

<210> 5
<211> 748
<212> PRT
<213> Homo sapiens

<400> 5

```
Met Asn Leu Gln Pro Ile Phe Trp Ile Gly Leu Ile Ser Ser Val Cys
1               5                   10                  15

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

Lys Ser Cys Gly Glu Cys Ile Gln Ala Gly Pro Asn Cys Gly Trp Cys
        35                  40                  45

Thr Asn Ser Thr Phe Leu Gln Glu Gly Met Pro Thr Ser Ala Arg Cys
    50                  55                  60

Asp Asp Leu Glu Ala Leu Lys Lys Lys Gly Cys Pro Pro Asp Asp Ile
```

```
65                  70                  75                  80

Glu Asn Pro Arg Gly Ser Lys Asp Ile Lys Lys Asn Lys Asn Val Thr
                85                  90                  95

Asn Arg Ser Lys Gly Thr Ala Glu Lys Leu Lys Pro Glu Asp Ile Thr
            100                 105                 110

Gln Ile Gln Pro Gln Gln Leu Val Leu Arg Leu Arg Ser Gly Glu Pro
        115                 120                 125

Gln Thr Phe Thr Leu Lys Phe Lys Arg Ala Glu Asp Tyr Pro Ile Asp
    130                 135                 140

Leu Tyr Tyr Leu Met Asp Leu Ser Tyr Ser Met Lys Asp Asp Leu Glu
145                 150                 155                 160

Asn Val Lys Ser Leu Gly Thr Asp Leu Met Asn Glu Met Arg Arg Ile
                165                 170                 175

Thr Ser Asp Phe Arg Ile Gly Phe Gly Ser Phe Val Glu Lys Thr Val
            180                 185                 190

Met Pro Tyr Ile Ser Thr Thr Pro Ala Lys Leu Arg Asn Pro Cys Thr
        195                 200                 205

Ser Glu Gln Asn Cys Thr Ser Pro Phe Ser Tyr Lys Asn Val Leu Ser
    210                 215                 220

Leu Thr Asn Lys Gly Glu Val Phe Asn Glu Leu Val Gly Lys Gln Arg
225                 230                 235                 240

Ile Ser Gly Asn Leu Asp Ser Pro Glu Gly Gly Phe Asp Ala Ile Met
                245                 250                 255

Gln Val Ala Val Cys Gly Ser Leu Ile Gly Trp Arg Asn Val Thr Arg
            260                 265                 270

Leu Leu Val Phe Ser Thr Asp Ala Gly Phe His Phe Ala Gly Asp Gly
        275                 280                 285
```

```
Lys Leu Gly Gly Ile Val Leu Pro Asn Asp Gly Gln Cys His Leu Glu
    290                 295                 300

Asn Asn Met Tyr Thr Met Ser His Tyr Tyr Asp Tyr Pro Ser Ile Ala
305                 310                 315                 320

His Leu Val Gln Lys Leu Ser Glu Asn Asn Ile Gln Thr Ile Phe Ala
                325                 330                 335

Val Thr Glu Glu Phe Gln Pro Val Tyr Lys Glu Leu Lys Asn Leu Ile
            340                 345                 350

Pro Lys Ser Ala Val Gly Thr Leu Ser Ala Asn Ser Ser Asn Val Ile
        355                 360                 365

Gln Leu Ile Ile Asp Ala Tyr Asn Ser Leu Ser Ser Glu Val Ile Leu
    370                 375                 380

Glu Asn Gly Lys Leu Ser Glu Gly Val Thr Ile Ser Tyr Lys Ser Tyr
385                 390                 395                 400

Cys Lys Asn Gly Val Asn Gly Thr Gly Glu Asn Gly Arg Lys Cys Ser
                405                 410                 415

Asn Ile Ser Ile Gly Asp Glu Val Gln Phe Glu Ile Ser Ile Thr Ser
            420                 425                 430

Asn Lys Cys Pro Lys Lys Asp Ser Asp Ser Phe Lys Ile Arg Pro Leu
        435                 440                 445

Gly Phe Thr Glu Glu Val Glu Val Ile Leu Gln Tyr Ile Cys Glu Cys
    450                 455                 460

Glu Cys Gln Ser Glu Gly Ile Pro Glu Ser Pro Lys Cys His Glu Gly
465                 470                 475                 480

Asn Gly Thr Phe Glu Cys Gly Ala Cys Arg Cys Asn Glu Gly Arg Val
                485                 490                 495

Gly Arg His Cys Glu Cys Ser Thr Asp Glu Val Asn Ser Glu Asp Met
```

```
            500                 505                 510

Asp Ala Tyr Cys Arg Lys Glu Asn Ser Ser Glu Ile Cys Ser Asn Asn
        515                 520                 525

Gly Glu Cys Val Cys Gly Gln Cys Val Cys Arg Lys Arg Asp Asn Thr
    530                 535                 540

Asn Glu Ile Tyr Ser Gly Ala Ser Asn Gly Gln Ile Cys Asn Gly Arg
545                 550                 555                 560

Gly Ile Cys Glu Cys Gly Val Cys Lys Cys Thr Asp Pro Lys Phe Gln
                565                 570                 575

Gly Gln Thr Cys Glu Met Cys Gln Thr Cys Leu Gly Val Cys Ala Glu
            580                 585                 590

His Lys Glu Cys Val Gln Cys Arg Ala Phe Asn Lys Gly Glu Lys Lys
        595                 600                 605

Asp Thr Cys Thr Gln Glu Cys Ser Tyr Phe Asn Ile Thr Lys Val Glu
    610                 615                 620

Ser Arg Asp Lys Leu Pro Gln Pro Val Gln Pro Asp Pro Val Ser His
625                 630                 635                 640

Cys Lys Glu Lys Asp Val Asp Asp Cys Trp Phe Tyr Phe Thr Tyr Ser
                645                 650                 655

Val Asn Gly Asn Asn Glu Val Met Val His Val Val Glu Asn Pro Glu
            660                 665                 670

Cys Pro Thr Gly Pro Asp Ile Ile Pro Ile Val Ala Gly Val Val Ala
        675                 680                 685

Gly Ile Val Leu Ile Gly Leu Ala Leu Leu Leu Ile Trp Lys Leu Leu
    690                 695                 700

Met Ile Ile His Asp Arg Arg Glu Phe Ala Lys Phe Glu Lys Glu Lys
705                 710                 715                 720
```

```
Met Asn Ala Lys Trp Asp Thr Gly Glu Asn Pro Ile Tyr Lys Ser Ala
                725                 730                 735


Val Thr Thr Val Val Asn Pro Lys Tyr Glu Gly Lys
            740                 745


<210>  6
<211>  1032
<212>  PRT
<213>  Homo sapiens

<400>  6

Met Ala Trp Glu Ala Arg Arg Glu Pro Gly Pro Arg Arg Ala Ala Val
1               5                   10                  15


Arg Glu Thr Val Met Leu Leu Leu Cys Leu Gly Val Pro Thr Gly Arg
            20                  25                  30


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


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


Arg Trp Leu Leu Val Gly Ala Pro Thr Ala Asn Trp Leu Ala Asn Ala
65                  70                  75                  80


Ser Val Ile Asn Pro Gly Ala Ile Tyr Arg Cys Arg Ile Gly Lys Asn
                85                  90                  95


Pro Gly Gln Thr Cys Glu Gln Leu Gln Leu Gly Ser Pro Asn Gly Glu
            100                 105                 110


Pro Cys Gly Lys Thr Cys Leu Glu Glu Arg Asp Asn Gln Trp Leu Gly
        115                 120                 125


Val Thr Leu Ser Arg Gln Pro Gly Glu Asn Gly Ser Ile Val Thr Cys
    130                 135                 140


Gly His Arg Trp Lys Asn Ile Phe Tyr Ile Lys Asn Glu Asn Lys Leu
145                 150                 155                 160
```

```
Pro Thr Gly Gly Cys Tyr Gly Val Pro Pro Asp Leu Arg Thr Glu Leu
                165                 170                 175

Ser Lys Arg Ile Ala Pro Cys Tyr Gln Asp Tyr Val Lys Lys Phe Gly
            180                 185                 190

Glu Asn Phe Ala Ser Cys Gln Ala Gly Ile Ser Ser Phe Tyr Thr Lys
        195                 200                 205

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

Leu Phe Val Tyr Asn Ile Thr Thr Asn Lys Tyr Lys Ala Phe Leu Asp
225                 230                 235                 240

Lys Gln Asn Gln Val Lys Phe Gly Ser Tyr Leu Gly Tyr Ser Val Gly
                245                 250                 255

Ala Gly His Phe Arg Ser Gln His Thr Thr Glu Val Val Gly Gly Ala
            260                 265                 270

Pro Gln His Glu Gln Ile Gly Lys Ala Tyr Ile Phe Ser Ile Asp Glu
        275                 280                 285

Lys Glu Leu Asn Ile Leu His Glu Met Lys Gly Lys Lys Leu Gly Ser
    290                 295                 300

Tyr Phe Gly Ala Ser Val Cys Ala Val Asp Leu Asn Ala Asp Gly Phe
305                 310                 315                 320

Ser Asp Leu Leu Val Gly Ala Pro Met Gln Ser Thr Ile Arg Glu Glu
                325                 330                 335

Gly Arg Val Phe Val Tyr Ile Asn Ser Gly Ser Gly Ala Val Met Asn
            340                 345                 350

Ala Met Glu Thr Asn Leu Val Gly Ser Asp Lys Tyr Ala Ala Arg Phe
        355                 360                 365
```

```
Gly Glu Ser Ile Val Asn Leu Gly Asp Ile Asp Asn Asp Gly Phe Glu
    370                 375                 380

Asp Val Ala Ile Gly Ala Pro Gln Glu Asp Asp Leu Gln Gly Ala Ile
385                 390                 395                 400

Tyr Ile Tyr Asn Gly Arg Ala Asp Gly Ile Ser Ser Thr Phe Ser Gln
                405                 410                 415

Arg Ile Glu Gly Leu Gln Ile Ser Lys Ser Leu Ser Met Phe Gly Gln
            420                 425                 430

Ser Ile Ser Gly Gln Ile Asp Ala Asp Asn Asn Gly Tyr Val Asp Val
        435                 440                 445

Ala Val Gly Ala Phe Arg Ser Asp Ser Ala Val Leu Leu Arg Thr Arg
    450                 455                 460

Pro Val Val Ile Val Asp Ala Ser Leu Ser His Pro Glu Ser Val Asn
465                 470                 475                 480

Arg Thr Lys Phe Asp Cys Val Glu Asn Gly Trp Pro Ser Val Cys Ile
                485                 490                 495

Asp Leu Thr Leu Cys Phe Ser Tyr Lys Gly Lys Glu Val Pro Gly Tyr
            500                 505                 510

Ile Val Leu Phe Tyr Asn Met Ser Leu Asp Val Asn Arg Lys Ala Glu
        515                 520                 525

Ser Pro Pro Arg Phe Tyr Phe Ser Ser Asn Gly Thr Ser Asp Val Ile
    530                 535                 540

Thr Gly Ser Ile Gln Val Ser Ser Arg Glu Ala Asn Cys Arg Thr His
545                 550                 555                 560

Gln Ala Phe Met Arg Lys Asp Val Arg Asp Ile Leu Thr Pro Ile Gln
                565                 570                 575

Ile Glu Ala Ala Tyr His Leu Gly Pro His Val Ile Ser Lys Arg Ser
            580                 585                 590
```

```
Thr Glu Glu Phe Pro Pro Leu Gln Pro Ile Leu Gln Gln Lys Lys Glu
        595                 600                 605

Lys Asp Ile Met Lys Lys Thr Ile Asn Phe Ala Arg Phe Cys Ala His
    610                 615                 620

Glu Asn Cys Ser Ala Asp Leu Gln Val Ser Ala Lys Ile Gly Phe Leu
625                 630                 635                 640

Lys Pro His Glu Asn Lys Thr Tyr Leu Ala Val Gly Ser Met Lys Thr
                645                 650                 655

Leu Met Leu Asn Val Ser Leu Phe Asn Ala Gly Asp Asp Ala Tyr Glu
            660                 665                 670

Thr Thr Leu His Val Lys Leu Pro Val Gly Leu Tyr Phe Ile Lys Ile
        675                 680                 685

Leu Glu Leu Glu Glu Lys Gln Ile Asn Cys Glu Val Thr Asp Asn Ser
    690                 695                 700

Gly Val Val Gln Leu Asp Cys Ser Ile Gly Tyr Ile Tyr Val Asp His
705                 710                 715                 720

Leu Ser Arg Ile Asp Ile Ser Phe Leu Leu Asp Val Ser Ser Leu Ser
                725                 730                 735

Arg Ala Glu Glu Asp Leu Ser Ile Thr Val His Ala Thr Cys Glu Asn
            740                 745                 750

Glu Glu Glu Met Asp Asn Leu Lys His Ser Arg Val Thr Val Ala Ile
        755                 760                 765

Pro Leu Lys Tyr Glu Val Lys Leu Thr Val His Gly Phe Val Asn Pro
    770                 775                 780

Thr Ser Phe Val Tyr Gly Ser Asn Asp Glu Asn Glu Pro Glu Thr Cys
785                 790                 795                 800
```

```
Met Val Glu Lys Met Asn Leu Thr Phe His Val Ile Asn Thr Gly Asn
                805                 810                 815

Ser Met Ala Pro Asn Val Ser Val Glu Ile Met Val Pro Asn Ser Phe
            820                 825                 830

Ser Pro Gln Thr Asp Lys Leu Phe Asn Ile Leu Asp Val Gln Thr Thr
        835                 840                 845

Thr Gly Glu Cys His Phe Glu Asn Tyr Gln Arg Val Cys Ala Leu Glu
    850                 855                 860

Gln Gln Lys Ser Ala Met Gln Thr Leu Lys Gly Ile Val Arg Phe Leu
865                 870                 875                 880

Ser Lys Thr Asp Lys Arg Leu Leu Tyr Cys Ile Lys Ala Asp Pro His
                885                 890                 895

Cys Leu Asn Phe Leu Cys Asn Phe Gly Lys Met Glu Ser Gly Lys Glu
            900                 905                 910

Ala Ser Val His Ile Gln Leu Glu Gly Arg Pro Ser Ile Leu Glu Met
        915                 920                 925

Asp Glu Thr Ser Ala Leu Lys Phe Glu Ile Arg Ala Thr Gly Phe Pro
    930                 935                 940

Glu Pro Asn Pro Arg Val Ile Glu Leu Asn Lys Asp Glu Asn Val Ala
945                 950                 955                 960

His Val Leu Leu Glu Gly Leu His His Gln Arg Pro Lys Arg Tyr Phe
                965                 970                 975

Thr Ile Val Ile Ile Ser Ser Ser Leu Leu Leu Gly Leu Ile Val Leu
            980                 985                 990

Leu Leu Ile Ser Tyr Val Met Trp  Lys Ala Gly Phe Phe  Lys Arg Gln
        995                 1000                1005

Tyr Lys  Ser Ile Leu Gln Glu  Glu Asn Arg Arg Asp  Ser Trp Ser
    1010                1015                1020
```

Tyr Ile Asn Ser Lys Ser Asn Asp Asp
    1025   1030

<210> 7
<211> 630
<212> PRT
<213> Homo sapiens

<400> 7

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

Arg Gln Leu Pro Gly Ser His Ser Glu Ala Gly Val Gln Gly Leu Ser
            20   25   30

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

Leu Glu Leu Leu Ala Ser Gly Asp Pro Leu Pro Ser Ala Ser Gln Asn
    50   55   60

Ala Glu Met Ile Glu Thr Gly Ser Asp Cys Val Thr Gln Ala Gly Leu
65   70   75   80

Gln Leu Leu Ala Ser Ser Asp Pro Pro Ala Leu Ala Ser Lys Asn Ala
                85   90   95

Glu Val Thr Gly Thr Met Ser Gln Asp Thr Glu Val Asp Met Lys Glu
            100   105   110

Val Glu Leu Asn Glu Leu Glu Pro Glu Lys Gln Pro Met Asn Ala Ala
        115   120   125

Ser Gly Ala Ala Met Ser Leu Ala Gly Ala Glu Lys Asn Gly Leu Val
    130   135   140

Lys Ile Lys Val Ala Glu Asp Glu Ala Glu Ala Ala Ala Ala Ala Lys
145   150   155   160

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

```
                165                 170                 175

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

Trp Leu Gly Met Leu Ala Gly Ala Val Val Ile Ile Val Arg Ala Pro
        195                 200                 205

Arg Cys Arg Glu Leu Pro Ala Gln Lys Trp Trp His Thr Gly Ala Leu
    210                 215                 220

Tyr Arg Ile Gly Asp Leu Gln Ala Phe Gln Gly His Gly Ala Gly Asn
225                 230                 235                 240

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

Lys Gly Leu Val Leu Gly Pro Ile His Lys Asn Gln Lys Asp Asp Val
            260                 265                 270

Ala Gln Thr Asp Leu Leu Gln Ile Asp Pro Asn Phe Gly Ser Lys Glu
        275                 280                 285

Asp Phe Asp Ser Leu Leu Gln Ser Ala Lys Lys Lys Ser Ile Arg Val
    290                 295                 300

Ile Leu Asp Leu Thr Pro Asn Tyr Arg Gly Glu Asn Ser Trp Phe Ser
305                 310                 315                 320

Thr Gln Val Asp Thr Val Ala Thr Lys Val Lys Asp Ala Leu Glu Phe
                325                 330                 335

Trp Leu Gln Ala Gly Val Asp Gly Phe Gln Val Arg Asp Ile Glu Asn
            340                 345                 350

Leu Lys Asp Ala Ser Ser Phe Leu Ala Glu Trp Gln Asn Ile Thr Lys
        355                 360                 365

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

```
Leu Gln Gln Ile Leu Ser Leu Leu Glu Ser Asn Lys Asp Leu Leu Leu
385                 390                 395                 400

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

Ser Leu Val Thr Gln Tyr Leu Asn Ala Thr Gly Asn Arg Trp Cys Ser
            420                 425                 430

Trp Ser Leu Ser Gln Ala Arg Leu Leu Thr Ser Phe Leu Pro Ala Gln
        435                 440                 445

Leu Leu Arg Leu Tyr Gln Leu Met Leu Phe Thr Leu Pro Gly Thr Pro
    450                 455                 460

Val Phe Ser Tyr Gly Asp Glu Ile Gly Leu Asp Ala Ala Ala Leu Pro
465                 470                 475                 480

Gly Gln Pro Met Glu Ala Pro Val Met Leu Trp Asp Glu Ser Ser Phe
                485                 490                 495

Pro Asp Ile Pro Gly Ala Val Ser Ala Asn Met Thr Val Lys Gly Gln
            500                 505                 510

Ser Glu Asp Pro Gly Ser Leu Leu Ser Leu Phe Arg Arg Leu Ser Asp
        515                 520                 525

Gln Arg Ser Lys Glu Arg Ser Leu Leu His Gly Asp Phe His Ala Phe
    530                 535                 540

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

Glu Arg Phe Leu Val Val Leu Asn Phe Gly Asp Val Gly Leu Ser Ala
                565                 570                 575

Gly Leu Gln Ala Ser Asp Leu Pro Ala Ser Ala Ser Leu Pro Ala Lys
            580                 585                 590

Ala Asp Leu Leu Leu Ser Thr Gln Pro Gly Arg Glu Glu Gly Ser Pro
```

595 600 605

Leu Glu Leu Glu Arg Leu Lys Leu Glu Pro His Glu Gly Leu Leu Leu
610 615 620

Arg Phe Pro Tyr Ala Ala
625 630

<210> 8
<211> 332
<212> PRT
<213> Homo sapiens

<400> 8

Met Gly Ala Gln Phe Ser Lys Thr Ala Ala Lys Gly Glu Ala Ala Ala
1 5 10 15

Glu Arg Pro Gly Glu Ala Ala Val Ala Ser Ser Pro Ser Lys Ala Asn
20 25 30

Gly Gln Glu Asn Gly His Val Lys Val Asn Gly Asp Ala Ser Pro Ala
35 40 45

Ala Ala Glu Ser Gly Ala Lys Glu Glu Leu Gln Ala Asn Gly Ser Ala
50 55 60

Pro Ala Ala Asp Lys Glu Glu Pro Ala Ala Ala Gly Ser Gly Ala Ala
65 70 75 80

Ser Pro Ser Ala Ala Glu Lys Gly Glu Pro Ala Ala Ala Ala Ala Pro
85 90 95

Glu Ala Gly Ala Ser Pro Val Glu Lys Glu Ala Pro Ala Glu Gly Glu
100 105 110

Ala Ala Glu Pro Gly Ser Pro Thr Ala Ala Glu Gly Glu Ala Ala Ser
115 120 125

Ala Ala Ser Ser Thr Ser Ser Pro Lys Ala Glu Asp Gly Ala Thr Pro
130 135 140

```
Ser Pro Ser Asn Glu Thr Pro Lys Lys Lys Lys Lys Arg Phe Ser Phe
145                 150                 155                 160


Lys Lys Ser Phe Lys Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys Lys
                165                 170                 175


Glu Ala Gly Glu Gly Gly Glu Ala Glu Ala Pro Ala Ala Glu Gly Gly
            180                 185                 190


Lys Asp Glu Ala Ala Gly Gly Ala Ala Ala Ala Ala Ala Glu Ala Gly
        195                 200                 205


Ala Ala Ser Gly Glu Gln Ala Ala Ala Pro Gly Glu Glu Ala Ala Ala
    210                 215                 220


Gly Glu Glu Gly Ala Ala Gly Gly Asp Pro Gln Glu Ala Lys Pro Gln
225                 230                 235                 240


Glu Ala Ala Val Ala Pro Glu Lys Pro Pro Ala Ser Asp Glu Thr Lys
                245                 250                 255


Ala Ala Glu Glu Pro Ser Lys Val Glu Glu Lys Lys Ala Glu Glu Ala
            260                 265                 270


Gly Ala Ser Ala Ala Ala Cys Glu Ala Pro Ser Ala Ala Gly Pro Gly
        275                 280                 285


Ala Pro Pro Glu Gln Glu Ala Ala Pro Ala Glu Glu Pro Ala Ala Ala
    290                 295                 300


Ala Ala Ser Ser Ala Cys Ala Ala Pro Ser Gln Glu Ala Gln Pro Glu
305                 310                 315                 320


Cys Ser Pro Glu Ala Pro Pro Ala Glu Ala Ala Glu
                325                 330
```

<210> 9
<211> 195
<212> PRT
<213> Homo sapiens

<400> 9

```
Met Gly Ser Gln Ser Ser Lys Ala Pro Arg Gly Asp Val Thr Ala Glu
1               5                  10                  15

Glu Ala Ala Gly Ala Ser Pro Ala Lys Ala Asn Gly Gln Glu Asn Gly
            20                  25                  30

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

Pro Pro Val Asn Gly Thr Asp Glu Ala Ala Gly Ala Thr Gly Asp Ala
    50                  55                  60

Ile Glu Pro Ala Pro Pro Ser Gln Gly Ala Glu Ala Lys Gly Glu Val
65                  70                  75                  80

Pro Pro Lys Glu Thr Pro Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
                85                  90                  95

Pro Phe Lys Leu Ser Gly Leu Ser Phe Lys Arg Asn Arg Lys Glu Gly
            100                 105                 110

Gly Gly Asp Ser Ser Ala Ser Ser Pro Thr Glu Glu Glu Gln Glu Gln
        115                 120                 125

Gly Glu Ile Gly Ala Cys Ser Asp Glu Gly Thr Ala Gln Glu Gly Lys
    130                 135                 140

Ala Ala Ala Thr Pro Glu Ser Gln Glu Pro Gln Ala Lys Gly Ala Glu
145                 150                 155                 160

Ala Ser Ala Ala Ser Glu Glu Glu Ala Gly Pro Gln Ala Thr Glu Pro
                165                 170                 175

Ser Thr Pro Ser Gly Pro Glu Ser Gly Pro Thr Pro Ala Ser Ala Glu
            180                 185                 190

Gln Asn Glu
        195
```

<210> 10

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

<400> 10

Met Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp
1 5 10 15

Glu Lys Ala Lys Glu Lys Asp Lys Lys Ala Glu Gly Ala Ala Thr Glu
20 25 30

Glu Glu Gly Thr Pro Lys Glu Ser Glu Pro Gln Ala Ala Ala Glu Pro
35 40 45

Ala Glu Ala Lys Glu Gly Lys Glu Lys Pro Asp Gln Asp Ala Glu Gly
50 55 60

Lys Ala Glu Glu Lys Glu Gly Glu Lys Asp Ala Ala Ala Ala Lys Glu
65 70 75 80

Glu Ala Pro Lys Ala Glu Pro Glu Lys Thr Glu Gly Ala Ala Glu Ala
85 90 95

Lys Ala Glu Pro Pro Lys Ala Pro Glu Gln Glu Gln Ala Ala Pro Gly
100 105 110

Pro Ala Ala Gly Gly Glu Ala Pro Lys Ala Ala Glu Ala Ala Ala Ala
115 120 125

Pro Ala Glu Ser Ala Ala Pro Ala Ala Gly Glu Glu Pro Ser Lys Glu
130 135 140

Glu Gly Glu Pro Lys Lys Thr Glu Ala Pro Ala Ala Pro Ala Ala Gln
145 150 155 160

Glu Thr Lys Ser Asp Gly Ala Pro Ala Ser Asp Ser Lys Pro Gly Ser
165 170 175

Ser Glu Ala Ala Pro Ser Ser Lys Glu Thr Pro Ala Ala Thr Glu Ala
180 185 190

Pro Ser Ser Thr Pro Lys Ala Gln Gly Pro Ala Ala Ser Ala Glu Glu
        195   200   205

Pro Lys Pro Val Glu Ala Pro Ala Ala Asn Ser Asp Gln Thr Val Thr
    210   215   220

Val Lys Glu
225

<210> 11
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 11

Lys Lys Lys Lys
1

<210> 12
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 12

Lys Lys Lys Lys Lys
1   5

<210> 13
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 13

Arg Arg Arg Arg
1

<210> 14
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 14

Arg Arg Arg Arg Arg
1   5

<210> 15
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MOD_RES
<222> (1)..(4)
<223> X = Lys or Arg

<400> 15

Xaa Xaa Xaa Xaa
1

<210> 16
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> misc_feature
<222> (1)..(5)
<223> Xaa can be any naturally occurring amino acid

<400> 16

Xaa Xaa Xaa Xaa Xaa
1   5

<210> 17
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 17

Gly Gly Lys Leu Ser Lys Lys
1 5

<210> 18
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 18

Gly Ala Lys Leu Ser Lys Lys
1 5

<210> 19
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 19

Gly Gly Lys Gln Ser Lys Lys
1 5

<210> 20
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 20

Gly Gly Lys Leu Ala Lys Lys
1 5

<210> 21
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 21

Gly Gly Lys Leu Ser Lys Lys
1 5

<210> 22
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 22

Gly Gly Lys Leu Ser Lys Lys Lys
1 5

<210> 23
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 23

Gly Gly Lys Leu Ser Lys Lys Ser
1 5

<210> 24
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 24

Gly Ala Lys Leu Ser Lys Lys Lys
1   5

<210> 25
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 25

Gly Ala Lys Leu Ser Lys Lys Ser
1   5

<210> 26
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 26

Gly Gly Lys Gln Ser Lys Lys Lys
1   5

<210> 27
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 27

Gly Gly Lys Gln Ser Lys Lys Ser
1   5

<210> 28
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 28

Gly Gly Lys Leu Ala Lys Lys Lys
1 5

<210> 29
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 29

Gly Gly Lys Leu Ala Lys Lys Ser
1 5

<210> 30
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 30

Gly Gly Gly Gly
1

<210> 31
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> misc_feature
<222> (1)..(4)
<223> Linker; can comprise 1 to 100 repeats of the sequence

<400> 31

Gly Gly Gly Ser
1

<210> 32
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 32

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn
1   5   10

<210> 33
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 33

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

<210> 34
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 34

Gly Gly Lys Gln Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn
1   5   10

<210> 35
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 35

Gly Gly Lys Leu Ala Lys Lys Lys Lys Gly Tyr Asn Val Asn
1   5   10

<210> 36
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 36

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Ser Gly Gly
1 5 10

<210> 37
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 37

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Ser Gly Gly Ser
1 5 10

<210> 38
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 38

Gly Gly Lys Leu Ser Lys Lys Lys Lys Ser Gly Gly Ser Gly
1 5 10

<210> 39
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 39

Gly Gly Lys Leu Ser Lys Lys Lys Ser Gly Gly Ser Gly Gly
1 5 10

<210> 40
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 40

Gly Gly Lys Leu Ser Lys Lys Ser Gly Gly Ser Gly Gly Ser
1 5 10

<210> 41
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 41

Gly Gly Lys Leu Ser Lys Ser Gly Gly Ser Gly Gly Ser Val
1 5 10

<210> 42
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 42

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser
1 5 10

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

<220>
<223> 453 to 459 of SEQ44

<400> 43

Gly Thr Thr Thr Gln Ser Arg
1 5

<210> 44
<211> 735
<212> PRT
<213> Artificial Sequence

<220>
<223> AAV2 VP1 (viral)

<400> 44

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

```
Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
                165                 170                 175

Gly Asp Ala Asp Ser Val Pro Asp Pro Gln Pro Leu Gly Gln Pro Pro
            180                 185                 190

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
        195                 200                 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
    210                 215                 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225                 230                 235                 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
                245                 250                 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
            260                 265                 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
        275                 280                 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
    290                 295                 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305                 310                 315                 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
                325                 330                 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
            340                 345                 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
        355                 360                 365
```

```
Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
    370                 375                 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385                 390                 395                 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
                405                 410                 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
            420                 425                 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
        435                 440                 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
    450                 455                 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465                 470                 475                 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
                485                 490                 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
            500                 505                 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
        515                 520                 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
    530                 535                 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545                 550                 555                 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
                565                 570                 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Arg Gln Ala Ala Thr
            580                 585                 590
```

```
Ala Asp Val Asn Thr Gln Gly Val Leu Pro Gly Met Val Trp Gln Asp
        595                 600                 605

Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr
    610                 615                 620

Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys
625                 630                 635                 640

His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn
                645                 650                 655

Pro Ser Thr Thr Phe Ser Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln
            660                 665                 670

Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys
        675                 680                 685

Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr
    690                 695                 700

Asn Lys Ser Val Asn Val Asp Phe Thr Val Asp Thr Asn Gly Val Tyr
705                 710                 715                 720

Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
                725                 730                 735
```

<210> 45
<211> 653
<212> PRT
<213> Artificial Sequence

<220>
<223> REP1

<400> 45

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

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

```
Arg Val Leu His Val Asp Ser Arg Ser Tyr Tyr Gly Gly Asn Trp Ala
        35                  40                  45

Ser Phe Ser Phe Ser Gly Leu Leu Ser Trp Leu Lys Glu Tyr Gln Glu
    50                  55                  60

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

Glu Asn Glu Glu Ala Ile Ala Leu Ser Arg Lys Asp Lys Thr Ile Gln
                85                  90                  95

His Val Glu Val Phe Cys Tyr Ala Ser Gln Asp Leu His Glu Asp Val
            100                 105                 110

Glu Glu Ala Gly Ala Leu Gln Lys Asn His Ala Leu Val Thr Ser Ala
        115                 120                 125

Asn Ser Thr Glu Ala Ala Asp Ser Ala Phe Leu Pro Thr Glu Asp Glu
    130                 135                 140

Ser Leu Ser Thr Met Ser Cys Glu Met Leu Thr Glu Gln Thr Pro Ser
145                 150                 155                 160

Ser Asp Pro Glu Asn Ala Leu Glu Val Asn Gly Ala Glu Val Thr Gly
                165                 170                 175

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

Ala Glu Asp Met Ser Glu Asn Val Pro Ile Ala Glu Asp Thr Thr Glu
        195                 200                 205

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

Arg Arg Phe Asn Ile Asp Leu Val Ser Lys Leu Leu Tyr Ser Arg Gly
225                 230                 235                 240
```

```
Leu Leu Ile Asp Leu Leu Ile Lys Ser Asn Val Ser Arg Tyr Ala Glu
                245                 250                 255

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

Gln Val Pro Cys Ser Arg Ala Asp Val Phe Asn Ser Lys Gln Leu Thr
        275                 280                 285

Met Val Glu Lys Arg Met Leu Met Lys Phe Leu Thr Phe Cys Met Glu
    290                 295                 300

Tyr Glu Lys Tyr Pro Asp Glu Tyr Lys Gly Tyr Glu Glu Ile Thr Phe
305                 310                 315                 320

Tyr Glu Tyr Leu Lys Thr Gln Lys Leu Thr Pro Asn Leu Gln Tyr Ile
                325                 330                 335

Val Met His Ser Ile Ala Met Thr Ser Glu Thr Ala Ser Ser Thr Ile
            340                 345                 350

Asp Gly Leu Lys Ala Thr Lys Asn Phe Leu His Cys Leu Gly Arg Tyr
        355                 360                 365

Gly Asn Thr Pro Phe Leu Phe Pro Leu Tyr Gly Gln Gly Glu Leu Pro
    370                 375                 380

Gln Cys Phe Cys Arg Met Cys Ala Val Phe Gly Gly Ile Tyr Cys Leu
385                 390                 395                 400

Arg His Ser Val Gln Cys Leu Val Val Asp Lys Glu Ser Arg Lys Cys
                405                 410                 415

Lys Ala Ile Ile Asp Gln Phe Gly Gln Arg Ile Ile Ser Glu His Phe
            420                 425                 430

Leu Val Glu Asp Ser Tyr Phe Pro Glu Asn Met Cys Ser Arg Val Gln
        435                 440                 445

Tyr Arg Gln Ile Ser Arg Ala Val Leu Ile Thr Asp Arg Ser Val Leu
    450                 455                 460
```

```
Lys Thr Asp Ser Asp Gln Gln Ile Ser Ile Leu Thr Val Pro Ala Glu
465                 470                 475                 480

Glu Pro Gly Thr Phe Ala Val Arg Val Ile Glu Leu Cys Ser Ser Thr
                485                 490                 495

Met Thr Cys Met Lys Gly Thr Tyr Leu Val His Leu Thr Cys Thr Ser
            500                 505                 510

Ser Lys Thr Ala Arg Glu Asp Leu Glu Ser Val Val Gln Lys Leu Phe
        515                 520                 525

Val Pro Tyr Thr Glu Met Glu Ile Glu Asn Glu Gln Val Glu Lys Pro
    530                 535                 540

Arg Ile Leu Trp Ala Leu Tyr Phe Asn Met Arg Asp Ser Ser Asp Ile
545                 550                 555                 560

Ser Arg Ser Cys Tyr Asn Asp Leu Pro Ser Asn Val Tyr Val Cys Ser
                565                 570                 575

Gly Pro Asp Cys Gly Leu Gly Asn Asp Asn Ala Val Lys Gln Ala Glu
            580                 585                 590

Thr Leu Phe Gln Glu Ile Cys Pro Asn Glu Asp Phe Cys Pro Pro Pro
        595                 600                 605

Pro Asn Pro Glu Asp Ile Ile Leu Asp Gly Asp Ser Leu Gln Pro Glu
    610                 615                 620

Ala Ser Glu Ser Ser Ala Ile Pro Glu Ala Asn Ser Glu Thr Phe Lys
625                 630                 635                 640

Glu Ser Thr Asn Leu Gly Asn Leu Glu Glu Ser Ser Glu
                645                 650
```

<210> 46
<211> 2
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MISC_FEATURE
<222> (1)..(2)
<223> Shortest example of [(Gly)n-Ser]m linker, wherein n is any
       integer from 1 to 100 and m is any integer from 1 to 100

<400> 46

Gly Ser
1

<210> 47
<211> 2
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MISC_FEATURE
<222> (1)..(2)
<223> Shortest example of [(Gly)x-Sery]z linker, wherein x in an
       integer from 1 to 4, y is 0 or 1, and z is an integers from 1 to
       50

<400> 47

Gly Ser
1

<210> 48
<211> 1
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Shortest example of Gn linker, wherein n can be an integer from
       1 to 100

<400> 48

Gly
1

<210> 49
<211> 2
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MISC_FEATURE
<222> (1)..(2)
<223> Shortest example of (GlyAla)n linker, wherein n is an integer between 1 and 100

<400> 49

Gly Ala
1

<210> 50
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MISC_FEATURE
<222> (1)..(3)
<223> Linker; can comprise 1 to 100 repeats of the sequence

<400> 50

Gly Gly Ser
1

<210> 51
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 51

Gly Gly Lys Leu Ser Lys
1 5

<210> 52
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 52

Gly Ala Lys Leu Ser Lys
1 5

<210> 53
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 53

Gly Gly Lys Gln Ser Lys
1 5

<210> 54
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 54

Gly Gly Lys Leu Ala Lys
1 5

<210> 55
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 55

Lys Lys Lys Gly
1

<210> 56
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 56

Lys Lys Lys Gly Tyr
1   5

<210> 57
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 57

Lys Lys Lys Gly Tyr Asn
1   5

<210> 58
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<220>
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<400> 58

Lys Lys Lys Gly Tyr Asn Val
1   5

<210> 59
<211> 8
<212> PRT

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<220>
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<400> 59

Lys Lys Lys Gly Tyr Asn Val Asn
1 5

<210> 60
<211> 6
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<220>
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<400> 60

Lys Lys Lys Gly Tyr Ser
1 5

<210> 61
<211> 6
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<220>
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<400> 61

Lys Lys Lys Gly Tyr Gly
1 5

<210> 62
<211> 7
<212> PRT
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<220>
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<400> 62

Lys Lys Lys Gly Tyr Gly Gly
1 5

<210> 63

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

<220>
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<400> 63

Lys Lys Lys Gly Ser
1   5

<210> 64
<211> 6
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<220>
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<400> 64

Lys Lys Lys Gly Ser Gly
1   5

<210> 65
<211> 6
<212> PRT
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<220>
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<400> 65

Lys Lys Lys Gly Ser Gly
1   5

<210> 66
<211> 7
<212> PRT
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<220>
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<400> 66

Lys Lys Lys Gly Ser Gly Ser
1   5

<210> 67
<211> 4
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<220>
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<400> 67

Lys Lys Lys Ser
1

<210> 68
<211> 5
<212> PRT
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<220>
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<400> 68

Lys Lys Lys Ser Gly
1   5

<210> 69
<211> 6
<212> PRT
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<220>
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<400> 69

Lys Lys Lys Ser Gly Gly
1   5

<210> 70
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<220>
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<400> 70

Lys Lys Lys Ser Gly Gly Ser

1 5

<210> 71
<211> 8
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<220>
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<400> 71

Lys Lys Lys Ser Gly Gly Ser Gly
1 5

<210> 72
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<220>
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<400> 72

Lys Lys Ser Gly Gly Ser Gly Gly
1 5

<210> 73
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<220>
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<400> 73

Lys Lys Lys Ser Gly Gly Ser Gly Gly Ser
1 5 10

<210> 74
<211> 8
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<220>
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<400> 74

Lys Arg Phe Ser Phe Lys Lys Ser
1   5

<210> 75
<211> 29
<212> PRT
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<220>
<223> Artificial Sequence

<400> 75

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1   5   10   15

Lys Ala Lys Glu Lys Asp Lys Lys Ala Glu Gly Ala Ala
            20   25

<210> 76
<211> 28
<212> PRT
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<220>
<223> Artificial Sequence

<400> 76

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1   5   10   15

Lys Ala Lys Glu Lys Asp Lys Lys Ala Glu Gly Ala
            20   25

<210> 77
<211> 27
<212> PRT
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<220>
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<400> 77

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1   5   10   15

Lys Ala Lys Glu Lys Asp Lys Lys Ala Glu Gly
20 25

<210> 78
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 78

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1 5 10 15

Lys Ala Lys Glu Lys Asp Lys Lys Ala Glu
20 25

<210> 79
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 79

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1 5 10 15

Lys Ala Lys Glu Lys Asp Lys Lys Ala
20 25

<210> 80
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<400> 80

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1 5 10 15

Lys Ala Lys Glu Lys Asp Lys Lys
            20

<210> 81
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 81

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1   5   10   15

Lys Ala Lys Glu Lys Asp Lys
            20

<210> 82
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 82

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1   5   10   15

Lys Ala Lys Glu Lys Asp
            20

<210> 83
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
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<400> 83

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1   5   10   15

Lys Ala Lys Glu Lys
20

<210> 84
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 84

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1 5 10 15

Lys Ala Lys Glu
20

<210> 85
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 85

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1 5 10 15

Lys Ala Lys

<210> 86
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 86

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1 5 10 15

Lys Ala

<210> 87
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 87

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1   5   10   15

Lys

<210> 88
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 88

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp Glu
1   5   10   15

<210> 89
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 89

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val Asn Asp
1   5   10   15

<210> 90
<211> 13
<212> PRT

<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 90

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn Val
1 5 10

<210> 91
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
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<400> 91

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr Asn
1 5 10

<210> 92
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 92

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly Tyr
1 5 10

<210> 93
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 93

Gly Gly Lys Leu Ser Lys Lys Lys Lys Gly
1 5 10

<210> 94

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

<220>
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<400> 94

Gly Gly Lys Leu Ser Lys Lys Lys Lys
1 5

<210> 95
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 95

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1 5 10 15

Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys Lys Glu Ala
20 25

<210> 96
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 96

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1 5 10 15

Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys Lys Glu
20 25

<210> 97
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 97

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys Lys
            20   25

<210> 98
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 98

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys
            20   25

<210> 99
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 99

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys Asn
            20   25

<210> 100
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 100

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys
            20

<210> 101
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 101

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys
            20

<210> 102
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 102

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe
            20

<210> 103
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 103

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser
            20

<210> 104
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 104

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe
            20

<210> 105
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 105

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly

<210> 106
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 106

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser

<210> 107
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 107

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu

<210> 108
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 108

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

<210> 109
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 109

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe
1 5 10 15

<210> 110
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 110

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys Lys
1 5 10

<210> 111
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 111

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe Lys
1 5 10

<210> 112
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 112

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser Phe
1 5 10

<210> 113
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 113

Gly Ala Lys Lys Ser Lys Lys Arg Phe Ser
1 5 10

<210> 114
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<400> 114

Gly Ala Lys Lys Ser Lys Lys Arg Phe
1 5

<210> 115
<211> 8
<212> PRT
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<220>
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<400> 115

Gly Ala Lys Lys Ser Lys Lys Arg
1 5

<210> 116
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 116

Gly Ala Lys Lys Ser Lys Lys
1 5

<210> 117
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 117

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys Lys Glu Ala
            20   25

<210> 118
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 118

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys Lys Glu
            20   25

<210> 119
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 119

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys Lys
            20   25

<210> 120
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 120

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys
            20   25

<210> 121
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 121

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys Asn
            20   25

<210> 122
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 122

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys Lys
            20

<210> 123
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 123

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe Lys
            20

<210> 124
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 124

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser Phe
            20

<210> 125
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 125

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe Ser
            20

<210> 126
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 126

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly Phe
            20

<210> 127
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 127

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser Gly

<210> 128
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 128

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu Ser

<210> 129
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 129

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

Leu

<210> 130
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 130

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe Lys
1   5   10   15

<210> 131
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 131

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser Phe
1   5   10   15

<210> 132
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 132

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys Ser
1   5   10

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

<220>
<223> Artificial Sequence

<400> 133

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys Lys
1   5   10

<210> 134
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 134

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe Lys
1   5   10

<210> 135
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 135

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser Phe
1   5   10

<210> 136
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 136

Gly Ala Lys Lys Ala Lys Lys Arg Phe Ser

1 5 10

<210> 137
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<400> 137

Gly Ala Lys Lys Ala Lys Lys Arg Phe
1 5

<210> 138
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
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<400> 138

Gly Ala Lys Lys Ala Lys Lys Arg
1 5

<210> 139
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 139

Gly Ala Lys Lys Ala Lys Lys
1 5

<210> 140
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
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<400> 140

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe Lys Leu Ser Gly Phe Ser Phe Lys Lys
            20   25

<210> 141
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 141

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe Lys Leu Ser Gly Phe Ser Phe Lys
            20   25

<210> 142
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 142

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe Lys Leu Ser Gly Phe Ser Phe
            20   25

<210> 143
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 143

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe Lys Leu Ser Gly Phe Ser
            20   25

<210> 144
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 144

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe Lys Leu Ser Gly Phe
            20

<210> 145
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 145

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe Lys Leu Ser Gly
            20

<210> 146
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 146

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe Lys Leu Ser
            20

<210> 147
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 147

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe Lys Leu
            20

<210> 148
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 148

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe Lys
            20

<210> 149
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 149

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser Phe

<210> 150
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
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<400> 150

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys Ser

<210> 151
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
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<400> 151

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1   5   10   15

Lys

<210> 152
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
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<400> 152

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe Lys
1 5 10 15

<210> 153
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
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<400> 153

Gly Ala Gln Glu Ser Lys Lys Lys Lys Lys Lys Arg Phe Ser Phe
1 5 10 15

<210> 154
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
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<400> 154

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

<210> 155
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
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<400> 155

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

<210> 156
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
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<400> 156

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

<210> 157
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 157

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

<210> 158
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 158

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

<210> 159
<211> 9
<212> PRT
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<220>
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<400> 159

Gly Ala Gln Glu Ser Lys Lys Lys Lys
1 5

<210> 160
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
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<400> 160

Gly Ala Gln Glu Ser Lys Lys Lys
1   5

<210> 161
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 161

Gly Ala Gln Glu Ser Lys Lys
1   5

<210> 162
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<400> 162

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1   5   10   15

Pro Phe Lys Leu Ser Gly Leu Ser Phe Lys Arg Asn Arg Lys
            20   25   30

<210> 163
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 163

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1   5   10   15

Pro Phe Lys Leu Ser Gly Leu Ser Phe Lys Arg Asn Arg
20 25

<210> 164
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 164

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1 5 10 15

Pro Phe Lys Leu Ser Gly Leu Ser Phe Lys Arg Asn
20 25

<210> 165
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 165

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1 5 10 15

Pro Phe Lys Leu Ser Gly Leu Ser Phe Lys Arg
20 25

<210> 166
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 166

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1 5 10 15

Pro Phe Lys Leu Ser Gly Leu Ser Phe Lys
            20   25

<210> 167
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 167

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1   5   10   15

Pro Phe Lys Leu Ser Gly Leu Ser Phe
            20   25

<210> 168
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 168

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1   5   10   15

Pro Phe Lys Leu Ser Gly Leu Ser
            20

<210> 169
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 169

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1   5   10   15

Pro Phe Lys Leu Ser Gly Leu
            20

<210> 170
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 170

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1   5   10   15

Pro Phe Lys Leu Ser Gly
            20

<210> 171
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 171

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1   5   10   15

Pro Phe Lys Leu Ser
            20

<210> 172
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 172

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1   5   10   15

Pro Phe Lys Leu
20

<210> 173
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 173

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1 5 10 15

Pro Phe Lys

<210> 174
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 174

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1 5 10 15

Pro Phe

<210> 175
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 175

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1 5 10 15

Pro

<210> 176
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 176

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys Lys
1   5   10   15

<210> 177
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 177

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe Lys
1   5   10   15

<210> 178
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 178

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser Phe
1   5   10

<210> 179
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 179

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe Ser
1 5 10

<210> 180
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 180

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys Phe
1 5 10

<210> 181
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 181

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys Lys
1 5 10

<210> 182
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 182

Gly Ser Gln Ser Ser Lys Lys Lys Lys Lys
1 5 10

<210> 183
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 183

Gly Ser Gln Ser Ser Lys Lys Lys Lys
1   5

<210> 184
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 184

Gly Ser Gln Ser Ser Lys Lys Lys
1   5

<210> 185
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 185

Gly Ser Gln Ser Ser Lys Lys
1   5

<210> 186
<211> 731
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 186

Pro Ser Ala Arg Pro Pro Pro Ser Leu Ser Leu Arg Glu Gly Glu Pro
1   5   10   15

Phe Glu Leu Arg Cys Thr Ala Ala Ser Ala Ser Pro Leu His Thr His
            20   25   30

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

Leu Ala Leu Thr His Glu Gly Arg Phe His Pro Gly Leu Gly Tyr Glu
    50                  55                  60

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

Ala Tyr Arg Leu Ser Val Ser Arg Ala Leu Ser Ala Asp Gln Gly Ser
                85                  90                  95

Tyr Arg Cys Ile Val Ser Glu Trp Ile Ala Glu Gln Gly Asn Trp Gln
            100                 105                 110

Glu Ile Gln Glu Lys Ala Val Glu Val Ala Thr Val Val Ile Gln Pro
        115                 120                 125

Ser Val Leu Arg Ala Ala Val Pro Lys Asn Val Ser Val Ala Glu Gly
    130                 135                 140

Lys Glu Leu Asp Leu Thr Cys Asn Ile Thr Thr Asp Arg Ala Asp Asp
145                 150                 155                 160

Val Arg Pro Glu Val Thr Trp Ser Phe Ser Arg Met Pro Asp Ser Thr
                165                 170                 175

Leu Pro Gly Ser Arg Val Leu Ala Arg Leu Asp Arg Asp Ser Leu Val
            180                 185                 190

His Ser Ser Pro His Val Ala Leu Ser His Val Asp Ala Arg Ser Tyr
        195                 200                 205

His Leu Leu Val Arg Asp Val Ser Lys Glu Asn Ser Gly Tyr Tyr Tyr
    210                 215                 220

Cys His Val Ser Leu Trp Ala Pro Gly His Asn Arg Ser Trp His Lys
225                 230                 235                 240

Val Ala Glu Ala Val Ser Ser Pro Ala Gly Val Gly Val Thr Trp Leu
```

```
                245                 250                 255

Glu Pro Asp Tyr Gln Val Tyr Leu Asn Ala Ser Lys Val Pro Gly Phe
            260                 265                 270

Ala Asp Asp Pro Thr Glu Leu Ala Cys Arg Val Val Asp Thr Lys Ser
        275                 280                 285

Gly Glu Ala Asn Val Arg Phe Thr Val Ser Trp Tyr Tyr Arg Met Asn
    290                 295                 300

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

Gly Asp Trp Thr Leu Lys Tyr Gly Glu Arg Ser Lys Gln Arg Ala Gln
                325                 330                 335

Asp Gly Asp Phe Ile Phe Ser Lys Glu His Thr Asp Thr Phe Asn Phe
            340                 345                 350

Arg Ile Gln Arg Thr Thr Glu Glu Asp Arg Gly Asn Tyr Tyr Cys Val
        355                 360                 365

Val Ser Ala Trp Thr Lys Gln Arg Asn Asn Ser Trp Val Lys Ser Lys
    370                 375                 380

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

Val Leu Val Val Lys Ala Arg Gln Pro Lys Pro Phe Phe Ala Ala Gly
                405                 410                 415

Asn Thr Phe Glu Met Thr Cys Lys Val Ser Ser Lys Asn Ile Lys Ser
            420                 425                 430

Pro Arg Tyr Ser Val Leu Ile Met Ala Glu Lys Pro Val Gly Asp Leu
        435                 440                 445

Ser Ser Pro Asn Glu Thr Lys Tyr Ile Ile Ser Leu Asp Gln Asp Ser
    450                 455                 460
```

```
Val Val Lys Leu Glu Asn Trp Thr Asp Ala Ser Arg Val Asp Gly Val
465                 470                 475                 480

Val Leu Glu Lys Val Gln Glu Asp Glu Phe Arg Tyr Arg Met Tyr Gln
                485                 490                 495

Thr Gln Val Ser Asp Ala Gly Leu Tyr Arg Cys Met Val Thr Ala Trp
            500                 505                 510

Ser Pro Val Arg Gly Ser Leu Trp Arg Glu Ala Ala Thr Ser Leu Ser
        515                 520                 525

Asn Pro Ile Glu Ile Asp Phe Gln Thr Ser Gly Pro Ile Phe Asn Ala
    530                 535                 540

Ser Val His Ser Asp Thr Pro Ser Val Ile Arg Gly Asp Leu Ile Lys
545                 550                 555                 560

Leu Phe Cys Ile Ile Thr Val Glu Gly Ala Ala Leu Asp Pro Asp Asp
                565                 570                 575

Met Ala Phe Asp Val Ser Trp Phe Ala Val His Ser Phe Gly Leu Asp
            580                 585                 590

Lys Ala Pro Val Leu Leu Ser Ser Leu Asp Arg Lys Gly Ile Val Thr
        595                 600                 605

Thr Ser Arg Arg Asp Trp Lys Ser Asp Leu Ser Leu Glu Arg Val Ser
    610                 615                 620

Val Leu Glu Phe Leu Leu Gln Val His Gly Ser Glu Asp Gln Asp Phe
625                 630                 635                 640

Gly Asn Tyr Tyr Cys Ser Val Thr Pro Trp Val Lys Ser Pro Thr Gly
                645                 650                 655

Ser Trp Gln Lys Glu Ala Glu Ile His Ser Lys Pro Val Phe Ile Thr
            660                 665                 670

Val Lys Met Asp Val Leu Asn Ala Phe Lys Tyr Pro Leu Leu Ile Gly
```

675 680 685

Val Gly Leu Ser Thr Val Ile Gly Leu Leu Ser Cys Leu Ile Gly Tyr
690 695 700

Cys Ser Ser His Trp Cys Cys Lys Lys Glu Val Gln Glu Thr Arg Arg
705 710 715 720

Glu Arg Arg Arg Leu Met Ser Met Glu Met Asp
725 730

<210> 187
<211> 611
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 187

Val Ala Thr Val Val Ile Gln Pro Ser Val Leu Arg Ala Ala Val Pro
1 5 10 15

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

Ile Thr Thr Asp Arg Ala Asp Asp Val Arg Pro Glu Val Thr Trp Ser
35 40 45

Phe Ser Arg Met Pro Asp Ser Thr Leu Pro Gly Ser Arg Val Leu Ala
50 55 60

Arg Leu Asp Arg Asp Ser Leu Val His Ser Ser Pro His Val Ala Leu
65 70 75 80

Ser His Val Asp Ala Arg Ser Tyr His Leu Leu Val Arg Asp Val Ser
85 90 95

Lys Glu Asn Ser Gly Tyr Tyr Tyr Cys His Val Ser Leu Trp Ala Pro
100 105 110

Gly His Asn Arg Ser Trp His Lys Val Ala Glu Ala Val Ser Ser Pro

```
        115                 120                 125

Ala Gly Val Gly Val Thr Trp Leu Glu Pro Asp Tyr Gln Val Tyr Leu
    130                 135                 140

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

Cys Arg Val Val Asp Thr Lys Ser Gly Glu Ala Asn Val Arg Phe Thr
                165                 170                 175

Val Ser Trp Tyr Tyr Arg Met Asn Arg Arg Ser Asp Asn Val Val Thr
            180                 185                 190

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

Glu Arg Ser Lys Gln Arg Ala Gln Asp Gly Asp Phe Ile Phe Ser Lys
    210                 215                 220

Glu His Thr Asp Thr Phe Asn Phe Arg Ile Gln Arg Thr Thr Glu Glu
225                 230                 235                 240

Asp Arg Gly Asn Tyr Tyr Cys Val Val Ser Ala Trp Thr Lys Gln Arg
                245                 250                 255

Asn Asn Ser Trp Val Lys Ser Lys Asp Val Phe Ser Lys Pro Val Asn
            260                 265                 270

Ile Phe Trp Ala Leu Glu Asp Ser Val Leu Val Val Lys Ala Arg Gln
        275                 280                 285

Pro Lys Pro Phe Phe Ala Ala Gly Asn Thr Phe Glu Met Thr Cys Lys
    290                 295                 300

Val Ser Ser Lys Asn Ile Lys Ser Pro Arg Tyr Ser Val Leu Ile Met
305                 310                 315                 320

Ala Glu Lys Pro Val Gly Asp Leu Ser Ser Pro Asn Glu Thr Lys Tyr
                325                 330                 335
```

```
Ile Ile Ser Leu Asp Gln Asp Ser Val Val Lys Leu Glu Asn Trp Thr
            340                 345                 350

Asp Ala Ser Arg Val Asp Gly Val Val Leu Glu Lys Val Gln Glu Asp
        355                 360                 365

Glu Phe Arg Tyr Arg Met Tyr Gln Thr Gln Val Ser Asp Ala Gly Leu
    370                 375                 380

Tyr Arg Cys Met Val Thr Ala Trp Ser Pro Val Arg Gly Ser Leu Trp
385                 390                 395                 400

Arg Glu Ala Ala Thr Ser Leu Ser Asn Pro Ile Glu Ile Asp Phe Gln
                405                 410                 415

Thr Ser Gly Pro Ile Phe Asn Ala Ser Val His Ser Asp Thr Pro Ser
            420                 425                 430

Val Ile Arg Gly Asp Leu Ile Lys Leu Phe Cys Ile Ile Thr Val Glu
        435                 440                 445

Gly Ala Ala Leu Asp Pro Asp Asp Met Ala Phe Asp Val Ser Trp Phe
    450                 455                 460

Ala Val His Ser Phe Gly Leu Asp Lys Ala Pro Val Leu Leu Ser Ser
465                 470                 475                 480

Leu Asp Arg Lys Gly Ile Val Thr Thr Ser Arg Arg Asp Trp Lys Ser
                485                 490                 495

Asp Leu Ser Leu Glu Arg Val Ser Val Leu Glu Phe Leu Leu Gln Val
            500                 505                 510

His Gly Ser Glu Asp Gln Asp Phe Gly Asn Tyr Tyr Cys Ser Val Thr
        515                 520                 525

Pro Trp Val Lys Ser Pro Thr Gly Ser Trp Gln Lys Glu Ala Glu Ile
    530                 535                 540

His Ser Lys Pro Val Phe Ile Thr Val Lys Met Asp Val Leu Asn Ala
```

545 550 555 560

Phe Lys Tyr Pro Leu Leu Ile Gly Val Gly Leu Ser Thr Val Ile Gly
565 570 575

Leu Leu Ser Cys Leu Ile Gly Tyr Cys Ser Ser His Trp Cys Cys Lys
580 585 590

Lys Glu Val Gln Glu Thr Arg Arg Glu Arg Arg Arg Leu Met Ser Met
595 600 605

Glu Met Asp
610

<210> 188
<211> 485
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 188

Ser Pro Ala Gly Val Gly Val Thr Trp Leu Glu Pro Asp Tyr Gln Val
1 5 10 15

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

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

Phe Thr Val Ser Trp Tyr Tyr Arg Met Asn Arg Arg Ser Asp Asn Val
50 55 60

Val Thr Ser Glu Leu Leu Ala Val Met Asp Gly Asp Trp Thr Leu Lys
65 70 75 80

Tyr Gly Glu Arg Ser Lys Gln Arg Ala Gln Asp Gly Asp Phe Ile Phe
85 90 95

Ser Lys Glu His Thr Asp Thr Phe Asn Phe Arg Ile Gln Arg Thr Thr

```
            100                 105                 110

Glu Glu Asp Arg Gly Asn Tyr Tyr Cys Val Val Ser Ala Trp Thr Lys
        115                 120                 125

Gln Arg Asn Asn Ser Trp Val Lys Ser Lys Asp Val Phe Ser Lys Pro
    130                 135                 140

Val Asn Ile Phe Trp Ala Leu Glu Asp Ser Val Leu Val Val Lys Ala
145                 150                 155                 160

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

Cys Lys Val Ser Ser Lys Asn Ile Lys Ser Pro Arg Tyr Ser Val Leu
            180                 185                 190

Ile Met Ala Glu Lys Pro Val Gly Asp Leu Ser Ser Pro Asn Glu Thr
        195                 200                 205

Lys Tyr Ile Ile Ser Leu Asp Gln Asp Ser Val Val Lys Leu Glu Asn
    210                 215                 220

Trp Thr Asp Ala Ser Arg Val Asp Gly Val Val Leu Glu Lys Val Gln
225                 230                 235                 240

Glu Asp Glu Phe Arg Tyr Arg Met Tyr Gln Thr Gln Val Ser Asp Ala
                245                 250                 255

Gly Leu Tyr Arg Cys Met Val Thr Ala Trp Ser Pro Val Arg Gly Ser
            260                 265                 270

Leu Trp Arg Glu Ala Ala Thr Ser Leu Ser Asn Pro Ile Glu Ile Asp
        275                 280                 285

Phe Gln Thr Ser Gly Pro Ile Phe Asn Ala Ser Val His Ser Asp Thr
    290                 295                 300

Pro Ser Val Ile Arg Gly Asp Leu Ile Lys Leu Phe Cys Ile Ile Thr
305                 310                 315                 320
```

```
Val Glu Gly Ala Ala Leu Asp Pro Asp Asp Met Ala Phe Asp Val Ser
                325                 330                 335

Trp Phe Ala Val His Ser Phe Gly Leu Asp Lys Ala Pro Val Leu Leu
            340                 345                 350

Ser Ser Leu Asp Arg Lys Gly Ile Val Thr Thr Ser Arg Arg Asp Trp
        355                 360                 365

Lys Ser Asp Leu Ser Leu Glu Arg Val Ser Val Leu Glu Phe Leu Leu
    370                 375                 380

Gln Val His Gly Ser Glu Asp Gln Asp Phe Gly Asn Tyr Tyr Cys Ser
385                 390                 395                 400

Val Thr Pro Trp Val Lys Ser Pro Thr Gly Ser Trp Gln Lys Glu Ala
                405                 410                 415

Glu Ile His Ser Lys Pro Val Phe Ile Thr Val Lys Met Asp Val Leu
            420                 425                 430

Asn Ala Phe Lys Tyr Pro Leu Leu Ile Gly Val Gly Leu Ser Thr Val
        435                 440                 445

Ile Gly Leu Leu Ser Cys Leu Ile Gly Tyr Cys Ser Ser His Trp Cys
    450                 455                 460

Cys Lys Lys Glu Val Gln Glu Thr Arg Arg Glu Arg Arg Arg Leu Met
465                 470                 475                 480

Ser Met Glu Met Asp
                485
```

<210> 189
<211> 343
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 189

```
Lys Pro Val Asn Ile Phe Trp Ala Leu Glu Asp Ser Val Leu Val Val
1               5                  10                  15

Lys Ala Arg Gln Pro Lys Pro Phe Phe Ala Ala Gly Asn Thr Phe Glu
            20                  25                  30

Met Thr Cys Lys Val Ser Ser Lys Asn Ile Lys Ser Pro Arg Tyr Ser
        35                  40                  45

Val Leu Ile Met Ala Glu Lys Pro Val Gly Asp Leu Ser Ser Pro Asn
    50                  55                  60

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

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

Val Gln Glu Asp Glu Phe Arg Tyr Arg Met Tyr Gln Thr Gln Val Ser
            100                 105                 110

Asp Ala Gly Leu Tyr Arg Cys Met Val Thr Ala Trp Ser Pro Val Arg
        115                 120                 125

Gly Ser Leu Trp Arg Glu Ala Ala Thr Ser Leu Ser Asn Pro Ile Glu
    130                 135                 140

Ile Asp Phe Gln Thr Ser Gly Pro Ile Phe Asn Ala Ser Val His Ser
145                 150                 155                 160

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

Ile Thr Val Glu Gly Ala Ala Leu Asp Pro Asp Asp Met Ala Phe Asp
            180                 185                 190

Val Ser Trp Phe Ala Val His Ser Phe Gly Leu Asp Lys Ala Pro Val
        195                 200                 205

Leu Leu Ser Ser Leu Asp Arg Lys Gly Ile Val Thr Thr Ser Arg Arg
```

```
    210                 215                 220

Asp Trp Lys Ser Asp Leu Ser Leu Glu Arg Val Ser Val Leu Glu Phe
225                 230                 235                 240

Leu Leu Gln Val His Gly Ser Glu Asp Gln Asp Phe Gly Asn Tyr Tyr
                245                 250                 255

Cys Ser Val Thr Pro Trp Val Lys Ser Pro Thr Gly Ser Trp Gln Lys
            260                 265                 270

Glu Ala Glu Ile His Ser Lys Pro Val Phe Ile Thr Val Lys Met Asp
        275                 280                 285

Val Leu Asn Ala Phe Lys Tyr Pro Leu Leu Ile Gly Val Gly Leu Ser
    290                 295                 300

Thr Val Ile Gly Leu Leu Ser Cys Leu Ile Gly Tyr Cys Ser Ser His
305                 310                 315                 320

Trp Cys Cys Lys Lys Glu Val Gln Glu Thr Arg Arg Glu Arg Arg Arg
                325                 330                 335

Leu Met Ser Met Glu Met Asp
            340
```

<210> 190
<211> 217
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 190

```
Val Arg Gly Ser Leu Trp Arg Glu Ala Ala Thr Ser Leu Ser Asn Pro
1               5                   10                  15

Ile Glu Ile Asp Phe Gln Thr Ser Gly Pro Ile Phe Asn Ala Ser Val
            20                  25                  30

His Ser Asp Thr Pro Ser Val Ile Arg Gly Asp Leu Ile Lys Leu Phe
```

```
        35                  40                  45

Cys Ile Ile Thr Val Glu Gly Ala Ala Leu Asp Pro Asp Asp Met Ala
    50                  55                  60

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

Pro Val Leu Leu Ser Ser Leu Asp Arg Lys Gly Ile Val Thr Thr Ser
                85                  90                  95

Arg Arg Asp Trp Lys Ser Asp Leu Ser Leu Glu Arg Val Ser Val Leu
            100                 105                 110

Glu Phe Leu Leu Gln Val His Gly Ser Glu Asp Gln Asp Phe Gly Asn
        115                 120                 125

Tyr Tyr Cys Ser Val Thr Pro Trp Val Lys Ser Pro Thr Gly Ser Trp
    130                 135                 140

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

Met Asp Val Leu Asn Ala Phe Lys Tyr Pro Leu Leu Ile Gly Val Gly
                165                 170                 175

Leu Ser Thr Val Ile Gly Leu Leu Ser Cys Leu Ile Gly Tyr Cys Ser
            180                 185                 190

Ser His Trp Cys Cys Lys Lys Glu Val Gln Glu Thr Arg Arg Glu Arg
        195                 200                 205

Arg Arg Leu Met Ser Met Glu Met Asp
    210                 215


<210>  191
<211>  66
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Artificial Sequence
```

<400> 191

Ser Lys Pro Val Phe Ile Thr Val Lys Met Asp Val Leu Asn Ala Phe
1 5 10 15

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

Leu Ser Cys Leu Ile Gly Tyr Cys Ser Ser His Trp Cys Cys Lys Lys
35 40 45

Glu Val Gln Glu Thr Arg Arg Glu Arg Arg Arg Leu Met Ser Met Glu
50 55 60

Met Asp
65

<210> 192
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 192

Met Gly Arg Leu Ala Ser Arg Pro Leu Leu Leu Ala Leu Leu Ser Leu
1 5 10 15

Ala Leu Cys Arg Gly
20

<210> 193
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 193

Pro Gly Thr Val Phe Thr Thr Val Glu Asp Leu Gly Ser Lys Ile Leu
1 5 10 15

```
Leu Thr Cys Ser Leu Asn Asp Ser Ala Thr Glu Val Thr Gly His Arg
            20                  25                  30

Trp Leu Lys Gly Gly Val Val Leu Lys Glu Asp Ala Leu Pro Gly Gln
        35                  40                  45

Lys Thr Glu Phe Lys Val Asp Ser Asp Asp Gln Trp Gly Glu Tyr Ser
    50                  55                  60

Cys Val Phe Leu Pro Glu Pro Met Gly Thr Ala Asn Ile Gln Leu His
65                  70                  75                  80

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

Gly Glu Thr Ala Met Leu Val Cys Lys Ser Glu Ser Val Pro Pro Val
            100                 105                 110

Thr Asp Trp Ala Trp Tyr Lys Ile Thr Asp Ser Glu Asp Lys Ala Leu
        115                 120                 125

Met Asn Gly Ser Glu Ser Arg Phe Phe Val Ser Ser Ser Gln Gly Arg
    130                 135                 140

Ser Glu Leu His Ile Glu Asn Leu Asn Met Glu Ala Asp Pro Gly Gln
145                 150                 155                 160

Tyr Arg Cys Asn Gly Thr Ser Ser Lys Gly Ser Asp Gln Ala Ile Ile
                165                 170                 175

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

Ile Val Ala Glu Val Leu Val Leu Val Thr Ile Ile Phe Ile Tyr Glu
        195                 200                 205

Lys Arg Arg Lys Pro Glu Asp Val Leu Asp Asp Asp Asp Ala Gly Ser
    210                 215                 220

Ala Pro Leu Lys Ser Ser Gly Gln His Gln Asn Asp Lys Gly Lys Asn
```

225 230 235 240

Val Arg Gln Arg Asn Ser Ser
245

<210> 194
<211> 168
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 194

His Gly Pro Pro Arg Val Lys Ala Val Lys Ser Ser Glu His Ile Asn
1 5 10 15

Glu Gly Glu Thr Ala Met Leu Val Cys Lys Ser Glu Ser Val Pro Pro
20 25 30

Val Thr Asp Trp Ala Trp Tyr Lys Ile Thr Asp Ser Glu Asp Lys Ala
35 40 45

Leu Met Asn Gly Ser Glu Ser Arg Phe Phe Val Ser Ser Ser Gln Gly
50 55 60

Arg Ser Glu Leu His Ile Glu Asn Leu Asn Met Glu Ala Asp Pro Gly
65 70 75 80

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

Ile Thr Leu Arg Val Arg Ser His Leu Ala Ala Leu Trp Pro Phe Leu
100 105 110

Gly Ile Val Ala Glu Val Leu Val Leu Val Thr Ile Ile Phe Ile Tyr
115 120 125

Glu Lys Arg Arg Lys Pro Glu Asp Val Leu Asp Asp Asp Asp Ala Gly
130 135 140

Ser Ala Pro Leu Lys Ser Ser Gly Gln His Gln Asn Asp Lys Gly Lys

145 150 155 160

Asn Val Arg Gln Arg Asn Ser Ser
165

<210> 195
<211> 66
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 195

Ser His Leu Ala Ala Leu Trp Pro Phe Leu Gly Ile Val Ala Glu Val
1 5 10 15

Leu Val Leu Val Thr Ile Ile Phe Ile Tyr Glu Lys Arg Arg Lys Pro
20 25 30

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

Ser Gly Gln His Gln Asn Asp Lys Gly Lys Asn Val Arg Gln Arg Asn
50 55 60

Ser Ser
65

<210> 196
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 196

Met Ala Ala Ala Leu Phe Val Leu Leu Gly Phe Ala Leu Leu Gly Thr
1 5 10 15

His Gly

<210> 197
<211> 456
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 197

Ala Pro Pro Gly Pro Arg Gly Arg Gln Ala Pro Thr Ser Pro Pro Arg
1   5   10   15

Met Thr Val His Glu Gly Gln Glu Leu Ala Leu Gly Cys Leu Ala Arg
            20   25   30

Thr Ser Thr Gln Lys His Thr His Leu Ala Val Ser Phe Gly Arg Ser
        35   40   45

Val Pro Glu Ala Pro Val Gly Arg Ser Thr Leu Gln Glu Val Val Gly
    50   55   60

Ile Arg Ser Asp Leu Ala Val Glu Ala Gly Ala Pro Tyr Ala Glu Arg
65   70   75   80

Leu Ala Ala Gly Glu Leu Arg Leu Gly Lys Glu Gly Thr Asp Arg Tyr
                85   90   95

Arg Met Val Val Gly Gly Ala Gln Ala Gly Asp Ala Gly Thr Tyr His
            100   105   110

Cys Thr Ala Ala Glu Trp Ile Gln Asp Pro Asp Gly Ser Trp Ala Gln
        115   120   125

Ile Ala Glu Lys Arg Ala Val Leu Ala His Val Asp Val Gln Thr Leu
    130   135   140

Ser Ser Gln Leu Ala Val Thr Val Gly Pro Gly Glu Arg Arg Ile Gly
145   150   155   160

Pro Gly Glu Pro Leu Glu Leu Leu Cys Asn Val Ser Gly Ala Leu Pro
                165   170   175

```
Pro Ala Gly Arg His Ala Ala Tyr Ser Val Gly Trp Glu Met Ala Pro
            180                 185                 190

Ala Gly Ala Pro Gly Pro Gly Arg Leu Val Ala Gln Leu Asp Thr Glu
        195                 200                 205

Gly Val Gly Ser Leu Gly Pro Gly Tyr Glu Gly Arg His Ile Ala Met
    210                 215                 220

Glu Lys Val Ala Ser Arg Thr Tyr Arg Leu Arg Leu Glu Ala Ala Arg
225                 230                 235                 240

Pro Gly Asp Ala Gly Thr Tyr Arg Cys Leu Ala Lys Ala Tyr Val Arg
                245                 250                 255

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

Leu Pro Val His Val Arg Glu Glu Gly Val Val Leu Glu Ala Val Ala
        275                 280                 285

Trp Leu Ala Gly Gly Thr Val Tyr Arg Gly Glu Thr Ala Ser Leu Leu
    290                 295                 300

Cys Asn Ile Ser Val Arg Gly Gly Pro Pro Gly Leu Arg Leu Ala Ala
305                 310                 315                 320

Ser Trp Trp Val Glu Arg Pro Glu Asp Gly Glu Leu Ser Ser Val Pro
                325                 330                 335

Ala Gln Leu Val Gly Gly Val Gly Gln Asp Gly Val Ala Glu Leu Gly
            340                 345                 350

Val Arg Pro Gly Gly Gly Pro Val Ser Val Glu Leu Val Gly Pro Arg
        355                 360                 365

Ser His Arg Leu Arg Leu His Ser Leu Gly Pro Glu Asp Glu Gly Val
    370                 375                 380

Tyr His Cys Ala Pro Ser Ala Trp Val Gln His Ala Asp Tyr Ser Trp
```

385 390 395 400

Tyr Gln Ala Gly Ser Ala Arg Ser Gly Pro Val Thr Val Tyr Pro Tyr
405 410 415

Met His Ala Leu Asp Thr Leu Phe Val Pro Leu Leu Val Gly Thr Gly
420 425 430

Val Ala Leu Val Thr Gly Ala Thr Val Leu Gly Thr Ile Thr Cys Cys
435 440 445

Phe Met Lys Arg Leu Arg Lys Arg
450 455

<210> 198
<211> 320
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 198

Ala His Val Asp Val Gln Thr Leu Ser Ser Gln Leu Ala Val Thr Val
1 5 10 15

Gly Pro Gly Glu Arg Arg Ile Gly Pro Gly Glu Pro Leu Glu Leu Leu
20 25 30

Cys Asn Val Ser Gly Ala Leu Pro Pro Ala Gly Arg His Ala Ala Tyr
35 40 45

Ser Val Gly Trp Glu Met Ala Pro Ala Gly Ala Pro Gly Pro Gly Arg
50 55 60

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

Tyr Glu Gly Arg His Ile Ala Met Glu Lys Val Ala Ser Arg Thr Tyr
85 90 95

Arg Leu Arg Leu Glu Ala Ala Arg Pro Gly Asp Ala Gly Thr Tyr Arg

```
            100                 105                 110

Cys Leu Ala Lys Ala Tyr Val Arg Gly Ser Gly Thr Arg Leu Arg Glu
        115                 120                 125

Ala Ala Ser Ala Arg Ser Arg Pro Leu Pro Val His Val Arg Glu Glu
    130                 135                 140

Gly Val Val Leu Glu Ala Val Ala Trp Leu Ala Gly Gly Thr Val Tyr
145                 150                 155                 160

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

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

Asp Gly Glu Leu Ser Ser Val Pro Ala Gln Leu Val Gly Gly Val Gly
        195                 200                 205

Gln Asp Gly Val Ala Glu Leu Gly Val Arg Pro Gly Gly Gly Pro Val
    210                 215                 220

Ser Val Glu Leu Val Gly Pro Arg Ser His Arg Leu Arg Leu His Ser
225                 230                 235                 240

Leu Gly Pro Glu Asp Glu Gly Val Tyr His Cys Ala Pro Ser Ala Trp
                245                 250                 255

Val Gln His Ala Asp Tyr Ser Trp Tyr Gln Ala Gly Ser Ala Arg Ser
            260                 265                 270

Gly Pro Val Thr Val Tyr Pro Tyr Met His Ala Leu Asp Thr Leu Phe
        275                 280                 285

Val Pro Leu Leu Val Gly Thr Gly Val Ala Leu Val Thr Gly Ala Thr
    290                 295                 300

Val Leu Gly Thr Ile Thr Cys Cys Phe Met Lys Arg Leu Arg Lys Arg
305                 310                 315                 320
```

<210> 199
<211> 179
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 199

Arg Glu Glu Gly Val Val Leu Glu Ala Val Ala Trp Leu Ala Gly Gly
1 5 10 15

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

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

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

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

Gly Pro Val Ser Val Glu Leu Val Gly Pro Arg Ser His Arg Leu Arg
85 90 95

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

Ser Ala Trp Val Gln His Ala Asp Tyr Ser Trp Tyr Gln Ala Gly Ser
115 120 125

Ala Arg Ser Gly Pro Val Thr Val Tyr Pro Tyr Met His Ala Leu Asp
130 135 140

Thr Leu Phe Val Pro Leu Leu Val Gly Thr Gly Val Ala Leu Val Thr
145 150 155 160

Gly Ala Thr Val Leu Gly Thr Ile Thr Cys Cys Phe Met Lys Arg Leu
165 170 175

Arg Lys Arg

<210> 200
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 200

Val Ala Leu Val Thr Gly Ala Thr Val Leu Gly Thr Ile Thr Cys Cys
1 5 10 15

Phe Met Lys Arg Leu Arg Lys Arg
20

<210> 201
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 201

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

Leu Leu Leu Met Leu Gly Met Gly Cys Trp Ala
20 25

<210> 202
<211> 1021
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 202

Met Ala Gly Ile Ser Tyr Val Ala Ser Phe Phe Leu Leu Leu Thr Lys
1 5 10 15

```
Leu Ser Ile Gly Gln Arg Glu Val Thr Val Gln Lys Gly Pro Leu Phe
            20                  25                  30

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

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

Asn Pro Thr Gln Glu Val Gln Ile Ile Ser Thr Lys Asp Ala Ala Phe
65                  70                  75                  80

Ser Tyr Ala Val Tyr Thr Gln Arg Val Arg Ser Gly Asp Val Tyr Val
                85                  90                  95

Glu Arg Val Gln Gly Asn Ser Val Leu Leu His Ile Ser Lys Leu Gln
            100                 105                 110

Met Lys Asp Ala Gly Glu Tyr Glu Cys His Thr Pro Asn Thr Asp Glu
        115                 120                 125

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

Asp Thr Leu Ser Ala Thr Met Ser Ser Gln Thr Leu Gly Lys Glu Glu
145                 150                 155                 160

Gly Glu Pro Leu Ala Leu Thr Cys Glu Ala Ser Lys Ala Thr Ala Gln
                165                 170                 175

His Thr His Leu Ser Val Thr Trp Tyr Leu Thr Gln Asp Gly Gly Gly
            180                 185                 190

Ser Gln Ala Thr Glu Ile Ile Ser Leu Ser Lys Asp Phe Ile Leu Val
        195                 200                 205

Pro Gly Pro Leu Tyr Thr Glu Arg Phe Ala Ala Ser Asp Val Gln Leu
    210                 215                 220

Asn Lys Leu Gly Pro Thr Thr Phe Arg Leu Ser Ile Glu Arg Leu Gln
```

```
225                 230                 235                 240

Ser Ser Asp Gln Gly Gln Leu Phe Cys Glu Ala Thr Glu Trp Ile Gln
                245                 250                 255

Asp Pro Asp Glu Thr Trp Met Phe Ile Thr Lys Lys Gln Thr Asp Gln
            260                 265                 270

Thr Thr Leu Arg Ile Gln Pro Ala Val Lys Asp Phe Gln Val Asn Ile
        275                 280                 285

Thr Ala Asp Ser Leu Phe Ala Glu Gly Lys Pro Leu Glu Leu Val Cys
    290                 295                 300

Leu Val Val Ser Ser Gly Arg Asp Pro Gln Leu Gln Gly Ile Trp Phe
305                 310                 315                 320

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

Leu Lys Asn Asp Tyr Lys Glu Arg Ala Ser Gln Gly Glu Leu Gln Val
            340                 345                 350

Ser Lys Leu Gly Pro Lys Ala Phe Ser Leu Lys Ile Phe Ser Leu Gly
        355                 360                 365

Pro Glu Asp Glu Gly Ala Tyr Arg Cys Val Val Ala Glu Val Met Lys
    370                 375                 380

Thr Arg Thr Gly Ser Trp Gln Val Leu Gln Arg Lys Gln Ser Pro Asp
385                 390                 395                 400

Ser His Val His Leu Arg Lys Pro Ala Ala Arg Ser Val Val Met Ser
                405                 410                 415

Thr Lys Asn Lys Gln Gln Val Val Trp Glu Gly Glu Thr Leu Ala Phe
            420                 425                 430

Leu Cys Lys Ala Gly Gly Ala Glu Ser Pro Leu Ser Val Ser Trp Trp
        435                 440                 445
```

```
His Ile Pro Arg Asp Gln Thr Gln Pro Glu Phe Val Ala Gly Met Gly
    450                 455                 460

Gln Asp Gly Ile Val Gln Leu Gly Ala Ser Tyr Gly Val Pro Ser Tyr
465                 470                 475                 480

His Gly Asn Thr Arg Leu Glu Lys Met Asp Trp Ala Thr Phe Gln Leu
                485                 490                 495

Glu Ile Thr Phe Thr Ala Ile Thr Asp Ser Gly Thr Tyr Glu Cys Arg
            500                 505                 510

Val Ser Glu Lys Ser Arg Asn Gln Ala Arg Asp Leu Ser Trp Thr Gln
        515                 520                 525

Lys Ile Ser Val Thr Val Lys Ser Leu Glu Ser Ser Leu Gln Val Ser
    530                 535                 540

Leu Met Ser Arg Gln Pro Gln Val Met Leu Thr Asn Thr Phe Asp Leu
545                 550                 555                 560

Ser Cys Val Val Arg Ala Gly Tyr Ser Asp Leu Lys Val Pro Leu Thr
                565                 570                 575

Val Thr Trp Gln Phe Gln Pro Ala Ser Ser His Ile Phe His Gln Leu
            580                 585                 590

Ile Arg Ile Thr His Asn Gly Thr Ile Glu Trp Gly Asn Phe Leu Ser
        595                 600                 605

Arg Phe Gln Lys Lys Thr Lys Val Ser Gln Ser Leu Phe Arg Ser Gln
    610                 615                 620

Leu Leu Val His Asp Ala Thr Glu Glu Glu Thr Gly Val Tyr Gln Cys
625                 630                 635                 640

Glu Val Glu Val Tyr Asp Arg Asn Ser Leu Tyr Asn Asn Arg Pro Pro
                645                 650                 655

Arg Ala Ser Ala Ile Ser His Pro Leu Arg Ile Ala Val Thr Leu Pro
```

```
            660                 665                 670

Glu Ser Lys Leu Lys Val Asn Ser Arg Ser Gln Val Gln Glu Leu Ser
        675                 680                 685

Ile Asn Ser Asn Thr Asp Ile Glu Cys Ser Ile Leu Ser Arg Ser Asn
    690                 695                 700

Gly Asn Leu Gln Leu Ala Ile Ile Trp Tyr Phe Ser Pro Val Ser Thr
705                 710                 715                 720

Asn Ala Ser Trp Leu Lys Ile Leu Glu Met Asp Gln Thr Asn Val Ile
                725                 730                 735

Lys Thr Gly Asp Glu Phe His Thr Pro Gln Arg Lys Gln Lys Phe His
            740                 745                 750

Thr Glu Lys Val Ser Gln Asp Leu Phe Gln Leu His Ile Leu Asn Val
        755                 760                 765

Glu Asp Ser Asp Arg Gly Lys Tyr His Cys Ala Val Glu Glu Trp Leu
    770                 775                 780

Leu Ser Thr Asn Gly Thr Trp His Lys Leu Gly Glu Lys Lys Ser Gly
785                 790                 795                 800

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

Lys Val Tyr Trp Thr Glu Asn Val Thr Glu His Arg Glu Val Ala Ile
            820                 825                 830

Arg Cys Ser Leu Glu Ser Val Gly Ser Ser Ala Thr Leu Tyr Ser Val
        835                 840                 845

Met Trp Tyr Trp Asn Arg Glu Asn Ser Gly Ser Lys Leu Leu Val His
    850                 855                 860

Leu Gln His Asp Gly Leu Leu Glu Tyr Gly Glu Glu Gly Leu Arg Arg
865                 870                 875                 880
```

```
His Leu His Cys Tyr Arg Ser Ser Ser Thr Asp Phe Val Leu Lys Leu
                885                 890                 895


His Gln Val Glu Met Glu Asp Ala Gly Met Tyr Trp Cys Arg Val Ala
            900                 905                 910


Glu Trp Gln Leu His Gly His Pro Ser Lys Trp Ile Asn Gln Ala Ser
        915                 920                 925


Asp Glu Ser Gln Arg Met Val Leu Thr Val Leu Pro Ser Glu Pro Thr
    930                 935                 940


Leu Pro Ser Arg Ile Cys Ser Ser Ala Pro Leu Leu Tyr Phe Leu Phe
945                 950                 955                 960


Ile Cys Pro Phe Val Leu Leu Leu Leu Leu Leu Ile Ser Leu Leu Cys
                965                 970                 975


Leu Tyr Trp Lys Ala Arg Lys Leu Ser Thr Leu Arg Ser Asn Thr Arg
            980                 985                 990


Lys Glu Lys Ala Leu Trp Val Asp  Leu Lys Glu Ala Gly  Gly Val Thr
        995                 1000                1005


Thr Asn  Arg Arg Glu Asp Glu  Glu Glu Asp Glu Gly  Asn
    1010                1015                1020


<210>  203
<211>  1195
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Artificial Sequence

<400>  203

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


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

```
Thr Glu Gly Ser His Ile Thr Ile Trp Cys Asn Val Ser Gly Tyr Gln
        35                  40                  45

Gly Pro Ser Glu Gln Asn Phe Gln Trp Ser Ile Tyr Leu Pro Ser Ser
    50                  55                  60

Pro Glu Arg Glu Val Gln Ile Val Ser Thr Met Asp Ser Ser Phe Pro
65                  70                  75                  80

Tyr Ala Ile Tyr Thr Gln Arg Val Arg Gly Gly Lys Ile Phe Ile Glu
                85                  90                  95

Arg Val Gln Gly Asn Ser Thr Leu Leu His Ile Thr Asp Leu Gln Ala
            100                 105                 110

Arg Asp Ala Gly Glu Tyr Glu Cys His Thr Pro Ser Thr Asp Lys Gln
        115                 120                 125

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

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

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

Ser His Leu Ser Val Ala Trp Leu Arg Gln Lys Val Gly Glu Lys Pro
            180                 185                 190

Val Glu Val Ile Ser Leu Ser Arg Asp Phe Met Leu His Ser Ser Ser
        195                 200                 205

Glu Tyr Ala Gln Arg Gln Ser Leu Gly Glu Val Arg Leu Asp Lys Leu
    210                 215                 220

Gly Arg Thr Thr Phe Arg Leu Thr Ile Phe His Leu Gln Pro Ser Asp
225                 230                 235                 240

Gln Gly Glu Phe Tyr Cys Glu Ala Ala Glu Trp Ile Gln Asp Pro Asp
```

```
                245                 250                 255

Gly Ser Trp Tyr Ala Met Thr Arg Lys Arg Ser Glu Gly Ala Val Val
            260                 265                 270

Asn Val Gln Pro Thr Asp Lys Glu Phe Thr Val Arg Leu Glu Thr Glu
        275                 280                 285

Lys Arg Leu His Thr Val Gly Glu Pro Val Glu Phe Arg Cys Ile Leu
    290                 295                 300

Glu Ala Gln Asn Val Pro Asp Arg Tyr Phe Ala Val Ser Trp Ala Phe
305                 310                 315                 320

Asn Ser Ser Leu Ile Ala Thr Met Gly Pro Asn Ala Val Pro Val Leu
                325                 330                 335

Asn Ser Glu Phe Ala His Arg Glu Ala Arg Gly Gln Leu Lys Val Ala
            340                 345                 350

Lys Glu Ser Asp Ser Val Phe Val Leu Lys Ile Tyr His Leu Arg Gln
        355                 360                 365

Glu Asp Ser Gly Lys Tyr Asn Cys Arg Val Thr Glu Arg Glu Lys Thr
    370                 375                 380

Val Thr Gly Glu Phe Ile Asp Lys Glu Ser Lys Arg Pro Lys Asn Ile
385                 390                 395                 400

Pro Ile Ile Val Leu Pro Leu Lys Ser Ser Ile Ser Val Glu Val Ala
                405                 410                 415

Ser Asn Ala Ser Val Ile Leu Glu Gly Glu Asp Leu Arg Phe Ser Cys
            420                 425                 430

Ser Val Arg Thr Ala Gly Arg Pro Gln Gly Arg Phe Ser Val Ile Trp
        435                 440                 445

Gln Leu Val Asp Arg Gln Asn Arg Arg Ser Asn Ile Met Trp Leu Asp
    450                 455                 460
```

```
Arg Asp Gly Thr Val Gln Pro Gly Ser Ser Tyr Trp Glu Arg Ser Ser
465                 470                 475                 480

Phe Gly Gly Val Gln Met Glu Gln Val Gln Pro Asn Ser Phe Ser Leu
                485                 490                 495

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

Val Thr Glu Trp Val Arg Ala Val Asp Gly Glu Trp Gln Ile Val Gly
        515                 520                 525

Glu Arg Arg Ala Ser Thr Pro Ile Ser Ile Thr Ala Leu Glu Met Gly
    530                 535                 540

Phe Ala Val Thr Ala Ile Ser Arg Thr Pro Gly Val Thr Tyr Ser Asp
545                 550                 555                 560

Ser Phe Asp Leu Gln Cys Ile Ile Lys Pro His Tyr Pro Ala Trp Val
                565                 570                 575

Pro Val Ser Val Thr Trp Arg Phe Gln Pro Val Gly Thr Val Glu Phe
            580                 585                 590

His Asp Leu Val Thr Phe Thr Arg Asp Gly Gly Val Gln Trp Gly Asp
        595                 600                 605

Arg Ser Ser Ser Phe Arg Thr Arg Thr Ala Ile Glu Lys Ala Glu Ser
    610                 615                 620

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

Gly Lys Tyr Gln Cys Val Ala Glu Leu Trp Arg Lys Asn Tyr Asn Asn
                645                 650                 655

Thr Trp Thr Arg Leu Ala Glu Arg Thr Ser Asn Leu Leu Glu Ile Arg
            660                 665                 670

Val Leu Gln Pro Val Thr Lys Leu Gln Val Ser Lys Ser Lys Arg Thr
```

```
        675                 680                 685

Leu Thr Leu Val Glu Asn Lys Pro Ile Gln Leu Asn Cys Ser Val Lys
    690                 695                 700

Ser Gln Thr Ser Gln Asn Ser His Phe Ala Val Leu Trp Tyr Val His
705                 710                 715                 720

Lys Pro Ser Asp Ala Asp Gly Lys Leu Ile Leu Lys Thr Thr His Asn
                725                 730                 735

Ser Ala Phe Glu Tyr Gly Thr Tyr Ala Glu Glu Glu Gly Leu Arg Ala
            740                 745                 750

Arg Leu Gln Phe Glu Arg His Val Ser Gly Gly Leu Phe Ser Leu Thr
        755                 760                 765

Val Gln Arg Ala Glu Val Ser Asp Ser Gly Ser Tyr Tyr Cys His Val
    770                 775                 780

Glu Glu Trp Leu Leu Ser Pro Asn Tyr Ala Trp Tyr Lys Leu Ala Glu
785                 790                 795                 800

Glu Val Ser Gly Arg Thr Glu Val Thr Val Lys Gln Pro Asp Ser Arg
                805                 810                 815

Leu Arg Leu Ser Gln Ala Gln Gly Asn Leu Ser Val Leu Glu Thr Arg
            820                 825                 830

Gln Val Gln Leu Glu Cys Val Val Leu Asn Arg Thr Ser Ile Thr Ser
        835                 840                 845

Gln Leu Met Val Glu Trp Phe Val Trp Lys Pro Asn His Pro Glu Arg
    850                 855                 860

Glu Thr Val Ala Arg Leu Ser Arg Asp Ala Thr Phe His Tyr Gly Glu
865                 870                 875                 880

Gln Ala Ala Lys Asn Asn Leu Lys Gly Arg Leu His Leu Glu Ser Pro
                885                 890                 895
```

```
Ser Pro Gly Val Tyr Arg Leu Phe Ile Gln Asn Val Ala Val Gln Asp
            900                 905                 910

Ser Gly Thr Tyr Ser Cys His Val Glu Glu Trp Leu Pro Ser Pro Ser
        915                 920                 925

Gly Met Trp Tyr Lys Arg Ala Glu Asp Thr Ala Gly Gln Thr Ala Leu
    930                 935                 940

Thr Val Met Arg Pro Asp Ala Ser Leu Gln Val Asp Thr Val Val Pro
945                 950                 955                 960

Asn Ala Thr Val Ser Glu Lys Ala Ala Phe Gln Leu Asp Cys Ser Ile
                965                 970                 975

Val Ser Arg Ser Ser Gln Asp Ser Arg Phe Ala Val Ala Trp Tyr Ser
            980                 985                 990

Leu Arg Thr Lys Ala Gly Gly Lys  Arg Ser Ser Pro Gly  Leu Glu Glu
        995                 1000                1005

Gln Glu  Glu Glu Arg Glu Glu  Glu Glu Glu Glu Glu  Glu Asp Asp
    1010                1015                1020

Asp Asp  Asp Asp Pro Thr Glu  Arg Thr Ala Leu Leu  Ser Val Gly
    1025                1030                1035

Pro Asp  Ala Val Phe Gly Pro  Glu Gly Ser Pro Trp  Glu Gly Arg
    1040                1045                1050

Leu Arg  Phe Gln Arg Leu Ser  Pro Val Leu Tyr Arg  Leu Thr Val
    1055                1060                1065

Leu Gln  Ala Ser Pro Gln Asp  Thr Gly Asn Tyr Ser  Cys His Val
    1070                1075                1080

Glu Glu  Trp Leu Pro Ser Pro  Gln Lys Glu Trp Tyr  Arg Leu Thr
    1085                1090                1095

Glu Glu  Glu Ser Ala Pro Ile  Gly Ile Arg Val Leu  Asp Thr Ser
```

```
    1100                1105                1110

Pro Thr  Leu Gln Ser Ile Ile  Cys Ser Asn Asp Ala  Leu Phe Tyr
    1115                1120                1125

Phe Val  Phe Phe Tyr Pro Phe  Pro Ile Phe Gly Ile  Leu Ile Ile
    1130                1135                1140

Thr Ile  Leu Leu Val Arg Phe  Lys Ser Arg Asn Ser  Ser Lys Asn
    1145                1150                1155

Ser Asp  Gly Lys Asn Gly Val  Pro Leu Leu Trp Ile  Lys Glu Pro
    1160                1165                1170

His Leu  Asn Tyr Ser Pro Thr  Cys Leu Glu Pro Pro  Val Leu Ser
    1175                1180                1185

Ile His  Pro Gly Ala Ile Asp
    1190                1195
```

<210> 204
<211> 1023
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 204

```
Met Gly Lys Gly Val Gly Arg Asp Lys Tyr Glu Pro Ala Ala Val Ser
1               5                   10                  15

Glu Gln Gly Asp Lys Lys Gly Lys Lys Gly Lys Lys Asp Arg Asp Met
            20                  25                  30

Asp Glu Leu Lys Lys Glu Val Ser Met Asp Asp His Lys Leu Ser Leu
        35                  40                  45

Asp Glu Leu His Arg Lys Tyr Gly Thr Asp Leu Ser Arg Gly Leu Thr
    50                  55                  60

Ser Ala Arg Ala Ala Glu Ile Leu Ala Arg Asp Gly Pro Asn Ala Leu
```

```
65                  70                  75                  80

Thr Pro Pro Pro Thr Thr Pro Glu Trp Ile Lys Phe Cys Arg Gln Leu
                85                  90                  95

Phe Gly Gly Phe Ser Met Leu Leu Trp Ile Gly Ala Ile Leu Cys Phe
            100                 105                 110

Leu Ala Tyr Ser Ile Gln Ala Ala Thr Glu Glu Glu Pro Gln Asn Asp
        115                 120                 125

Asn Leu Tyr Leu Gly Val Val Leu Ser Ala Val Val Ile Ile Thr Gly
    130                 135                 140

Cys Phe Ser Tyr Tyr Gln Glu Ala Lys Ser Ser Lys Ile Met Glu Ser
145                 150                 155                 160

Phe Lys Asn Met Val Pro Gln Gln Ala Leu Val Ile Arg Asn Gly Glu
                165                 170                 175

Lys Met Ser Ile Asn Ala Glu Glu Val Val Val Gly Asp Leu Val Glu
            180                 185                 190

Val Lys Gly Gly Asp Arg Ile Pro Ala Asp Leu Arg Ile Ile Ser Ala
        195                 200                 205

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

Gln Thr Arg Ser Pro Asp Phe Thr Asn Glu Asn Pro Leu Glu Thr Arg
225                 230                 235                 240

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

Ile Val Val Tyr Thr Gly Asp Arg Thr Val Met Gly Arg Ile Ala Thr
            260                 265                 270

Leu Ala Ser Gly Leu Glu Gly Gly Gln Thr Pro Ile Ala Ala Glu Ile
        275                 280                 285
```

```
Glu His Phe Ile His Ile Ile Thr Gly Val Ala Val Phe Leu Gly Val
    290                 295                 300

Ser Phe Phe Ile Leu Ser Leu Ile Leu Glu Tyr Thr Trp Leu Glu Ala
305                 310                 315                 320

Val Ile Phe Leu Ile Gly Ile Ile Val Ala Asn Val Pro Glu Gly Leu
                325                 330                 335

Leu Ala Thr Val Thr Val Cys Leu Thr Leu Thr Ala Lys Arg Met Ala
            340                 345                 350

Arg Lys Asn Cys Leu Val Lys Asn Leu Glu Ala Val Glu Thr Leu Gly
        355                 360                 365

Ser Thr Ser Thr Ile Cys Ser Asp Lys Thr Gly Thr Leu Thr Gln Asn
    370                 375                 380

Arg Met Thr Val Ala His Met Trp Phe Asp Asn Gln Ile His Glu Ala
385                 390                 395                 400

Asp Thr Thr Glu Asn Gln Ser Gly Val Ser Phe Asp Lys Thr Ser Ala
                405                 410                 415

Thr Trp Leu Ala Leu Ser Arg Ile Ala Gly Leu Cys Asn Arg Ala Val
            420                 425                 430

Phe Gln Ala Asn Gln Glu Asn Leu Pro Ile Leu Lys Arg Ala Val Ala
        435                 440                 445

Gly Asp Ala Ser Glu Ser Ala Leu Leu Lys Cys Ile Glu Leu Cys Cys
    450                 455                 460

Gly Ser Val Lys Glu Met Arg Glu Arg Tyr Ala Lys Ile Val Glu Ile
465                 470                 475                 480

Pro Phe Asn Ser Thr Asn Lys Tyr Gln Leu Ser Ile His Lys Asn Pro
                485                 490                 495

Asn Thr Ser Glu Pro Gln His Leu Leu Val Met Lys Gly Ala Pro Glu
```

```
            500                 505                 510

Arg Ile Leu Asp Arg Cys Ser Ser Ile Leu Leu His Gly Lys Glu Gln
        515                 520                 525

Pro Leu Asp Glu Glu Leu Lys Asp Ala Phe Gln Asn Ala Tyr Leu Glu
    530                 535                 540

Leu Gly Gly Leu Gly Glu Arg Val Leu Gly Phe Cys His Leu Phe Leu
545                 550                 555                 560

Pro Asp Glu Gln Phe Pro Glu Gly Phe Gln Phe Asp Thr Asp Asp Val
                565                 570                 575

Asn Phe Pro Ile Asp Asn Leu Cys Phe Val Gly Leu Ile Ser Met Ile
            580                 585                 590

Asp Pro Pro Arg Ala Ala Val Pro Asp Ala Val Gly Lys Cys Arg Ser
        595                 600                 605

Ala Gly Ile Lys Val Ile Met Val Thr Gly Asp His Pro Ile Thr Ala
    610                 615                 620

Lys Ala Ile Ala Lys Gly Val Gly Ile Ile Ser Glu Gly Asn Glu Thr
625                 630                 635                 640

Val Glu Asp Ile Ala Ala Arg Leu Asn Ile Pro Val Ser Gln Val Asn
                645                 650                 655

Pro Arg Asp Ala Lys Ala Cys Val Val His Gly Ser Asp Leu Lys Asp
            660                 665                 670

Met Thr Ser Glu Gln Leu Asp Asp Ile Leu Lys Tyr His Thr Glu Ile
        675                 680                 685

Val Phe Ala Arg Thr Ser Pro Gln Gln Lys Leu Ile Ile Val Glu Gly
    690                 695                 700

Cys Gln Arg Gln Gly Ala Ile Val Ala Val Thr Gly Asp Gly Val Asn
705                 710                 715                 720
```

```
Asp Ser Pro Ala Leu Lys Lys Ala Asp Ile Gly Val Ala Met Gly Ile
                725                 730                 735

Ala Gly Ser Asp Val Ser Lys Gln Ala Ala Asp Met Ile Leu Leu Asp
            740                 745                 750

Asp Asn Phe Ala Ser Ile Val Thr Gly Val Glu Glu Gly Arg Leu Ile
        755                 760                 765

Phe Asp Asn Leu Lys Lys Ser Ile Ala Tyr Thr Leu Thr Ser Asn Ile
    770                 775                 780

Pro Glu Ile Thr Pro Phe Leu Ile Phe Ile Ile Ala Asn Ile Pro Leu
785                 790                 795                 800

Pro Leu Gly Thr Val Thr Ile Leu Cys Ile Asp Leu Gly Thr Asp Met
                805                 810                 815

Val Pro Ala Ile Ser Leu Ala Tyr Glu Gln Ala Glu Ser Asp Ile Met
            820                 825                 830

Lys Arg Gln Pro Arg Asn Pro Lys Thr Asp Lys Leu Val Asn Glu Arg
        835                 840                 845

Leu Ile Ser Met Ala Tyr Gly Gln Ile Gly Met Ile Gln Ala Leu Gly
    850                 855                 860

Gly Phe Phe Thr Tyr Phe Val Ile Leu Ala Glu Asn Gly Phe Leu Pro
865                 870                 875                 880

Ile His Leu Leu Gly Leu Arg Val Asp Trp Asp Asp Arg Trp Ile Asn
                885                 890                 895

Asp Val Glu Asp Ser Tyr Gly Gln Gln Trp Thr Tyr Glu Gln Arg Lys
            900                 905                 910

Ile Val Glu Phe Thr Cys His Thr Ala Phe Phe Val Ser Ile Val Val
        915                 920                 925

Val Gln Trp Ala Asp Leu Val Ile Cys Lys Thr Arg Arg Asn Ser Val
```

```
    930                 935                 940

Phe Gln Gln Gly Met Lys Asn Lys Ile Leu Ile Phe Gly Leu Phe Glu
945                 950                 955                 960

Glu Thr Ala Leu Ala Ala Phe Leu Ser Tyr Cys Pro Gly Met Gly Val
                965                 970                 975

Ala Leu Arg Met Tyr Pro Leu Lys Pro Thr Trp Trp Phe Cys Ala Phe
            980                 985                 990

Pro Tyr Ser Leu Leu Ile Phe Val  Tyr Asp Glu Val Arg  Lys Leu Ile
        995                 1000                1005

Ile Arg  Arg Arg Pro Gly Gly  Trp Val Glu Lys Glu  Thr Tyr Tyr
    1010                1015                1020
```

<210> 205
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 205

```
Met Gly Arg Gly Ala Gly Arg Glu Tyr Ser Pro Ala Ala Thr Thr Ala
1               5                   10                  15

Glu Asn Gly Gly Gly Lys Lys Lys Gln Lys Glu Lys Glu Leu Asp Glu
            20                  25                  30

Leu Lys Lys Glu Val Ala Met Asp Asp His Lys Leu Ser Leu Asp Glu
        35                  40                  45

Leu Gly Arg Lys Tyr Gln Val Asp Leu Ser Lys Gly Leu Thr Asn Gln
    50                  55                  60

Arg Ala Gln Asp Val Leu Ala Arg Asp Gly Pro Asn Ala Leu Thr Pro
65                  70                  75                  80

Pro Pro Thr Thr Pro Glu Trp Val Lys Phe Cys Arg Gln Leu Phe Gly
```

```
                85                  90                  95

Gly Phe Ser Ile Leu Leu Trp Ile Gly Ala Ile Leu Cys Phe Leu Ala
            100                 105                 110

Tyr Gly Ile Gln Ala Ala Met Glu Asp Glu Pro Ser Asn Asp Asn Leu
        115                 120                 125

Tyr Leu Gly Val Val Leu Ala Ala Val Val Ile Val Thr Gly Cys Phe
    130                 135                 140

Ser Tyr Tyr Gln Glu Ala Lys Ser Ser Lys Ile Met Asp Ser Phe Lys
145                 150                 155                 160

Asn Met Val Pro Gln Gln Ala Leu Val Ile Arg Glu Gly Glu Lys Met
                165                 170                 175

Gln Ile Asn Ala Glu Glu Val Val Val Gly Asp Leu Val Glu Val Lys
            180                 185                 190

Gly Gly Asp Arg Val Pro Ala Asp Leu Arg Ile Ile Ser Ser His Gly
        195                 200                 205

Cys Lys Val Asp Asn Ser Ser Leu Thr Gly Glu Ser Glu Pro Gln Thr
    210                 215                 220

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


<210>  206
<211>  780
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Artificial Sequence

<400>  206

Cys Phe Phe Ser Thr Asn Cys Val Glu Gly Thr Ala Arg Gly Ile Val
1               5                   10                  15

Ile Ala Thr Gly Asp Arg Thr Val Met Gly Arg Ile Ala Thr Leu Ala
```

```
            20                  25                  30

Ser Gly Leu Glu Val Gly Arg Thr Pro Ile Ala Met Glu Ile Glu His
        35                  40                  45

Phe Ile Gln Leu Ile Thr Gly Val Ala Val Phe Leu Gly Val Ser Phe
    50                  55                  60

Phe Val Leu Ser Leu Ile Leu Gly Tyr Ser Trp Leu Glu Ala Val Ile
65                  70                  75                  80

Phe Leu Ile Gly Ile Ile Val Ala Asn Val Pro Glu Gly Leu Leu Ala
                85                  90                  95

Thr Val Thr Val Cys Leu Thr Leu Thr Ala Lys Arg Met Ala Arg Lys
            100                 105                 110

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

Ser Thr Ile Cys Ser Asp Lys Thr Gly Thr Leu Thr Gln Asn Arg Met
    130                 135                 140

Thr Val Ala His Met Trp Phe Asp Asn Gln Ile His Glu Ala Asp Thr
145                 150                 155                 160

Thr Glu Asp Gln Ser Gly Ala Thr Phe Asp Lys Arg Ser Pro Thr Trp
                165                 170                 175

Thr Ala Leu Ser Arg Ile Ala Gly Leu Cys Asn Arg Ala Val Phe Lys
            180                 185                 190

Ala Gly Gln Glu Asn Ile Ser Val Ser Lys Arg Asp Thr Ala Gly Asp
        195                 200                 205

Ala Ser Glu Ser Ala Leu Leu Lys Cys Ile Glu Leu Ser Cys Gly Ser
    210                 215                 220

Val Arg Lys Met Arg Asp Arg Asn Pro Lys Val Ala Glu Ile Pro Phe
225                 230                 235                 240
```

```
Asn Ser Thr Asn Lys Tyr Gln Leu Ser Ile His Glu Arg Glu Asp Ser
                245                 250                 255

Pro Gln Ser His Val Leu Val Met Lys Gly Ala Pro Glu Arg Ile Leu
            260                 265                 270

Asp Arg Cys Ser Thr Ile Leu Val Gln Gly Lys Glu Ile Pro Leu Asp
        275                 280                 285

Lys Glu Met Gln Asp Ala Phe Gln Asn Ala Tyr Met Glu Leu Gly Gly
    290                 295                 300

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

Lys Phe Pro Arg Gly Phe Lys Phe Asp Thr Asp Glu Leu Asn Phe Pro
                325                 330                 335

Thr Glu Lys Leu Cys Phe Val Gly Leu Met Ser Met Ile Asp Pro Pro
            340                 345                 350

Arg Ala Ala Val Pro Asp Ala Val Gly Lys Cys Arg Ser Ala Gly Ile
        355                 360                 365

Lys Val Ile Met Val Thr Gly Asp His Pro Ile Thr Ala Lys Ala Ile
    370                 375                 380

Ala Lys Gly Val Gly Ile Ile Ser Glu Gly Asn Glu Thr Val Glu Asp
385                 390                 395                 400

Ile Ala Ala Arg Leu Asn Ile Pro Met Ser Gln Val Asn Pro Arg Glu
                405                 410                 415

Ala Lys Ala Cys Val Val His Gly Ser Asp Leu Lys Asp Met Thr Ser
            420                 425                 430

Glu Gln Leu Asp Glu Ile Leu Lys Asn His Thr Glu Ile Val Phe Ala
        435                 440                 445

Arg Thr Ser Pro Gln Gln Lys Leu Ile Ile Val Glu Gly Cys Gln Arg
```

```
    450                 455                 460

Gln Gly Ala Ile Val Ala Val Thr Gly Asp Gly Val Asn Asp Ser Pro
465                 470                 475                 480

Ala Leu Lys Lys Ala Asp Ile Gly Ile Ala Met Gly Ile Ser Gly Ser
                485                 490                 495

Asp Val Ser Lys Gln Ala Ala Asp Met Ile Leu Leu Asp Asp Asn Phe
            500                 505                 510

Ala Ser Ile Val Thr Gly Val Glu Glu Gly Arg Leu Ile Phe Asp Asn
        515                 520                 525

Leu Lys Lys Ser Ile Ala Tyr Thr Leu Thr Ser Asn Ile Pro Glu Ile
    530                 535                 540

Thr Pro Phe Leu Leu Phe Ile Ile Ala Asn Ile Pro Leu Pro Leu Gly
545                 550                 555                 560

Thr Val Thr Ile Leu Cys Ile Asp Leu Gly Thr Asp Met Val Pro Ala
                565                 570                 575

Ile Ser Leu Ala Tyr Glu Ala Ala Glu Ser Asp Ile Met Lys Arg Gln
            580                 585                 590

Pro Arg Asn Ser Gln Thr Asp Lys Leu Val Asn Glu Arg Leu Ile Ser
        595                 600                 605

Met Ala Tyr Gly Gln Ile Gly Met Ile Gln Ala Leu Gly Gly Phe Phe
    610                 615                 620

Thr Tyr Phe Val Ile Leu Ala Glu Asn Gly Phe Leu Pro Ser Arg Leu
625                 630                 635                 640

Leu Gly Ile Arg Leu Asp Trp Asp Asp Arg Thr Met Asn Asp Leu Glu
                645                 650                 655

Asp Ser Tyr Gly Gln Glu Trp Thr Tyr Glu Gln Arg Lys Val Val Glu
            660                 665                 670
```

Phe Thr Cys His Thr Ala Phe Phe Ala Ser Ile Val Val Val Gln Trp
        675   680   685

Ala Asp Leu Ile Ile Cys Lys Thr Arg Arg Asn Ser Val Phe Gln Gln
    690   695   700

Gly Met Lys Asn Lys Ile Leu Ile Phe Gly Leu Leu Glu Glu Thr Ala
705   710   715   720

Leu Ala Ala Phe Leu Ser Tyr Cys Pro Gly Met Gly Val Ala Leu Arg
                725   730   735

Met Tyr Pro Leu Lys Val Thr Trp Trp Phe Cys Ala Phe Pro Tyr Ser
            740   745   750

Leu Leu Ile Phe Ile Tyr Asp Glu Val Arg Lys Leu Ile Leu Arg Arg
        755   760   765

Tyr Pro Gly Gly Trp Val Glu Lys Glu Thr Tyr Tyr
    770   775   780

<210> 207
<211> 1026
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 207

Met Gly Ser Gly Gly Ser Asp Ser Tyr Arg Ile Ala Thr Ser Gln Asp
1   5   10   15

Lys Lys Asp Asp Lys Asp Ser Pro Lys Lys Asn Lys Gly Lys Glu Arg
            20   25   30

Arg Asp Leu Asp Asp Leu Lys Lys Glu Val Ala Met Thr Glu His Lys
        35   40   45

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

```
Gly Leu Thr His Ser Lys Ala Gln Glu Ile Leu Ala Arg Asp Gly Pro
65                  70                  75                  80

Asn Ala Leu Thr Pro Pro Pro Thr Thr Pro Glu Trp Val Lys Phe Cys
                85                  90                  95

Arg Gln Leu Phe Gly Gly Phe Ser Ile Leu Leu Trp Ile Gly Ala Ile
            100                 105                 110

Leu Cys Phe Leu Ala Tyr Gly Ile Gln Ala Gly Thr Glu Asp Asp Pro
        115                 120                 125

Ser Gly Asp Asn Leu Tyr Leu Gly Ile Val Leu Ala Ala Val Val Ile
    130                 135                 140

Ile Thr Gly Cys Phe Ser Tyr Tyr Gln Glu Ala Lys Ser Ser Lys Ile
145                 150                 155                 160

Met Glu Ser Phe Lys Asn Met Val Pro Gln Gln Ala Leu Val Ile Arg
                165                 170                 175

Glu Gly Glu Lys Met Gln Val Asn Ala Glu Glu Val Val Val Gly Asp
            180                 185                 190

Leu Val Glu Ile Lys Gly Gly Asp Arg Val Pro Ala Asp Leu Arg Ile
        195                 200                 205

Ile Ser Ala His Gly Cys Lys Val Asp Asn Ser Ser Leu Thr Gly Glu
    210                 215                 220

Ser Glu Pro Gln Thr Arg Ser Pro Asp Cys Thr His Asp Asn Pro Leu
225                 230                 235                 240

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

Ala Arg Gly Val Val Val Ala Thr Gly Asp Arg Thr Val Met Gly Arg
            260                 265                 270

Ile Ala Thr Leu Ala Ser Gly Leu Glu Val Gly Lys Thr Pro Ile Ala
```

```
        275                 280                 285

Ile Glu Ile Glu His Phe Ile Gln Leu Ile Thr Gly Val Ala Val Phe
    290                 295                 300

Leu Gly Val Ser Phe Phe Ile Leu Ser Leu Ile Leu Gly Tyr Thr Trp
305                 310                 315                 320

Leu Glu Ala Val Ile Phe Leu Ile Gly Ile Ile Val Ala Asn Val Pro
                325                 330                 335

Glu Gly Leu Leu Ala Thr Val Thr Val Cys Leu Thr Leu Thr Ala Lys
            340                 345                 350

Arg Met Ala Arg Lys Asn Cys Leu Val Lys Asn Leu Glu Ala Val Glu
        355                 360                 365

Thr Leu Gly Ser Thr Ser Thr Ile Cys Ser Asp Lys Thr Gly Thr Leu
    370                 375                 380

Thr Gln Asn Arg Met Thr Val Ala His Met Trp Phe Asp Asn Gln Ile
385                 390                 395                 400

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

Ser Ser His Thr Trp Val Ala Leu Ser His Ile Ala Gly Leu Cys Asn
            420                 425                 430

Arg Ala Val Phe Lys Gly Gly Gln Asp Asn Ile Pro Val Leu Lys Arg
        435                 440                 445

Asp Val Ala Gly Asp Ala Ser Glu Ser Ala Leu Leu Lys Cys Ile Glu
    450                 455                 460

Leu Ser Ser Gly Ser Val Lys Leu Met Arg Glu Arg Asn Lys Lys Val
465                 470                 475                 480

Ala Glu Ile Pro Phe Asn Ser Thr Asn Lys Tyr Gln Leu Ser Ile His
                485                 490                 495
```

```
Glu Thr Glu Asp Pro Asn Asp Asn Arg Tyr Leu Leu Val Met Lys Gly
            500                 505                 510

Ala Pro Glu Arg Ile Leu Asp Arg Cys Ser Thr Ile Leu Leu Gln Gly
        515                 520                 525

Lys Glu Gln Pro Leu Asp Glu Glu Met Lys Glu Ala Phe Gln Asn Ala
    530                 535                 540

Tyr Leu Glu Leu Gly Gly Leu Gly Glu Arg Val Leu Gly Phe Cys His
545                 550                 555                 560

Tyr Tyr Leu Pro Glu Glu Gln Phe Pro Lys Gly Phe Ala Phe Asp Cys
                565                 570                 575

Asp Asp Val Asn Phe Thr Thr Asp Asn Leu Cys Phe Val Gly Leu Met
            580                 585                 590

Ser Met Ile Asp Pro Pro Arg Ala Ala Val Pro Asp Ala Val Gly Lys
        595                 600                 605

Cys Arg Ser Ala Gly Ile Lys Val Ile Met Val Thr Gly Asp His Pro
    610                 615                 620

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

Asn Glu Thr Val Glu Asp Ile Ala Ala Arg Leu Asn Ile Pro Val Ser
                645                 650                 655

Gln Val Asn Pro Arg Asp Ala Lys Ala Cys Val Ile His Gly Thr Asp
            660                 665                 670

Leu Lys Asp Phe Thr Ser Glu Gln Ile Asp Glu Ile Leu Gln Asn His
        675                 680                 685

Thr Glu Ile Val Phe Ala Arg Thr Ser Pro Gln Gln Lys Leu Ile Ile
    690                 695                 700

Val Glu Gly Cys Gln Arg Gln Gly Ala Ile Val Ala Val Thr Gly Asp
```

```
705                 710                 715                 720

Gly Val Asn Asp Ser Pro Ala Leu Lys Lys Ala Asp Ile Gly Val Ala
                725                 730                 735

Met Gly Ile Ala Gly Ser Asp Val Ser Lys Gln Ala Ala Asp Met Ile
            740                 745                 750

Leu Leu Asp Asp Asn Phe Ala Ser Ile Val Thr Gly Val Glu Glu Gly
        755                 760                 765

Arg Leu Ile Phe Asp Asn Leu Lys Lys Ser Ile Ala Tyr Thr Leu Thr
    770                 775                 780

Ser Asn Ile Pro Glu Ile Thr Pro Phe Leu Leu Phe Ile Met Ala Asn
785                 790                 795                 800

Ile Pro Leu Pro Leu Gly Thr Ile Thr Ile Leu Cys Ile Asp Leu Gly
                805                 810                 815

Thr Asp Met Val Pro Ala Ile Ser Leu Ala Tyr Glu Ala Ala Glu Ser
            820                 825                 830

Asp Ile Met Lys Arg Gln Pro Arg Asn Pro Arg Thr Asp Lys Leu Val
        835                 840                 845

Asn Glu Arg Leu Ile Ser Met Ala Tyr Gly Gln Ile Gly Met Ile Gln
    850                 855                 860

Ala Leu Gly Gly Phe Phe Ser Tyr Phe Val Ile Leu Ala Glu Asn Gly
865                 870                 875                 880

Phe Leu Pro Gly Asn Leu Val Gly Ile Arg Leu Asn Trp Asp Asp Arg
                885                 890                 895

Thr Val Asn Asp Leu Glu Asp Ser Tyr Gly Gln Gln Trp Thr Tyr Glu
            900                 905                 910

Gln Arg Lys Val Val Glu Phe Thr Cys His Thr Ala Phe Phe Val Ser
        915                 920                 925
```

```
Ile Val Val Val Gln Trp Ala Asp Leu Ile Ile Cys Lys Thr Arg Arg
    930                 935                 940

Asn Ser Val Phe Gln Gln Gly Met Lys Asn Lys Ile Leu Ile Phe Gly
945                 950                 955                 960

Leu Phe Glu Glu Thr Ala Leu Ala Ala Phe Leu Ser Tyr Cys Pro Gly
                965                 970                 975

Met Asp Val Ala Leu Arg Met Tyr Pro Leu Lys Pro Ser Trp Trp Phe
            980                 985                 990

Cys Ala Phe Pro Tyr Ser Phe Leu  Ile Phe Val Tyr Asp  Glu Ile Arg
        995                 1000                1005

Lys Leu  Ile Leu Arg Arg Asn  Pro Gly Gly Trp Val  Glu Lys Glu
    1010                1015                1020

Thr Tyr  Tyr
    1025
```

<210> 208
<211> 1029
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 208

```
Met Gly Leu Trp Gly Lys Lys Gly Thr Val Ala Pro His Asp Gln Ser
1               5                   10                  15

Pro Arg Arg Arg Pro Lys Lys Gly Leu Ile Lys Lys Lys Met Val Lys
            20                  25                  30

Arg Glu Lys Gln Lys Arg Asn Met Glu Glu Leu Lys Lys Glu Val Val
        35                  40                  45

Met Asp Asp His Lys Leu Thr Leu Glu Glu Leu Ser Thr Lys Tyr Ser
    50                  55                  60
```

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

Thr Arg Gly Gly Pro Asn Thr Val Thr Pro Pro Pro Thr Thr Pro Glu
                85                  90                  95

Trp Val Lys Phe Cys Lys Gln Leu Phe Gly Gly Phe Ser Leu Leu Leu
            100                 105                 110

Trp Thr Gly Ala Ile Leu Cys Phe Val Ala Tyr Ser Ile Gln Ile Tyr
        115                 120                 125

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

Ser Val Val Val Ile Val Thr Gly Cys Phe Ser Tyr Tyr Gln Glu Ala
145                 150                 155                 160

Lys Ser Ser Lys Ile Met Glu Ser Phe Lys Asn Met Val Pro Gln Gln
                165                 170                 175

Ala Leu Val Ile Arg Gly Gly Glu Lys Met Gln Ile Asn Val Gln Glu
            180                 185                 190

Val Val Leu Gly Asp Leu Val Glu Ile Lys Gly Gly Asp Arg Val Pro
        195                 200                 205

Ala Asp Leu Arg Leu Ile Ser Ala Gln Gly Cys Lys Val Asp Asn Ser
    210                 215                 220

Ser Leu Thr Gly Glu Ser Glu Pro Gln Ser Arg Ser Pro Asp Phe Thr
225                 230                 235                 240

His Glu Asn Pro Leu Glu Thr Arg Asn Ile Cys Phe Phe Ser Thr Asn
                245                 250                 255

Cys Val Glu Gly Thr Ala Arg Gly Ile Val Ile Ala Thr Gly Asp Ser
            260                 265                 270

Thr Val Met Gly Arg Ile Ala Ser Leu Thr Ser Gly Leu Ala Val Gly
```

```
        275                 280                 285

Gln Thr Pro Ile Ala Ala Glu Ile Glu His Phe Ile His Leu Ile Thr
    290                 295                 300

Val Val Ala Val Phe Leu Gly Val Thr Phe Phe Ala Leu Ser Leu Leu
305                 310                 315                 320

Leu Gly Tyr Gly Trp Leu Glu Ala Ile Ile Phe Leu Ile Gly Ile Ile
                325                 330                 335

Val Ala Asn Val Pro Glu Gly Leu Leu Ala Thr Val Thr Val Cys Leu
            340                 345                 350

Thr Leu Thr Ala Lys Arg Met Ala Arg Lys Asn Cys Leu Val Lys Asn
        355                 360                 365

Leu Glu Ala Val Glu Thr Leu Gly Ser Thr Ser Thr Ile Cys Ser Asp
    370                 375                 380

Lys Thr Gly Thr Leu Thr Gln Asn Arg Met Thr Val Ala His Met Trp
385                 390                 395                 400

Phe Asp Met Thr Val Tyr Glu Ala Asp Thr Thr Glu Glu Gln Thr Gly
                405                 410                 415

Lys Thr Phe Thr Lys Ser Ser Asp Thr Trp Phe Met Leu Ala Arg Ile
            420                 425                 430

Ala Gly Leu Cys Asn Arg Ala Asp Phe Lys Ala Asn Gln Glu Ile Leu
        435                 440                 445

Pro Ile Ala Lys Arg Ala Thr Thr Gly Asp Ala Ser Glu Ser Ala Leu
    450                 455                 460

Leu Lys Phe Ile Glu Gln Ser Tyr Ser Ser Val Ala Glu Met Arg Glu
465                 470                 475                 480

Lys Asn Pro Lys Val Ala Glu Ile Pro Phe Asn Ser Thr Asn Lys Tyr
                485                 490                 495
```

```
Gln Met Ser Ile His Leu Arg Glu Asp Ser Ser Gln Thr His Val Leu
            500                 505                 510

Met Met Lys Gly Ala Pro Glu Arg Ile Leu Glu Phe Cys Ser Thr Phe
        515                 520                 525

Leu Leu Asn Gly Gln Glu Tyr Ser Met Asn Asp Glu Met Lys Glu Ala
    530                 535                 540

Phe Gln Asn Ala Tyr Leu Glu Leu Gly Gly Leu Gly Glu Arg Val Leu
545                 550                 555                 560

Gly Phe Cys Phe Leu Asn Leu Pro Ser Ser Phe Ser Lys Gly Phe Pro
                565                 570                 575

Phe Asn Thr Asp Glu Ile Asn Phe Pro Met Asp Asn Leu Cys Phe Val
            580                 585                 590

Gly Leu Ile Ser Met Ile Asp Pro Pro Arg Ala Ala Val Pro Asp Ala
        595                 600                 605

Val Ser Lys Cys Arg Ser Ala Gly Ile Lys Val Ile Met Val Thr Gly
    610                 615                 620

Asp His Pro Ile Thr Ala Lys Ala Ile Ala Lys Gly Val Gly Ile Ile
625                 630                 635                 640

Ser Glu Gly Thr Glu Thr Ala Glu Glu Val Ala Ala Arg Leu Lys Ile
                645                 650                 655

Pro Ile Ser Lys Val Asp Ala Ser Ala Ala Lys Ala Ile Val Val His
            660                 665                 670

Gly Ala Glu Leu Lys Asp Ile Gln Ser Lys Gln Leu Asp Gln Ile Leu
        675                 680                 685

Gln Asn His Pro Glu Ile Val Phe Ala Arg Thr Ser Pro Gln Gln Lys
    690                 695                 700

Leu Ile Ile Val Glu Gly Cys Gln Arg Leu Gly Ala Val Val Ala Val
```

```
705                 710                 715                 720

Thr Gly Asp Gly Val Asn Asp Ser Pro Ala Leu Lys Lys Ala Asp Ile
                725                 730                 735

Gly Ile Ala Met Gly Ile Ser Gly Ser Asp Val Ser Lys Gln Ala Ala
            740                 745                 750

Asp Met Ile Leu Leu Asp Asp Asn Phe Ala Ser Ile Val Thr Gly Val
        755                 760                 765

Glu Glu Gly Arg Leu Ile Phe Asp Asn Leu Lys Lys Ser Ile Met Tyr
    770                 775                 780

Thr Leu Thr Ser Asn Ile Pro Glu Ile Thr Pro Phe Leu Met Phe Ile
785                 790                 795                 800

Ile Leu Gly Ile Pro Leu Pro Leu Gly Thr Ile Thr Ile Leu Cys Ile
                805                 810                 815

Asp Leu Gly Thr Asp Met Val Pro Ala Ile Ser Leu Ala Tyr Glu Ser
            820                 825                 830

Ala Glu Ser Asp Ile Met Lys Arg Leu Pro Arg Asn Pro Lys Thr Asp
        835                 840                 845

Asn Leu Val Asn His Arg Leu Ile Gly Met Ala Tyr Gly Gln Ile Gly
    850                 855                 860

Met Ile Gln Ala Leu Ala Gly Phe Phe Thr Tyr Phe Val Ile Leu Ala
865                 870                 875                 880

Glu Asn Gly Phe Arg Pro Val Asp Leu Leu Gly Ile Arg Leu His Trp
                885                 890                 895

Glu Asp Lys Tyr Leu Asn Asp Leu Glu Asp Ser Tyr Gly Gln Gln Trp
            900                 905                 910

Thr Tyr Glu Gln Arg Lys Val Val Glu Phe Thr Cys Gln Thr Ala Phe
        915                 920                 925
```

```
Phe Val Thr Ile Val Val Val Gln Trp Ala Asp Leu Ile Ile Ser Lys
    930                 935                 940


Thr Arg Arg Asn Ser Leu Phe Gln Gln Gly Met Arg Asn Lys Val Leu
945                 950                 955                 960


Ile Phe Gly Ile Leu Glu Glu Thr Leu Leu Ala Ala Phe Leu Ser Tyr
                965                 970                 975


Thr Pro Gly Met Asp Val Ala Leu Arg Met Tyr Pro Leu Lys Ile Thr
            980                 985                 990


Trp Trp Leu Cys Ala Ile Pro Tyr  Ser Ile Leu Ile Phe  Val Tyr Asp
        995                 1000                1005


Glu Ile  Arg Lys Leu Leu Ile  Arg Gln His Pro Asp  Gly Trp Val
    1010                1015                1020


Glu Arg  Glu Thr Tyr Tyr
    1025
```

<210> 209
<211> 279
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 209

```
Met Thr Lys Asn Glu Lys Lys Ser Leu Asn Gln Ser Leu Ala Glu Trp
1               5                   10                  15


Lys Leu Phe Ile Tyr Asn Pro Thr Thr Gly Glu Phe Leu Gly Arg Thr
            20                  25                  30


Ala Lys Ser Trp Gly Leu Ile Leu Leu Phe Tyr Leu Val Phe Tyr Gly
        35                  40                  45


Phe Leu Ala Ala Leu Phe Ser Phe Thr Met Trp Val Met Leu Gln Thr
    50                  55                  60
```

```
Leu Asn Asp Glu Val Pro Lys Tyr Arg Asp Gln Ile Pro Ser Pro Gly
65                  70                  75                  80

Leu Met Val Phe Pro Lys Pro Val Thr Ala Leu Glu Tyr Thr Phe Ser
                85                  90                  95

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

Phe Leu Lys Pro Tyr Thr Leu Glu Glu Gln Lys Asn Leu Thr Val Cys
        115                 120                 125

Pro Asp Gly Ala Leu Phe Glu Gln Lys Gly Pro Val Tyr Val Ala Cys
    130                 135                 140

Gln Phe Pro Ile Ser Leu Leu Gln Ala Cys Ser Gly Met Asn Asp Pro
145                 150                 155                 160

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

Arg Ile Ile Gly Leu Lys Pro Glu Gly Val Pro Arg Ile Asp Cys Val
            180                 185                 190

Ser Lys Asn Glu Asp Ile Pro Asn Val Ala Val Tyr Pro His Asn Gly
        195                 200                 205

Met Ile Asp Leu Lys Tyr Phe Pro Tyr Tyr Gly Lys Lys Leu His Val
    210                 215                 220

Gly Tyr Leu Gln Pro Leu Val Ala Val Gln Val Ser Phe Ala Pro Asn
225                 230                 235                 240

Asn Thr Gly Lys Glu Val Thr Val Glu Cys Lys Ile Asp Gly Ser Ala
                245                 250                 255

Asn Leu Lys Ser Gln Asp Asp Arg Asp Lys Phe Leu Gly Arg Val Met
            260                 265                 270

Phe Lys Ile Thr Ala Arg Ala
```

275

<210> 210
<211> 1258
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 210

Met Gly Asp Met Ala Asn Asn Ser Val Ala Tyr Ser Gly Val Lys Asn
1 5 10 15

Ser Leu Lys Glu Ala Asn His Asp Gly Asp Phe Gly Ile Thr Leu Ala
20 25 30

Glu Leu Arg Ala Leu Met Glu Leu Arg Ser Thr Asp Ala Leu Arg Lys
35 40 45

Ile Gln Glu Ser Tyr Gly Asp Val Tyr Gly Ile Cys Thr Lys Leu Lys
50 55 60

Thr Ser Pro Asn Glu Gly Leu Ser Gly Asn Pro Ala Asp Leu Glu Arg
65 70 75 80

Arg Glu Ala Val Phe Gly Lys Asn Phe Ile Pro Pro Lys Lys Pro Lys
85 90 95

Thr Phe Leu Gln Leu Val Trp Glu Ala Leu Gln Asp Val Thr Leu Ile
100 105 110

Ile Leu Glu Ile Ala Ala Ile Val Ser Leu Gly Leu Ser Phe Tyr Gln
115 120 125

Pro Pro Glu Gly Asp Asn Ala Leu Cys Gly Glu Val Ser Val Gly Glu
130 135 140

Glu Glu Gly Glu Gly Glu Thr Gly Trp Ile Glu Gly Ala Ala Ile Leu
145 150 155 160

Leu Ser Val Val Cys Val Val Leu Val Thr Ala Phe Asn Asp Trp Ser

```
                165                 170                 175

Lys Glu Lys Gln Phe Arg Gly Leu Gln Ser Arg Ile Glu Gln Glu Gln
            180                 185                 190

Lys Phe Thr Val Ile Arg Gly Gly Gln Val Ile Gln Ile Pro Val Ala
        195                 200                 205

Asp Ile Thr Val Gly Asp Ile Ala Gln Val Lys Tyr Gly Asp Leu Leu
    210                 215                 220

Pro Ala Asp Gly Ile Leu Ile Gln Gly Asn Asp Leu Lys Ile Asp Glu
225                 230                 235                 240

Ser Ser Leu Thr Gly Glu Ser Asp His Val Lys Lys Ser Leu Asp Lys
                245                 250                 255

Asp Pro Leu Leu Leu Ser Gly Thr His Val Met Glu Gly Ser Gly Arg
            260                 265                 270

Met Val Val Thr Ala Val Gly Val Asn Ser Gln Thr Gly Ile Ile Phe
        275                 280                 285

Thr Leu Leu Gly Ala Gly Gly Glu Glu Glu Glu Lys Lys Asp Glu Lys
    290                 295                 300

Lys Lys Glu Lys Lys Asn Lys Lys Gln Asp Gly Ala Ile Glu Asn Arg
305                 310                 315                 320

Asn Lys Ala Lys Ala Gln Asp Gly Ala Ala Met Glu Met Gln Pro Leu
                325                 330                 335

Lys Ser Glu Glu Gly Gly Asp Gly Asp Glu Lys Asp Lys Lys Lys Ala
            340                 345                 350

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

Leu Ala Val Gln Ile Gly Lys Ala Gly Leu Leu Met Ser Ala Ile Thr
    370                 375                 380
```

```
Val Ile Ile Leu Val Leu Tyr Phe Val Ile Asp Thr Phe Trp Val Gln
385                 390                 395                 400

Lys Arg Pro Trp Leu Ala Glu Cys Thr Pro Ile Tyr Ile Gln Tyr Phe
                405                 410                 415

Val Lys Phe Phe Ile Ile Gly Val Thr Val Leu Val Val Ala Val Pro
            420                 425                 430

Glu Gly Leu Pro Leu Ala Val Thr Ile Ser Leu Ala Tyr Ser Val Lys
        435                 440                 445

Lys Met Met Lys Asp Asn Asn Leu Val Arg His Leu Asp Ala Cys Glu
    450                 455                 460

Thr Met Gly Asn Ala Thr Ala Ile Cys Ser Asp Lys Thr Gly Thr Leu
465                 470                 475                 480

Thr Met Asn Arg Met Thr Val Val Gln Ala Tyr Ile Asn Glu Lys His
                485                 490                 495

Tyr Lys Lys Val Pro Glu Pro Glu Ala Ile Pro Pro Asn Ile Leu Ser
            500                 505                 510

Tyr Leu Val Thr Gly Ile Ser Val Asn Cys Ala Tyr Thr Ser Lys Ile
        515                 520                 525

Leu Pro Pro Glu Lys Glu Gly Gly Leu Pro Arg His Val Gly Asn Lys
    530                 535                 540

Thr Glu Cys Ala Leu Leu Gly Leu Leu Leu Asp Leu Lys Arg Asp Tyr
545                 550                 555                 560

Gln Asp Val Arg Asn Glu Ile Pro Glu Glu Ala Leu Tyr Lys Val Tyr
                565                 570                 575

Thr Phe Asn Ser Val Arg Lys Ser Met Ser Thr Val Leu Lys Asn Ser
            580                 585                 590

Asp Gly Ser Tyr Arg Ile Phe Ser Lys Gly Ala Ser Glu Ile Ile Leu
```

```
        595                 600                 605

Lys Lys Cys Phe Lys Ile Leu Ser Ala Asn Gly Glu Ala Lys Val Phe
    610                 615                 620

Arg Pro Arg Asp Arg Asp Asp Ile Val Lys Thr Val Ile Glu Pro Met
625                 630                 635                 640

Ala Ser Glu Gly Leu Arg Thr Ile Cys Leu Ala Phe Arg Asp Phe Pro
                645                 650                 655

Ala Gly Glu Pro Glu Pro Glu Trp Asp Asn Glu Asn Asp Ile Val Thr
            660                 665                 670

Gly Leu Thr Cys Ile Ala Val Val Gly Ile Glu Asp Pro Val Arg Pro
        675                 680                 685

Glu Val Pro Asp Ala Ile Lys Lys Cys Gln Arg Ala Gly Ile Thr Val
    690                 695                 700

Arg Met Val Thr Gly Asp Asn Ile Asn Thr Ala Arg Ala Ile Ala Thr
705                 710                 715                 720

Lys Cys Gly Ile Leu His Pro Gly Glu Asp Phe Leu Cys Leu Glu Gly
                725                 730                 735

Lys Asp Phe Asn Arg Arg Ile Arg Asn Glu Lys Gly Glu Ile Glu Gln
            740                 745                 750

Glu Arg Ile Asp Lys Ile Trp Pro Lys Leu Arg Val Leu Ala Arg Ser
        755                 760                 765

Ser Pro Thr Asp Lys His Thr Leu Val Lys Gly Ile Ile Asp Ser Thr
    770                 775                 780

Val Ser Asp Gln Arg Gln Val Val Ala Val Thr Gly Asp Gly Thr Asn
785                 790                 795                 800

Asp Gly Pro Ala Leu Lys Lys Ala Asp Val Gly Phe Ala Met Gly Ile
                805                 810                 815
```

```
Ala Gly Thr Asp Val Ala Lys Glu Ala Ser Asp Ile Ile Leu Thr Asp
            820                 825                 830

Asp Asn Phe Thr Ser Ile Val Lys Ala Val Met Trp Gly Arg Asn Val
        835                 840                 845

Tyr Asp Ser Ile Ser Lys Phe Leu Gln Phe Gln Leu Thr Val Asn Val
    850                 855                 860

Val Ala Val Ile Val Ala Phe Thr Gly Ala Cys Ile Thr Gln Asp Ser
865                 870                 875                 880

Pro Leu Lys Ala Val Gln Met Leu Trp Val Asn Leu Ile Met Asp Thr
                885                 890                 895

Leu Ala Ser Leu Ala Leu Ala Thr Glu Pro Pro Thr Glu Ser Leu Leu
            900                 905                 910

Leu Arg Lys Pro Tyr Gly Arg Asn Lys Pro Leu Ile Ser Arg Thr Met
        915                 920                 925

Met Lys Asn Ile Leu Gly His Ala Phe Tyr Gln Leu Val Val Val Phe
    930                 935                 940

Thr Leu Leu Phe Ala Gly Glu Lys Phe Phe Asp Ile Asp Ser Gly Arg
945                 950                 955                 960

Asn Ala Pro Leu His Ala Pro Pro Ser Glu His Tyr Thr Ile Val Phe
                965                 970                 975

Asn Thr Phe Val Leu Met Gln Leu Phe Asn Glu Ile Asn Ala Arg Lys
            980                 985                 990

Ile His Gly Glu Arg Asn Val Phe  Glu Gly Ile Phe Asn  Asn Ala Ile
        995                 1000                1005

Phe Cys  Thr Ile Val Leu Gly  Thr Phe Val Val Gln  Ile Ile Ile
    1010                1015                1020

Val Gln  Phe Gly Gly Lys Pro  Phe Ser Cys Ser Glu  Leu Ser Ile
```

```
    1025                1030                1035

Glu Gln  Trp Leu Trp Ser Ile  Phe Leu Gly Met Gly  Thr Leu Leu
    1040                1045                1050

Trp Gly  Gln Leu Ile Ser Thr  Ile Pro Thr Ser Arg  Leu Lys Phe
    1055                1060                1065

Leu Lys  Glu Ala Gly His Gly  Thr Gln Lys Glu Glu  Ile Pro Glu
    1070                1075                1080

Glu Glu  Leu Ala Glu Asp Val  Glu Glu Ile Asp His  Ala Glu Arg
    1085                1090                1095

Glu Leu  Arg Arg Gly Gln Ile  Leu Trp Phe Arg Gly  Leu Asn Arg
    1100                1105                1110

Ile Gln  Thr Gln Met Asp Val  Val Asn Ala Phe Gln  Ser Gly Ser
    1115                1120                1125

Ser Ile  Gln Gly Ala Leu Arg  Arg Gln Pro Ser Ile  Ala Ser Gln
    1130                1135                1140

His His  Asp Val Thr Asn Ile  Ser Thr Pro Thr His  Ile Arg Val
    1145                1150                1155

Val Asn  Ala Phe Arg Ser Ser  Leu Tyr Glu Gly Leu  Glu Lys Pro
    1160                1165                1170

Glu Ser  Arg Ser Ser Ile His  Asn Phe Met Thr His  Pro Glu Phe
    1175                1180                1185

Arg Ile  Glu Asp Ser Glu Pro  His Ile Pro Leu Ile  Asp Asp Thr
    1190                1195                1200

Asp Ala  Glu Asp Asp Ala Pro  Thr Lys Arg Asn Ser  Ser Pro Pro
    1205                1210                1215

Pro Ser  Pro Asn Lys Asn Asn  Asn Ala Val Asp Ser  Gly Ile His
    1220                1225                1230
```

Leu Thr Ile Glu Met Asn Lys Ser Ala Thr Ser Ser Ser Pro Gly
    1235   1240   1245

Ser Pro Leu His Ser Leu Glu Thr Ser Leu
    1250   1255

<210> 211
<211> 1272
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 211

Met Gly Asp Met Thr Asn Ser Asp Phe Tyr Ser Lys Asn Gln Arg Asn
1   5   10   15

Glu Ser Ser His Gly Gly Glu Phe Gly Cys Thr Met Glu Glu Leu Arg
            20   25   30

Ser Leu Met Glu Leu Arg Gly Thr Glu Ala Val Val Lys Ile Lys Glu
        35   40   45

Thr Tyr Gly Asp Thr Glu Ala Ile Cys Arg Arg Leu Lys Thr Ser Pro
    50   55   60

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

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

Gln Leu Val Trp Glu Ala Leu Gln Asp Val Thr Leu Ile Ile Leu Glu
            100   105   110

Ile Ala Ala Ile Ile Ser Leu Gly Leu Ser Phe Tyr His Pro Pro Gly
        115   120   125

Glu Gly Asn Glu Gly Cys Ala Thr Ala Gln Gly Gly Ala Glu Asp Glu
    130   135   140

```
Gly Glu Ala Glu Ala Gly Trp Ile Glu Gly Ala Ala Ile Leu Leu Ser
145                 150                 155                 160

Val Ile Cys Val Val Leu Val Thr Ala Phe Asn Asp Trp Ser Lys Glu
                165                 170                 175

Lys Gln Phe Arg Gly Leu Gln Ser Arg Ile Glu Gln Glu Gln Lys Phe
            180                 185                 190

Thr Val Val Arg Ala Gly Gln Val Val Gln Ile Pro Val Ala Glu Ile
        195                 200                 205

Val Val Gly Asp Ile Ala Gln Val Lys Tyr Gly Asp Leu Leu Pro Ala
    210                 215                 220

Asp Gly Leu Phe Ile Gln Gly Asn Asp Leu Lys Ile Asp Glu Ser Ser
225                 230                 235                 240

Leu Thr Gly Glu Ser Asp Gln Val Arg Lys Ser Val Asp Lys Asp Pro
                245                 250                 255

Met Leu Leu Ser Gly Thr His Val Met Glu Gly Ser Gly Arg Met Leu
            260                 265                 270

Val Thr Ala Val Gly Val Asn Ser Gln Thr Gly Ile Ile Phe Thr Leu
        275                 280                 285

Leu Gly Ala Gly Gly Glu Glu Glu Glu Lys Lys Asp Lys Lys Gly Val
    290                 295                 300

Lys Lys Gly Asp Gly Leu Gln Leu Pro Ala Ala Asp Gly Ala Ala Ala
305                 310                 315                 320

Ser Asn Ala Ala Asp Ser Ala Asn Ala Ser Leu Val Asn Gly Lys Met
                325                 330                 335

Gln Asp Gly Asn Val Asp Ala Ser Gln Ser Lys Ala Lys Gln Gln Asp
            340                 345                 350

Gly Ala Ala Ala Met Glu Met Gln Pro Leu Lys Ser Ala Glu Gly Gly
```

```
        355                 360                 365

Asp Ala Asp Asp Arg Lys Lys Ala Ser Met His Lys Lys Glu Lys Ser
    370                 375                 380

Val Leu Gln Gly Lys Leu Thr Lys Leu Ala Val Gln Ile Gly Lys Ala
385                 390                 395                 400

Gly Leu Val Met Ser Ala Ile Thr Val Ile Ile Leu Val Leu Tyr Phe
                405                 410                 415

Thr Val Asp Thr Phe Val Val Asn Lys Lys Pro Trp Leu Pro Glu Cys
            420                 425                 430

Thr Pro Val Tyr Val Gln Tyr Phe Val Lys Phe Phe Ile Ile Gly Val
        435                 440                 445

Thr Val Leu Val Val Ala Val Pro Glu Gly Leu Pro Leu Ala Val Thr
    450                 455                 460

Ile Ser Leu Ala Tyr Ser Val Lys Lys Met Met Lys Asp Asn Asn Leu
465                 470                 475                 480

Val Arg His Leu Asp Ala Cys Glu Thr Met Gly Asn Ala Thr Ala Ile
                485                 490                 495

Cys Ser Asp Lys Thr Gly Thr Leu Thr Thr Asn Arg Met Thr Val Val
            500                 505                 510

Gln Ala Tyr Val Gly Asp Val His Tyr Lys Glu Ile Pro Asp Pro Ser
        515                 520                 525

Ser Ile Asn Thr Lys Thr Met Glu Leu Leu Ile Asn Ala Ile Ala Ile
    530                 535                 540

Asn Ser Ala Tyr Thr Thr Lys Ile Leu Pro Pro Glu Lys Glu Gly Ala
545                 550                 555                 560

Leu Pro Arg Gln Val Gly Asn Lys Thr Glu Cys Gly Leu Leu Gly Phe
                565                 570                 575
```

```
Val Leu Asp Leu Lys Gln Asp Tyr Glu Pro Val Arg Ser Gln Met Pro
            580                 585                 590

Glu Glu Lys Leu Tyr Lys Val Tyr Thr Phe Asn Ser Val Arg Lys Ser
        595                 600                 605

Met Ser Thr Val Ile Lys Leu Pro Asp Glu Ser Phe Arg Met Tyr Ser
    610                 615                 620

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

Gly Ala Gly Glu Pro Arg Val Phe Arg Pro Arg Asp Arg Asp Glu Met
                645                 650                 655

Val Lys Lys Val Ile Glu Pro Met Ala Cys Asp Gly Leu Arg Thr Ile
            660                 665                 670

Cys Val Ala Tyr Arg Asp Phe Pro Ser Ser Pro Glu Pro Asp Trp Asp
        675                 680                 685

Asn Glu Asn Asp Ile Leu Asn Glu Leu Thr Cys Ile Cys Val Val Gly
    690                 695                 700

Ile Glu Asp Pro Val Arg Pro Glu Val Pro Glu Ala Ile Arg Lys Cys
705                 710                 715                 720

Gln Arg Ala Gly Ile Thr Val Arg Met Val Thr Gly Asp Asn Ile Asn
                725                 730                 735

Thr Ala Arg Ala Ile Ala Ile Lys Cys Gly Ile Ile His Pro Gly Glu
            740                 745                 750

Asp Phe Leu Cys Leu Glu Gly Lys Glu Phe Asn Arg Arg Ile Arg Asn
        755                 760                 765

Glu Lys Gly Glu Ile Glu Gln Glu Arg Ile Asp Lys Ile Trp Pro Lys
    770                 775                 780

Leu Arg Val Leu Ala Arg Ser Ser Pro Thr Asp Lys His Thr Leu Val
```

785 790 795 800

Lys Gly Ile Ile Asp Ser Thr His Thr Glu Gln Arg Gln Val Val Ala
805 810 815

Val Thr Gly Asp Gly Thr Asn Asp Gly Pro Ala Leu Lys Lys Ala Asp
820 825 830

Val Gly Phe Ala Met Gly Ile Ala Gly Thr Asp Val Ala Lys Glu Ala
835 840 845

Ser Asp Ile Ile Leu Thr Asp Asp Asn Phe Ser Ser Ile Val Lys Ala
850 855 860

Val Met Trp Gly Arg Asn Val Tyr Asp Ser Ile Ser Lys Phe Leu Gln
865 870 875 880

Phe Gln Leu Thr Val Asn Val Val Ala Val Ile Val Ala Phe Thr Gly
885 890 895

Ala Cys Ile Thr Gln Asp Ser Pro Leu Lys Ala Val Gln Met Leu Trp
900 905 910

Val Asn Leu Ile Met Asp Thr Phe Ala Ser Leu Ala Leu Ala Thr Glu
915 920 925

Pro Pro Thr Glu Thr Leu Leu Leu Arg Lys Pro Tyr Gly Arg Asn Lys
930 935 940

Pro Leu Ile Ser Arg Thr Met Met Lys Asn Ile Leu Gly His Ala Val
945 950 955 960

Tyr Gln Leu Ala Leu Ile Phe Thr Leu Leu Phe Val Gly Glu Lys Met
965 970 975

Phe Gln Ile Asp Ser Gly Arg Asn Ala Pro Leu His Ser Pro Pro Ser
980 985 990

Glu His Tyr Thr Ile Ile Phe Asn Thr Phe Val Met Met Gln Leu Phe
995 1000 1005

```
Asn Glu  Ile Asn Ala Arg Lys  Ile His Gly Glu Arg  Asn Val Phe
    1010                1015                1020

Asp Gly  Ile Phe Arg Asn Pro  Ile Phe Cys Thr Ile  Val Leu Gly
    1025                1030                1035

Thr Phe  Ala Ile Gln Ile Val  Ile Val Gln Phe Gly  Gly Lys Pro
    1040                1045                1050

Phe Ser  Cys Ser Pro Leu Gln  Leu Asp Gln Trp Met  Trp Cys Ile
    1055                1060                1065

Phe Ile  Gly Leu Gly Glu Leu  Val Trp Gly Gln Val  Ile Ala Thr
    1070                1075                1080

Ile Pro  Thr Ser Arg Leu Lys  Phe Leu Lys Glu Ala  Gly Arg Leu
    1085                1090                1095

Thr Gln  Lys Glu Glu Ile Pro  Glu Glu Glu Leu Asn  Glu Asp Val
    1100                1105                1110

Glu Glu  Ile Asp His Ala Glu  Arg Glu Leu Arg Arg  Gly Gln Ile
    1115                1120                1125

Leu Trp  Phe Arg Gly Leu Asn  Arg Ile Gln Thr Gln  Ile Glu Val
    1130                1135                1140

Val Asn  Thr Phe Lys Ser Gly  Ala Ser Phe Gln Gly  Ala Leu Arg
    1145                1150                1155

Arg Gln  Ser Ser Val Thr Ser  Gln Ser Gln Asp Ile  Arg Val Val
    1160                1165                1170

Lys Ala  Phe Arg Ser Ser Leu  Tyr Glu Gly Leu Glu  Lys Pro Glu
    1175                1180                1185

Ser Arg  Thr Ser Ile His Asn  Phe Met Ala His Pro  Glu Phe Arg
    1190                1195                1200

Ile Glu  Asp Ser Gln Pro His  Ile Pro Leu Ile Asp  Asp Thr Asp
```

1205 1210 1215

Leu Glu Glu Asp Ala Ala Leu Lys Gln Asn Ser Ser Pro Pro Ser
1220 1225 1230

Ser Leu Asn Lys Asn Asn Ser Ala Ile Asp Ser Gly Ile Asn Leu
1235 1240 1245

Thr Thr Asp Thr Ser Lys Ser Ala Thr Ser Ser Ser Pro Gly Ser
1250 1255 1260

Pro Ile His Ser Leu Glu Thr Ser Leu
1265 1270

<210> 212
<211> 874
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 212

Met Gly Asp Met Ala Asn Ser Ser Ile Glu Phe His Pro Lys Pro Gln
1 5 10 15

Gln Gln Arg Asp Val Pro Gln Ala Gly Gly Phe Gly Cys Thr Leu Ala
20 25 30

Glu Leu Arg Thr Leu Met Glu Leu Arg Gly Ala Glu Ala Leu Gln Lys
35 40 45

Ile Glu Glu Ala Tyr Gly Asp Val Ser Gly Leu Cys Arg Arg Leu Lys
50 55 60

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

Arg Arg Gln Ile Tyr Gly Gln Asn Phe Ile Pro Pro Lys Gln Pro Lys
85 90 95

Thr Phe Leu Gln Leu Val Trp Glu Ala Leu Gln Asp Val Thr Leu Ile

```
            100                 105                 110

Ile Leu Glu Val Ala Ala Ile Val Ser Leu Gly Leu Ser Phe Tyr Ala
        115                 120                 125

Pro Pro Gly Glu Glu Ser Glu Ala Cys Gly Asn Val Ser Gly Gly Ala
    130                 135                 140

Glu Asp Glu Gly Glu Ala Glu Ala Gly Trp Ile Glu Gly Ala Ala Ile
145                 150                 155                 160

Leu Leu Ser Val Ile Cys Val Val Leu Val Thr Ala Phe Asn Asp Trp
                165                 170                 175

Ser Lys Glu Lys Gln Phe Arg Gly Leu Gln Ser Arg Ile Glu Gln Glu
            180                 185                 190

Gln Lys Phe Thr Val Ile Arg Asn Gly Gln Leu Leu Gln Val Pro Val
        195                 200                 205

Ala Ala Leu Val Val Gly Asp Ile Ala Gln Val Lys Tyr Gly Asp Leu
    210                 215                 220

Leu Pro Ala Asp Gly Val Leu Ile Gln Ala Asn Asp Leu Lys Ile Asp
225                 230                 235                 240

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

Lys Asp Pro Met Leu Leu Ser Gly Thr His Val Met Glu Gly Ser Gly
            260                 265                 270

Arg Met Val Val Thr Ala Val Gly Val Asn Ser Gln Thr Gly Ile Ile
        275                 280                 285

Phe Thr Leu Leu Gly Ala Gly Gly Glu Glu Glu Glu Lys Lys Asp Lys
    290                 295                 300

Lys Gly Lys Gln Gln Asp Gly Ala Met Glu Ser Ser Gln Thr Lys Ala
305                 310                 315                 320
```

```
Lys Lys Gln Asp Gly Ala Val Ala Met Glu Met Gln Pro Leu Lys Ser
                325                 330                 335

Ala Glu Gly Gly Glu Met Glu Glu Arg Glu Lys Lys Lys Ala Asn Ala
            340                 345                 350

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

Val Gln Ile Gly Lys Ala Gly Leu Val Met Ser Ala Ile Thr Val Ile
    370                 375                 380

Ile Leu Val Leu Tyr Phe Val Ile Glu Thr Phe Val Val Glu Gly Arg
385                 390                 395                 400

Thr Trp Leu Ala Glu Cys Thr Pro Val Tyr Val Gln Tyr Phe Val Lys
                405                 410                 415

Phe Phe Ile Ile Gly Val Thr Val Leu Val Val Ala Val Pro Glu Gly
            420                 425                 430

Leu Pro Leu Ala Val Thr Ile Ser Leu Ala Tyr Ser Val Lys Lys Met
        435                 440                 445

Met Lys Asp Asn Asn Leu Val Arg His Leu Asp Ala Cys Glu Thr Met
    450                 455                 460

Gly Asn Ala Thr Ala Ile Cys Ser Asp Lys Thr Gly Thr Leu Thr Thr
465                 470                 475                 480

Asn Arg Met Thr Val Val Gln Ser Tyr Leu Gly Asp Thr His Tyr Lys
                485                 490                 495

Glu Ile Pro Ala Pro Ser Ala Leu Thr Pro Lys Ile Leu Asp Leu Leu
            500                 505                 510

Val His Ala Ile Ser Ile Asn Ser Ala Tyr Thr Thr Lys Ile Leu Pro
        515                 520                 525

Pro Glu Lys Glu Gly Ala Leu Pro Arg Gln Val Gly Asn Lys Thr Glu
```

```
    530                 535                 540

Cys Ala Leu Leu Gly Phe Val Leu Asp Leu Lys Arg Asp Phe Gln Pro
545                 550                 555                 560

Val Arg Glu Gln Ile Pro Glu Asp Lys Leu Tyr Lys Val Tyr Thr Phe
                565                 570                 575

Asn Ser Val Arg Lys Ser Met Ser Thr Val Ile Arg Met Pro Asp Gly
            580                 585                 590

Gly Phe Arg Leu Phe Ser Lys Gly Ala Ser Glu Ile Leu Leu Lys Lys
        595                 600                 605

Cys Thr Asn Ile Leu Asn Ser Asn Gly Glu Leu Arg Gly Phe Arg Pro
    610                 615                 620

Arg Asp Arg Asp Asp Met Val Arg Lys Ile Ile Glu Pro Met Ala Cys
625                 630                 635                 640

Asp Gly Leu Arg Thr Ile Cys Ile Ala Tyr Arg Asp Phe Ser Ala Gly
                645                 650                 655

Gln Glu Pro Asp Trp Asp Asn Glu Asn Glu Val Val Gly Asp Leu Thr
            660                 665                 670

Cys Ile Ala Val Val Gly Ile Glu Asp Pro Val Arg Pro Glu Val Pro
        675                 680                 685

Glu Ala Ile Arg Lys Cys Gln Arg Ala Gly Ile Thr Val Arg Met Val
    690                 695                 700

Thr Gly Asp Asn Ile Asn Thr Ala Arg Ala Ile Ala Ala Lys Cys Gly
705                 710                 715                 720

Ile Ile Gln Pro Gly Glu Asp Phe Leu Cys Leu Glu Gly Lys Glu Phe
                725                 730                 735

Asn Arg Arg Ile Arg Asn Glu Lys Gly Glu Ile Glu Gln Glu Arg Leu
            740                 745                 750
```

Asp Lys Val Trp Pro Lys Leu Arg Val Leu Ala Arg Ser Ser Pro Thr
        755   760   765

Asp Lys His Thr Leu Val Lys Gly Ile Ile Asp Ser Thr Thr Gly Glu
    770   775   780

Gln Arg Gln Val Val Ala Val Thr Gly Asp Gly Thr Asn Asp Gly Pro
785   790   795   800

Ala Leu Lys Lys Ala Asp Val Gly Phe Ala Met Gly Ile Ala Gly Thr
                805   810   815

Asp Val Ala Lys Glu Ala Ser Asp Ile Ile Leu Thr Asp Asp Asn Phe
            820   825   830

Thr Ser Ile Val Lys Ala Val Met Trp Gly Arg Asn Val Tyr Asp Ser
        835   840   845

Ile Ser Lys Phe Leu Gln Phe Gln Leu Thr Val Asn Val Val Ala Val
    850   855   860

Ile Val Ala Phe Thr Gly Ala Cys Ile Thr
865   870

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

<220>
<223> Artificial Sequence

<400> 213

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

Ile Cys Leu Leu Gly Tyr Leu Leu Ser Ala Glu Cys
            20   25

<210> 214
<211> 18
<212> PRT

<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 214

Thr Val Phe Leu Asp His Glu Asn Ala Asn Lys Ile Leu Asn Arg Pro
1 5 10 15

Lys Arg

<210> 215
<211> 415
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 215

Tyr Asn Ser Gly Lys Leu Glu Glu Phe Val Gln Gly Asn Leu Glu Arg
1 5 10 15

Glu Cys Met Glu Glu Lys Cys Ser Phe Glu Glu Ala Arg Glu Val Phe
20 25 30

Glu Asn Thr Glu Arg Thr Thr Glu Phe Trp Lys Gln Tyr Val Asp Gly
35 40 45

Asp Gln Cys Glu Ser Asn Pro Cys Leu Asn Gly Gly Ser Cys Lys Asp
50 55 60

Asp Ile Asn Ser Tyr Glu Cys Trp Cys Pro Phe Gly Phe Glu Gly Lys
65 70 75 80

Asn Cys Glu Leu Asp Val Thr Cys Asn Ile Lys Asn Gly Arg Cys Glu
85 90 95

Gln Phe Cys Lys Asn Ser Ala Asp Asn Lys Val Val Cys Ser Cys Thr
100 105 110

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

```
        115                 120                 125

Pro Phe Pro Cys Gly Arg Val Ser Val Ser Gln Thr Ser Lys Leu Thr
    130                 135                 140

Arg Ala Glu Thr Val Phe Pro Asp Val Asp Tyr Val Asn Ser Thr Glu
145                 150                 155                 160

Ala Glu Thr Ile Leu Asp Asn Ile Thr Gln Ser Thr Gln Ser Phe Asn
                165                 170                 175

Asp Phe Thr Arg Val Val Gly Gly Glu Asp Ala Lys Pro Gly Gln Phe
            180                 185                 190

Pro Trp Gln Val Val Leu Asn Gly Lys Val Asp Ala Phe Cys Gly Gly
        195                 200                 205

Ser Ile Val Asn Glu Lys Trp Ile Val Thr Ala Ala His Cys Val Glu
    210                 215                 220

Thr Gly Val Lys Ile Thr Val Val Ala Gly Glu His Asn Ile Glu Glu
225                 230                 235                 240

Thr Glu His Thr Glu Gln Lys Arg Asn Val Ile Arg Ile Ile Pro His
                245                 250                 255

His Asn Tyr Asn Ala Ala Ile Asn Lys Tyr Asn His Asp Ile Ala Leu
            260                 265                 270

Leu Glu Leu Asp Glu Pro Leu Val Leu Asn Ser Tyr Val Thr Pro Ile
        275                 280                 285

Cys Ile Ala Asp Lys Glu Tyr Thr Asn Ile Phe Leu Lys Phe Gly Ser
    290                 295                 300

Gly Tyr Val Ser Gly Trp Gly Arg Val Phe His Lys Gly Arg Ser Ala
305                 310                 315                 320

Leu Val Leu Gln Tyr Leu Arg Val Pro Leu Val Asp Arg Ala Thr Cys
                325                 330                 335
```

```
Leu Arg Ser Thr Lys Phe Thr Ile Tyr Asn Asn Met Phe Cys Ala Gly
            340                 345                 350

Phe His Glu Gly Gly Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro
        355                 360                 365

His Val Thr Glu Val Glu Gly Thr Ser Phe Leu Thr Gly Ile Ile Ser
    370                 375                 380

Trp Gly Glu Glu Cys Ala Met Lys Gly Lys Tyr Gly Ile Tyr Thr Lys
385                 390                 395                 400

Val Ser Arg Tyr Val Asn Trp Ile Lys Glu Lys Thr Lys Leu Thr
                405                 410                 415
```

<210> 216
<211> 415
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 216

```
Tyr Asn Ser Gly Lys Leu Glu Glu Phe Val Gln Gly Asn Leu Glu Arg
1               5                   10                  15

Glu Cys Met Glu Glu Lys Cys Ser Phe Glu Glu Ala Arg Glu Val Phe
            20                  25                  30

Glu Asn Thr Glu Arg Thr Thr Glu Phe Trp Lys Gln Tyr Val Asp Gly
        35                  40                  45

Asp Gln Cys Glu Ser Asn Pro Cys Leu Asn Gly Gly Ser Cys Lys Asp
    50                  55                  60

Asp Ile Asn Ser Tyr Glu Cys Trp Cys Pro Phe Gly Phe Glu Gly Lys
65                  70                  75                  80

Asn Cys Glu Leu Asp Val Thr Cys Asn Ile Lys Asn Gly Arg Cys Glu
                85                  90                  95
```

```
Gln Phe Cys Lys Asn Ser Ala Asp Asn Lys Val Val Cys Ser Cys Thr
            100                 105                 110

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

Pro Phe Pro Cys Gly Arg Val Ser Val Ser Gln Thr Ser Lys Leu Thr
    130                 135                 140

Arg Ala Glu Thr Val Phe Pro Asp Val Asp Tyr Val Asn Ser Thr Glu
145                 150                 155                 160

Ala Glu Thr Ile Leu Asp Asn Ile Thr Gln Ser Thr Gln Ser Phe Asn
                165                 170                 175

Asp Phe Thr Arg Val Val Gly Gly Glu Asp Ala Lys Pro Gly Gln Phe
            180                 185                 190

Pro Trp Gln Val Val Leu Asn Gly Lys Val Asp Ala Phe Cys Gly Gly
        195                 200                 205

Ser Ile Val Asn Glu Lys Trp Ile Val Thr Ala Ala His Cys Val Glu
    210                 215                 220

Thr Gly Val Lys Ile Thr Val Val Ala Gly Glu His Asn Ile Glu Glu
225                 230                 235                 240

Thr Glu His Thr Glu Gln Lys Arg Asn Val Ile Arg Ile Ile Pro His
                245                 250                 255

His Asn Tyr Asn Ala Ala Ile Asn Lys Tyr Asn His Asp Ile Ala Leu
            260                 265                 270

Leu Glu Leu Asp Glu Pro Leu Val Leu Asn Ser Tyr Val Thr Pro Ile
        275                 280                 285

Cys Ile Ala Asp Lys Glu Tyr Thr Asn Ile Phe Leu Lys Phe Gly Ser
    290                 295                 300

Gly Tyr Val Ser Gly Trp Gly Arg Val Phe His Lys Gly Arg Ser Ala
```

305 310 315 320

Leu Val Leu Gln Tyr Leu Arg Val Pro Leu Val Asp Arg Ala Thr Cys
325 330 335

Leu Leu Ser Thr Lys Phe Thr Ile Tyr Asn Asn Met Phe Cys Ala Gly
340 345 350

Phe His Glu Gly Gly Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro
355 360 365

His Val Thr Glu Val Glu Gly Thr Ser Phe Leu Thr Gly Ile Ile Ser
370 375 380

Trp Gly Glu Glu Cys Ala Met Lys Gly Lys Tyr Gly Ile Tyr Thr Lys
385 390 395 400

Val Ser Arg Tyr Val Asn Trp Ile Lys Glu Lys Thr Lys Leu Thr
405 410 415

<210> 217
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MISC_FEATURE
<222> (1)..(8)
<223> Shortest example of (GGS)n(GGGGS)n linker, wherein n is an integer between 1 and 100

<400> 217

Gly Gly Ser Gly Gly Gly Gly Ser
1 5

<210> 218
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

<223> Artificial Sequence

<400> 218

Ser Gly Gly Ser Gly Gly Ser
1   5

<210> 219
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
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<400> 219

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Gly
1   5   10   15

<210> 220
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
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<400> 220

Gly Gly Ser Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1   5   10   15

<210> 221
<211> 18
<212> PRT
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<220>
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<400> 221

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
1   5   10   15

Gly Ser

<210> 222
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
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<400> 222

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 223
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MISC_FEATURE
<222> (1)..(4)
<223> Shortest example of (GGGG)n linker, wherein n is an integer between 1 and 100

<400> 223

Gly Gly Gly Gly
1

<210> 224
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> X= any amino acid

<400> 224

Met Gly Xaa Lys Leu Ser Lys Lys Lys
1 5

<210> 225
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> X= is any amino acid

<400> 225

Gly Xaa Lys Leu Ser Lys Lys Lys
1 5

<210> 226
<211> 22
<212> RNA
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 226
ugagaacuga auuccauggg uu 22

<210> 227
<211> 22
<212> RNA
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 227
ccucugaaau ucaguucuuc ag 22

<210> 228
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<212> RNA
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<220>
<223> Artificial Sequence

<400> 228

uuaaugcuaa ucgugauagg ggu 23

<210> 229
<211> 22
<212> RNA
<213> Artificial Sequence

<220>
<223> Artificial Sequence

<400> 229
cuccuacaua uuagcauuaa ca 22

<210> 230
<211> 95
<212> PRT
<213> Mycobacterium tuberculosis

<400> 230

Met Thr Glu Gln Gln Trp Asn Phe Ala Gly Ile Glu Ala Ala Ala Ser
1 5 10 15

Ala Ile Gln Gly Asn Val Thr Ser Ile His Ser Leu Leu Asp Glu Gly
20 25 30

Lys Gln Ser Leu Thr Lys Leu Ala Ala Ala Trp Gly Gly Ser Gly Ser
35 40 45

Glu Ala Tyr Gln Gly Val Gln Gln Lys Trp Asp Ala Thr Ala Thr Glu
50 55 60

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

Gln Ala Met Ala Ser Thr Glu Gly Asn Val Thr Gly Met Phe Ala
85 90 95

<210> 231
<211> 96
<212> PRT
<213> Mycobacterium tuberculosis

<400> 231

Met Ser Gln Ile Met Tyr Asn Tyr Pro Ala Met Leu Gly His Ala Gly

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1               5                   10                  15

Asp Met Ala Gly Tyr Ala Gly Thr Leu Gln Ser Leu Gly Ala Glu Ile
            20                  25                  30

Ala Val Glu Gln Ala Ala Leu Gln Ser Ala Trp Gln Gly Asp Thr Gly
        35                  40                  45

Ile Thr Tyr Gln Ala Trp Gln Ala Gln Trp Asn Gln Ala Met Glu Asp
    50                  55                  60

Leu Val Arg Ala Tyr His Ala Met Ser Ser Thr His Glu Ala Asn Thr
65                  70                  75                  80

Met Ala Met Met Ala Arg Asp Pro Ala Glu Ala Ala Lys Trp Gly Gly
                85                  90                  95
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