SEQUENCE LISTING

<110> F.Hoffmann-La Roche Ltd

<120> Protease-activated T cell bispecific molecules

<130> P33331

<160> 170

<170> PatentIn version 3.5

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<212> PRT
<213> Chimeric

<400> 1

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


Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
        35                  40                  45


Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
    50                  55                  60


Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65                  70                  75                  80


Gln Pro Glu Asp Glu Ala Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn
                85                  90                  95


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


Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu
        115                 120                 125


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


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


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


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


Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr
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Val Ala Pro Thr Glu Cys Ser
210 215

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

Ser Ile His Trp Val Lys Gln Ala Pro Gly Lys Cys Leu Lys Trp Met
35 40 45

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

Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Phe Phe Cys
85 90 95

Ala His Pro Tyr Asp Tyr Asp Val Leu Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Thr Val Leu Thr Gln
130 135 140

Ser Pro Ala Ser Leu Gly Val Ser Leu Gly Gln Arg Ala Thr Ile Ser
145 150 155 160

Cys Arg Ala Ser Lys Ser Val Ser Thr Ser Asn Tyr Ser Tyr Ile His
165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Lys Tyr
180 185 190

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

Ser Gly Thr Asp Phe Thr Leu Asn Ile His Pro Val Glu Glu Glu Asp
210 215 220

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Ala Ala Thr Tyr Tyr Cys Gln His Ser Arg Glu Phe Pro Trp Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255

Gly Gly Ser Arg Gln Ala Arg Val Val Asn Gly Gly Gly Gly Gly Ser
            260                 265                 270

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

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
    290                 295                 300

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
305                 310                 315                 320

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
                325                 330                 335

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
            340                 345                 350

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
        355                 360                 365

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
    370                 375                 380

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
385                 390                 395                 400

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
                405                 410                 415

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
            420                 425                 430

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
        435                 440                 445

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
    450                 455                 460

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
465                 470                 475                 480

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
                485                 490                 495
```

```
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly
            500                 505                 510

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser
        515                 520                 525

Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
    530                 535                 540

Ala Ser Gly Phe Thr Phe Ser Asn Ala Trp Met Ser Trp Val Arg Gln
545                 550                 555                 560

Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Lys Thr
                565                 570                 575

Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe Thr
            580                 585                 590

Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
        595                 600                 605

Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Pro Trp Glu
    610                 615                 620

Trp Ser Trp Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
625                 630                 635                 640

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
                645                 650                 655

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
            660                 665                 670

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
        675                 680                 685

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
    690                 695                 700

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
705                 710                 715                 720

Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
                725                 730                 735

Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
            740                 745                 750

Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
        755                 760                 765
```

```
Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
    770                 775                 780

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
785                 790                 795                 800

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
                805                 810                 815

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
            820                 825                 830

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
        835                 840                 845

Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
    850                 855                 860

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp
865                 870                 875                 880

Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe
                885                 890                 895

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
            900                 905                 910

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
        915                 920                 925

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
    930                 935                 940

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
945                 950                 955                 960

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                965                 970
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<210> 3
<211> 450
<212> PRT
<213> Chimeric

<400> 3

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

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

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

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
    50                  55                  60

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

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

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

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

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

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

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

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

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

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

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Lys
    450
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<210> 4
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<212> PRT
<213> Chimeric

<400> 4

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

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

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

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

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

```
Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255

Gly Gly Ser Arg Gln Ala Arg Val Val Asn Gly Gly Gly Gly Gly Ser
            260                 265                 270

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

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
    290                 295                 300

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
305                 310                 315                 320

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
                325                 330                 335

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
            340                 345                 350
```

```
Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
        355                 360                 365

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
    370                 375                 380

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
385                 390                 395                 400

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
                405                 410                 415

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
            420                 425                 430

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
        435                 440                 445

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
    450                 455                 460

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
465                 470                 475                 480

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
                485                 490                 495

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly
            500                 505                 510

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser
        515                 520                 525

Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
    530                 535                 540

Ala Ser Gly Phe Thr Phe Ser Asn Ala Trp Met Ser Trp Val Arg Gln
545                 550                 555                 560

Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Lys Thr
                565                 570                 575

Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe Thr
            580                 585                 590

Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
        595                 600                 605

Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Pro Trp Glu
    610                 615                 620
```

```
Trp Ser Trp Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
625                 630                 635                 640

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
                645                 650                 655

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
            660                 665                 670

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
        675                 680                 685

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
    690                 695                 700

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
705                 710                 715                 720

Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
                725                 730                 735

Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
            740                 745                 750

Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
        755                 760                 765

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
    770                 775                 780

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
785                 790                 795                 800

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
                805                 810                 815

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
            820                 825                 830

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
        835                 840                 845

Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
    850                 855                 860

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp
865                 870                 875                 880

Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe
                885                 890                 895
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Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
900 905 910

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
915 920 925

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
930 935 940

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
945 950 955 960

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
965 970

<210> 5
<211> 971
<212> PRT
<213> Chimeric

<400> 5

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
85 90 95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
130 135 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145 150 155 160

Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Asp Ser Tyr Leu Ala

```
                165                 170                 175

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser
            260                 265                 270

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

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
    290                 295                 300

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
305                 310                 315                 320

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
                325                 330                 335

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
            340                 345                 350

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
        355                 360                 365

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
    370                 375                 380

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
385                 390                 395                 400

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
                405                 410                 415

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
            420                 425                 430

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
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435 440 445

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
450 455 460

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
465 470 475 480

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
485 490 495

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly
500 505 510

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser
515 520 525

Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
530 535 540

Ala Ser Gly Phe Thr Phe Ser Asn Ala Trp Met Ser Trp Val Arg Gln
545 550 555 560

Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Lys Thr
565 570 575

Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe Thr
580 585 590

Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
595 600 605

Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Pro Trp Glu
610 615 620

Trp Ser Trp Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
625 630 635 640

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
645 650 655

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
660 665 670

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
675 680 685

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
690 695 700

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln

705 710 715 720

Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
725 730 735

Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
740 745 750

Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
755 760 765

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
770 775 780

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
785 790 795 800

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
805 810 815

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
820 825 830

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
835 840 845

Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
850 855 860

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp
865 870 875 880

Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe
885 890 895

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
900 905 910

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
915 920 925

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
930 935 940

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
945 950 955 960

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
965 970

<210> 6

<211> 971
<212> PRT
<213> Chimeric

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

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

Ser Ile His Trp Val Lys Gln Ala Pro Gly Lys Cys Leu Lys Trp Met
        35                  40                  45

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

Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65                  70                  75                  80

Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Phe Phe Cys
                85                  90                  95

Ala His Pro Tyr Asp Tyr Asp Val Leu Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Thr Val Leu Thr Gln
    130                 135                 140

Ser Pro Ala Ser Leu Gly Val Ser Leu Gly Gln Arg Ala Thr Ile Ser
145                 150                 155                 160

Cys Arg Ala Ser Lys Ser Val Ser Thr Ser Asn Tyr Ser Tyr Ile His
                165                 170                 175

Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Lys Tyr
            180                 185                 190

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

Ser Gly Thr Asp Phe Thr Leu Asn Ile His Pro Val Glu Glu Glu Asp
    210                 215                 220

Ala Ala Thr Tyr Tyr Cys Gln His Ser Arg Glu Phe Pro Trp Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255
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Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser
            260                 265                 270

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

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
    290                 295                 300

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
305                 310                 315                 320

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
                325                 330                 335

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
            340                 345                 350

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
        355                 360                 365

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
    370                 375                 380

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
385                 390                 395                 400

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
                405                 410                 415

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
            420                 425                 430

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
        435                 440                 445

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
    450                 455                 460

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
465                 470                 475                 480

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
                485                 490                 495

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly
            500                 505                 510

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser
        515                 520                 525
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Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
    530                 535                 540

Ala Ser Gly Phe Thr Phe Ser Asn Ala Trp Met Ser Trp Val Arg Gln
545                 550                 555                 560

Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Lys Thr
                565                 570                 575

Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe Thr
            580                 585                 590

Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
        595                 600                 605

Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Pro Trp Glu
    610                 615                 620

Trp Ser Trp Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
625                 630                 635                 640

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
                645                 650                 655

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
            660                 665                 670

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
        675                 680                 685

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
    690                 695                 700

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
705                 710                 715                 720

Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
                725                 730                 735

Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
            740                 745                 750

Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
        755                 760                 765

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
    770                 775                 780

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
785                 790                 795                 800
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Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
                805                 810                 815

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
            820                 825                 830

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
        835                 840                 845

Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
    850                 855                 860

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp
865                 870                 875                 880

Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe
                885                 890                 895

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
            900                 905                 910

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
        915                 920                 925

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
    930                 935                 940

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
945                 950                 955                 960

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                965                 970


<210>  7
<211>  33
<212>  PRT
<213>  Chimeric

<400>  7

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Arg Gln Ala Arg Val Val
1               5                   10                  15

Asn Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
            20                  25                  30

Ser


<210>  8
<211>  28
<212>  PRT
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<213> Chimeric

<400> 8

Gly Gly Gly Gly Ser Val His Met Pro Leu Gly Phe Leu Gly Pro Gly
1 5 10 15

Arg Ser Arg Gly Ser Phe Pro Gly Gly Gly Gly Ser
20 25

<210> 9
<211> 41
<212> PRT
<213> Chimeric

<400> 9

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Arg Gln Ala Arg Val Val
1 5 10 15

Asn Gly Gly Gly Gly Gly Ser Val Pro Leu Ser Leu Tyr Ser Gly Gly
20 25 30

Gly Gly Gly Ser Gly Gly Gly Gly Ser
35 40

<210> 10
<211> 36
<212> PRT
<213> Chimeric

<400> 10

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Arg Gln Ala Arg Val Val
1 5 10 15

Asn Gly Val Pro Leu Ser Leu Tyr Ser Gly Gly Gly Gly Gly Ser Gly
20 25 30

Gly Gly Gly Ser
35

<210> 11
<211> 5
<212> PRT
<213> Chimeric

<400> 11

Thr Tyr Ala Met Asn
1 5

<210> 12
<211> 19
<212> PRT
<213> Chimeric

<400> 12

Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser
1 5 10 15

Val Lys Gly

<210> 13
<211> 14
<212> PRT
<213> Chimeric

<400> 13

His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr
1 5 10

<210> 14
<211> 5
<212> PRT
<213> Chimeric

<400> 14

Asn Ala Trp Met Ser
1 5

<210> 15
<211> 19
<212> PRT
<213> Chimeric

<400> 15

Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro
1 5 10 15

Val Lys Gly

<210> 16
<211> 9
<212> PRT
<213> Chimeric

<400> 16

Pro Trp Glu Trp Ser Trp Tyr Asp Tyr
1 5

<210> 17
<211> 14
<212> PRT
<213> Chimeric

<400> 17

Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn
1 5 10

<210> 18

<211> 7
<212> PRT
<213> Chimeric

<400> 18

Gly Thr Asn Lys Arg Ala Pro
1 5

<210> 19
<211> 9
<212> PRT
<213> Chimeric

<400> 19

Ala Leu Trp Tyr Ser Asn Leu Trp Val
1 5

<210> 20
<211> 5
<212> PRT
<213> Chimeric

<400> 20

Asp Tyr Ser Ile His
1 5

<210> 21
<211> 17
<212> PRT
<213> Chimeric

<400> 21

Trp Ile Asn Thr Glu Thr Gly Glu Pro Ala Tyr Ala Asp Asp Phe Lys
1 5 10 15

Gly

<210> 22
<211> 9
<212> PRT
<213> Chimeric

<400> 22

Pro Tyr Asp Tyr Asp Val Leu Asp Tyr
1 5

<210> 23
<211> 15
<212> PRT
<213> Chimeric

<400> 23

Arg Ala Ser Lys Ser Val Ser Thr Ser Asn Tyr Ser Tyr Ile His
1 5 10 15

<210> 24
<211> 7
<212> PRT
<213> Chimeric

<400> 24

Tyr Val Ser Tyr Leu Glu Ser
1 5

<210> 25
<211> 9
<212> PRT
<213> Chimeric

<400> 25

Gln His Ser Arg Glu Phe Pro Trp Thr
1 5

<210> 26
<211> 5
<212> PRT
<213> Chimeric

<400> 26

Ser Tyr Gly Val Ser
1 5

<210> 27
<211> 16
<212> PRT
<213> Chimeric

<400> 27

Ile Ile Trp Gly Asp Gly Ser Thr Asn Tyr His Ser Ala Leu Ile Ser
1 5 10 15

<210> 28
<211> 14
<212> PRT
<213> Chimeric

<400> 28

Gly Ile Thr Thr Val Val Asp Asp Tyr Tyr Ala Met Asp Tyr
1 5 10

<210> 29
<211> 11
<212> PRT
<213> Chimeric

<400> 29

Arg Ala Ser Glu Asn Ile Asp Ser Tyr Leu Ala
1 5 10

<210> 30

<211> 7
<212> PRT
<213> Chimeric

<400> 30

Ala Ala Thr Phe Leu Ala Asp
1 5

<210> 31
<211> 9
<212> PRT
<213> Chimeric

<400> 31

Gln His Tyr Tyr Ser Thr Pro Tyr Thr
1 5

<210> 32
<211> 450
<212> PRT
<213> Chimeric

<400> 32

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

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

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

Gly Tyr Phe Asn Pro Asn Ser Gly Tyr Ser Thr Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Leu Ser Pro Gly Gly Tyr Tyr Val Met Asp Ala Trp Gly Gln
100 105 110

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Lys
450

<210> 33
<211> 213
<212> PRT
<213> Chimeric

<400> 33

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

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

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

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

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

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

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

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

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

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

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

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

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

Asn Arg Gly Glu Cys

210

<210> 34
<211> 492
<212> PRT
<213> Chimeric

<400> 34

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

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

Tyr Ile Asn Trp Ile Ile Gln Ser His Gly Lys Cys Leu Glu Trp Ile
35 40 45

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

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Thr Thr Ala Tyr
65 70 75 80

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

Ala Arg Arg Asp Ser Tyr Gly Phe Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Thr
130 135 140

Pro Lys Phe Leu Leu Val Pro Ala Gly Asp Arg Ile Thr Met Thr Cys
145 150 155 160

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

Pro Gly Gln Ser Pro Lys Leu Leu Leu Tyr Tyr Ala Ser Asn Arg Asn
180 185 190

Ala Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Tyr Gly Thr Asp Phe
195 200 205

Thr Phe Thr Ile Thr Thr Leu Gln Ala Glu Asp Leu Ala Val Tyr Phe
210 215 220

Cys Gln Gln Asp Tyr Thr Ser Pro Pro Thr Phe Gly Cys Gly Thr Lys
225 230 235 240

```
Leu Glu Ile Arg Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Pro
                245                 250                 255

Leu Gly Leu Trp Ser Gln Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
            260                 265                 270

Gly Gly Gly Gly Ser Gly Gly Asp Ile Gln Met Thr Gln Ser Pro Ser
        275                 280                 285

Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala
    290                 295                 300

Ser Gln Gly Ile Asn Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly
305                 310                 315                 320

Lys Ala Pro Lys Arg Leu Ile Tyr Asn Thr Asn Asn Leu Gln Thr Gly
                325                 330                 335

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu
            340                 345                 350

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu
        355                 360                 365

Gln His Asn Ser Phe Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
    370                 375                 380

Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp
385                 390                 395                 400

Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn
                405                 410                 415

Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu
            420                 425                 430

Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp
        435                 440                 445

Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr
    450                 455                 460

Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser
465                 470                 475                 480

Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
                485                 490
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<210> 35
<211> 35

<212> PRT
<213> Chimeric

<400> 35

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Pro Leu Gly Leu Trp
1 5 10 15

Ser Gln Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
20 25 30

Ser Gly Gly
35

<210> 36
<211> 8
<212> PRT
<213> Chimeric

<400> 36

Arg Gln Ala Arg Val Val Asn Gly
1 5

<210> 37
<211> 18
<212> PRT
<213> Chimeric

<400> 37

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

Phe Pro

<210> 38
<211> 21
<212> PRT
<213> Chimeric

<220>
<221> X
<222> (9)..(13)
<223> X is an amino acid

<220>
<221> X
<222> (9)..(13)
<223> X or Xaa is an amino acid

<400> 38

Arg Gln Ala Arg Val Val Asn Gly Xaa Xaa Xaa Xaa Xaa Val Pro Leu
1 5 10 15

Ser Leu Tyr Ser Gly
20

<210> 39
<211> 16
<212> PRT
<213> Chimeric

<400> 39

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

<210> 40
<211> 7
<212> PRT
<213> Chimeric

<400> 40

Pro Leu Gly Leu Trp Ser Gln
1 5

<210> 41
<211> 249
<212> PRT
<213> Chimeric

<400> 41

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

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

Ser Ile His Trp Val Lys Gln Ala Pro Gly Lys Cys Leu Lys Trp Met
35 40 45

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

Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Phe Phe Cys
85 90 95

Ala His Pro Tyr Asp Tyr Asp Val Leu Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Thr Val Leu Thr Gln
130 135 140

Ser Pro Ala Ser Leu Gly Val Ser Leu Gly Gln Arg Ala Thr Ile Ser
145 150 155 160

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Cys Arg Ala Ser Lys Ser Val Ser Thr Ser Asn Tyr Ser Tyr Ile His
                165                 170                 175

Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Lys Tyr
            180                 185                 190

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

Ser Gly Thr Asp Phe Thr Leu Asn Ile His Pro Val Glu Glu Glu Asp
    210                 215                 220

Ala Ala Thr Tyr Tyr Cys Gln His Ser Arg Glu Phe Pro Trp Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys
                245
```

<210> 42
<211> 249
<212> PRT
<213> Chimeric

<400> 42

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140
```

```
Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys
                245
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<210> 43
<211> 125
<212> PRT
<213> Chimeric

<400> 43

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

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

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
    50                  55                  60

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

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

Tyr Cys Val Arg His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe
            100                 105                 110

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125
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<210> 44
<211> 5
<212> PRT
<213> Chimeric

<400> 44

Thr Tyr Ala Met Asn
1 5

<210> 45
<211> 19
<212> PRT
<213> Chimeric

<400> 45

Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser
1 5 10 15

Val Lys Gly

<210> 46
<211> 14
<212> PRT
<213> Chimeric

<400> 46

His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr
1 5 10

<210> 47
<211> 120
<212> PRT
<213> Chimeric

<400> 47

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

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

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

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

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

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

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 48
<211> 5
<212> PRT
<213> Chimeric

<400> 48

Asp Tyr Tyr Ile Asn
1 5

<210> 49
<211> 17
<212> PRT
<213> Chimeric

<400> 49

Val Ile Asn Pro Asp Ser Gly Gly Thr Asp Tyr Asn Gln Asn Phe Lys
1 5 10 15

Gly

<210> 50
<211> 8
<212> PRT
<213> Chimeric

<400> 50

Arg Asp Ser Tyr Gly Phe Asp Tyr
1 5

<210> 51
<211> 11
<212> PRT
<213> Chimeric

<400> 51

Lys Ala Ser Leu Ser Val Thr Asn Asp Val Ala
1 5 10

<210> 52
<211> 7
<212> PRT
<213> Chimeric

<400> 52

Tyr Ala Ser Asn Arg Asn Ala
1 5

<210> 53

<211> 9
<212> PRT
<213> Chimeric

<400> 53

Gln Gln Asp Tyr Thr Ser Pro Pro Thr
1 5

<210> 54
<211> 207
<212> PRT
<213> Homo sapiens

<400> 54

Met Gln Ser Gly Thr His Trp Arg Val Leu Gly Leu Cys Leu Leu Ser
1 5 10 15

Val Gly Val Trp Gly Gln Asp Gly Asn Glu Glu Met Gly Gly Ile Thr
20 25 30

Gln Thr Pro Tyr Lys Val Ser Ile Ser Gly Thr Thr Val Ile Leu Thr
35 40 45

Cys Pro Gln Tyr Pro Gly Ser Glu Ile Leu Trp Gln His Asn Asp Lys
50 55 60

Asn Ile Gly Gly Asp Glu Asp Asp Lys Asn Ile Gly Ser Asp Glu Asp
65 70 75 80

His Leu Ser Leu Lys Glu Phe Ser Glu Leu Glu Gln Ser Gly Tyr Tyr
85 90 95

Val Cys Tyr Pro Arg Gly Ser Lys Pro Glu Asp Ala Asn Phe Tyr Leu
100 105 110

Tyr Leu Arg Ala Arg Val Cys Glu Asn Cys Met Glu Met Asp Val Met
115 120 125

Ser Val Ala Thr Ile Val Ile Val Asp Ile Cys Ile Thr Gly Gly Leu
130 135 140

Leu Leu Leu Val Tyr Tyr Trp Ser Lys Asn Arg Lys Ala Lys Ala Lys
145 150 155 160

Pro Val Thr Arg Gly Ala Gly Ala Gly Gly Arg Gln Arg Gly Gln Asn
165 170 175

Lys Glu Arg Pro Pro Pro Val Pro Asn Pro Asp Tyr Glu Pro Ile Arg
180 185 190

Lys Gly Gln Arg Asp Leu Tyr Ser Gly Leu Asn Gln Arg Arg Ile
195 200 205

<210> 55
<211> 109
<212> PRT
<213> Chimeric

<400> 55

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

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
35 40 45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
50 55 60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65 70 75 80

Gln Pro Glu Asp Glu Ala Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn
85 90 95

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

<210> 56
<211> 5
<212> PRT
<213> Chimeric

<400> 56

Asp Tyr Lys Ile His
1 5

<210> 57
<211> 17
<212> PRT
<213> Chimeric

<400> 57

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

Gly

<210> 58
<211> 11
<212> PRT
<213> Chimeric

<400> 58

Leu Ser Pro Gly Gly Tyr Tyr Val Met Asp Ala
1 5 10

<210> 59
<211> 11
<212> PRT
<213> Chimeric

<400> 59

Arg Ala Ser Gln Gly Ile Asn Asn Tyr Leu Asn
1 5 10

<210> 60
<211> 7
<212> PRT
<213> Chimeric

<400> 60

Asn Thr Asn Asn Leu Gln Thr
1 5

<210> 61
<211> 8
<212> PRT
<213> Chimeric

<400> 61

Leu Gln His Asn Ser Phe Pro Thr
1 5

<210> 62
<211> 648
<212> DNA
<213> Chimeric

<400> 62
caggccgtcg tgacccagga acccagcctg acagtgtctc ctggcggcac cgtgaccctg 60

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aagcccggcc aggccttcag aggactgatc ggcggcacca acaagagagc ccctggcacc 180

cctgccagat tcagcggatc tctgctggga ggaaaggccg ccctgacact gtctggcgcc 240

cagccagaag atgaggccga gtactactgc gccctgtggt acagcaacct gtgggtgttc 300

ggcggaggca ccaagctgac agtcctaggt caacccaagg ctgcccccag cgtgaccctg 360

ttcccccccа gcagcgagga actgcaggcc aacaaggcca ccctggtctg cctgatcagc 420

gacttctacc caggcgccgt gaccgtggcc tggaaggccg acagcagccc cgtgaaggcc 480

ggcgtggaga ccaccacccc cagcaagcag agcaacaaca agtacgccgc cagcagctac 540

ctgagcctga cccccgagca gtggaagagc cacaggtcct acagctgcca ggtgacccac 600

gagggcagca ccgtggagaa aaccgtggcc cccaccgagt gcagctga 648

<210> 63

<211> 2916
<212> DNA
<213> Chimeric

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atggagctgt cctctcttcg ctcagaggac accgccgtct actattgtgc tcggctgagc 300

cccggtggct actatgtgat ggatgcatgg gggcagggaa caaccgtaac agtgtcctct 360

gcgtcgacta agggcccttc agtttttcca ctcgccccca gtagcaagtc cacatctggg 420

ggtaccgctg ccctgggctg ccttgtgaaa gactatttcc ctgaaccagt cactgtgtca 480

tggaatagcg gagccctgac ctccggtgta cacacattcc ccgctgtgtt gcagtctagt 540

ggcctgtaca gcctctcctc tgttgtgacc gtcccttcaa gctccctggg gacacagacc 600

tatatctgta acgtgaatca taagccatct aacactaaag tagataaaaa agtggagccc 660

aagagttgcg acaaaacaca cacctgtccc ccttgcccag cccccgagct tctgggaggc 720

cctagcgtct ttctcttccc acccaagcct aaggatactc tgatgatatc caggacccca 780

gaagttacat gcgtggtcgt ggacgtctca cacgaggacc ccgaagtgaa atttaactgg 840

tacgttgatg gtgtggaagt ccataatgcc aagaccaagc ctagagagga gcaatacaac 900

agtacatatc gcgtggtaag cgtgttgacc gttctccacc aggactggct caatgggaaa 960

gaatacaagt gtaaagtgtc caacaaagct ctgccagcac ccatcgagaa gactatttct 1020

aaggccaaag gccagccccg ggagcctcag gtctatacac ttccaccctc aagggatgaa 1080

ctgaccaaga accaagtgag cttgacttgc ctggtaaagg ggttctaccc ttccgacatc 1140

gctgtggagt gggagtctaa tggacaacca gaaaacaatt acaaaaccac acccccctgtc 1200

ctcgacagtg atggcagctt tttcctgtat agcaaactta ccgttgacaa gtccagatgg 1260

cagcagggaa acgtgttctc atgtagcgtc atgcacgaag ctttgcataa ccactacaca 1320

cagaaaagcc tcagcctgag tccagggaag 1350

<210> 70
<211> 639
<212> DNA
<213> Chimeric

<400> 70
gacatccaaa tgacccagtc acctagtagc ctctccgcct ctgttggcga cagggtgaca 60

attacatgca gagcttcaca gggtatcaac aattacctga actggtatca gcagaaacca 120

gggaaggccc ccaagcgctt gatatataac accaataacc tgcaaactgg cgtccctagc 180

cggttctccg gatctggtag tggcaccgaa tttacactca ccatcagctc cctgcagcca 240

gaggatttcg ccacatacta ttgtcttcag cataattctt tccccacctt tgggcaagga 300

actaaactgg agattaagcg tactgtcgcc gctccctctg tgttcatttt tcctccaagt 360

gatgagcagc tcaaaagcgg taccgcatcc gttgtgtgcc tgcttaacaa cttctatccc 420

cgggaagcca aggtccaatg gaaggtggac aatgctctgc agtcaggaaa cagtcaggag 480

agcgtaaccg agcaggattc caaagactct acttactcat tgagctccac cctgacactc 540

tctaaggcag actatgaaaa gcataaagtg tacgcctgtg aggttaccca ccagggcctg 600

agtagccctg tgacaaagtc cttcaatagg ggagagtgc 639

<210> 71
<211> 1476
<212> DNA
<213> Chimeric

<400> 71
gaggttcagc tggagcagtc aggacctgtg ctggtgaagc ctgggacttc agtgaagatg 60

tcctgtaagg cttctggata cacattcact gactactata taaactggat aatacagagc 120

catggaaagt gtcttgagtg gattggagtt attaatcctg acagcggtgg tactgactac 180

aaccagaact tcaagggcaa ggccacattg actgttgaca agtcctccac cacagcctac 240

atggaactca ctagcctgac atctgaggac tctgcagtct attattgtgc aagaagggat 300

tcttacggct ttgactactg gggccaaggc accactctca cagtctcctc aggcggaggt 360

ggctcagggg gaggcggtag cggcggaggt ggctcagggg gaggcggtag cgacattgtg 420

ctgacccaga ctcccaaatt cctgcttgtg ccagcaggag acaggattac catgacctgc 480

aaggccagtc tgagtgtgac taatgatgta gcttggtatc aacagaaacc agggcagtct 540

cctaaactgc tgttatacta tgcatccaat cgcaacgctg gagtccctga tcgcttcact 600

ggcagtggat atgggacgga tttcactttc accatcacca ctttgcaggc tgaagacctg 660

gcagtttatt tctgtcagca ggattatacc tctcctccga cgttcggttg tggcaccaag 720

ctagaaatcc gtggtggcgg cggttctggc ggaggggttt ctggcccct ggggctatgg 780

agccagggtg gcggcggttc tggcggaggg ggttctggcg gtggtggctc tggcggtgac 840

atccaaatga cccagtcacc tagtagcctc tccgcctctg ttggcgacag ggtgacaatt 900

acatgcagag cttcacaggg tatcaacaat tacctgaact ggtatcagca gaaaccaggg 960

aaggccccca agcgcttgat atataacacc aataacctgc aaactggcgt ccctagccgg 1020

ttctccggat ctggtagtgg caccgaattt acactcacca tcagctccct gcagccagag 1080

gatttcgcca catactattg tcttcagcat aattctttcc ccacctttgg gcaaggaact 1140

aaactggaga ttaagcgtac tgtcgccgct ccctctgtgt tcatttttcc tccaagtgat 1200

gagcagctca aaagcggtac cgcatccgtt gtgtgcctgc ttaacaactt ctatccccgg 1260

gaagccaagg tccaatggaa ggtggacaat gctctgcagt caggaaacag tcaggagagc 1320

gtaaccgagc aggattccaa agactctact tactcattga gctccaccct gacactctct 1380

aaggcagact atgaaaagca taaagtgtac gcctgtgagg ttacccacca gggcctgagt 1440

agccctgtga caaagtcctt caatagggga gagtgc 1476

<210> 72
<211> 971
<212> PRT
<213> Chimeric

<400> 72

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
85 90 95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
130 135 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145 150 155 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
180 185 190

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

```
Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Val His
                245                 250                 255

Met Pro Leu Gly Phe Leu Gly Pro Arg Gln Ala Arg Val Val Asn Gly
            260                 265                 270

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

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
    290                 295                 300

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
305                 310                 315                 320

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
                325                 330                 335

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
            340                 345                 350

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
        355                 360                 365

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
    370                 375                 380

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
385                 390                 395                 400

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
                405                 410                 415

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
            420                 425                 430

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
        435                 440                 445

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
    450                 455                 460

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
465                 470                 475                 480
```

```
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
                485                 490                 495

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly
            500                 505                 510

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser
        515                 520                 525

Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
    530                 535                 540

Ala Ser Gly Phe Thr Phe Ser Asn Ala Trp Met Ser Trp Val Arg Gln
545                 550                 555                 560

Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Lys Thr
                565                 570                 575

Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe Thr
            580                 585                 590

Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
        595                 600                 605

Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Pro Trp Glu
    610                 615                 620

Trp Ser Trp Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
625                 630                 635                 640

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
                645                 650                 655

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
            660                 665                 670

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
        675                 680                 685

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
    690                 695                 700

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
705                 710                 715                 720

Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
                725                 730                 735

Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
            740                 745                 750
```

```
Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
        755                 760                 765

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
    770                 775                 780

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
785                 790                 795                 800

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
                805                 810                 815

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
            820                 825                 830

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
        835                 840                 845

Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
    850                 855                 860

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp
865                 870                 875                 880

Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe
                885                 890                 895

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
            900                 905                 910

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
        915                 920                 925

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
    930                 935                 940

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
945                 950                 955                 960

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                965                 970
```

<210> 73
<211> 689
<212> PRT
<213> Chimeric

<400> 73

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

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

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

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
    50                  55                  60

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

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

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

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

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

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

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

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

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

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

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu
225                 230                 235                 240

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
                245                 250                 255

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
            260                 265                 270

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
        275                 280                 285
```

```
Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
    290                 295                 300

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
305                 310                 315                 320

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
                325                 330                 335

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
            340                 345                 350

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
        355                 360                 365

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

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
385                 390                 395                 400

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                405                 410                 415

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
            420                 425                 430

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

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
    450                 455                 460

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
465                 470                 475                 480

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                485                 490                 495

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            500                 505                 510

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        515                 520                 525

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    530                 535                 540

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
545                 550                 555                 560
```

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
565 570 575

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
580 585 590

Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp
595 600 605

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
610 615 620

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
625 630 635 640

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
645 650 655

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
660 665 670

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
675 680 685

Lys

<210> 74
<211> 497
<212> PRT
<213> Chimeric

<400> 74

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
85 90 95

Lys Gly Ile Thr Thr Val Val Asp Asp Tyr Tyr Ala Met Asp Tyr Trp

100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
130 135 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145 150 155 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
180 185 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
210 215 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225 230 235 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
245 250 255

Gly Gly Ser Arg Gln Ala Arg Val Val Asn Gly Gly Gly Gly Gly Ser
260 265 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln
275 280 285

Glu Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys
290 295 300

Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val
305 310 315 320

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

Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly
340 345 350

Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala
355 360 365

Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly

370 375 380

Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro Ser Val
385 390 395 400

Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys Ala Thr
405 410 415

Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr Val Ala
420 425 430

Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr Thr Thr
435 440 445

Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr Leu Ser
450 455 460

Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser Cys Gln Val
465 470 475 480

Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr Glu Cys
485 490 495

Ser

<210> 75
<211> 497
<212> PRT
<213> Chimeric

<400> 75

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
85 90 95

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

```
Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser
            260                 265                 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln
        275                 280                 285

Glu Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys
    290                 295                 300

Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val
305                 310                 315                 320

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

Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly
            340                 345                 350

Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala
        355                 360                 365

Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly
    370                 375                 380
```

```
Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro Ser Val
385                 390                 395                 400

Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys Ala Thr
                405                 410                 415

Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr Val Ala
            420                 425                 430

Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr Thr Thr
        435                 440                 445

Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr Leu Ser
    450                 455                 460

Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser Cys Gln Val
465                 470                 475                 480

Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr Glu Cys
                485                 490                 495

Ser
```

<210> 76
<211> 674
<212> PRT
<213> Chimeric

<400> 76

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

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

Thr Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

Arg Gly Lys Ala Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65                  70                  75                  80

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

Ala Arg Gly Gly Tyr Asp Gly Arg Gly Phe Asp Tyr Trp Gly Gln Gly
            100                 105                 110
```

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

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

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

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

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

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

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln Glu
225                 230                 235                 240

Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys Gly
                245                 250                 255

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

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

Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly Gly
    290                 295                 300

Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala Glu
305                 310                 315                 320

Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly Gly
                325                 330                 335

Thr Lys Leu Thr Val Leu Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
            340                 345                 350

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
        355                 360                 365

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
    370                 375                 380
```

```
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
385                 390                 395                 400

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
                405                 410                 415

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
            420                 425                 430

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
        435                 440                 445

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
    450                 455                 460

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
465                 470                 475                 480

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
                485                 490                 495

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
            500                 505                 510

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
        515                 520                 525

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
    530                 535                 540

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
545                 550                 555                 560

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
                565                 570                 575

Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
            580                 585                 590

Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
        595                 600                 605

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
    610                 615                 620

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
625                 630                 635                 640

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
                645                 650                 655
```

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
660 665 670

Gly Lys

<210> 77
<211> 449
<212> PRT
<213> Chimeric

<400> 77

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

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

Thr Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Arg Gly Lys Ala Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Gly Gly Tyr Asp Gly Arg Gly Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Lys
```

<210> 78
<211> 213
<212> PRT
<213> Chimeric

<400> 78

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

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

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

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

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

Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Lys His Pro Leu Thr
85 90 95

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

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

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

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

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

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

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

Asn Arg Gly Glu Cys
210

<210> 79
<211> 514
<212> PRT
<213> Chimeric

<400> 79

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Val His
                245                 250                 255

Met Pro Leu Gly Phe Leu Gly Pro Arg Gln Ala Arg Val Val Asn Gly
            260                 265                 270

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

```
Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
    290                 295                 300

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
305                 310                 315                 320

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
                325                 330                 335

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
            340                 345                 350

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
        355                 360                 365

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
    370                 375                 380

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
385                 390                 395                 400

Thr Leu Val Thr Val Ser Ser Ala Ser Val Ala Ala Pro Ser Val Phe
                405                 410                 415

Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val
            420                 425                 430

Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp
        435                 440                 445

Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr
    450                 455                 460

Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr
465                 470                 475                 480

Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val
                485                 490                 495

Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly
            500                 505                 510

Glu Cys
```

<210> 80
<211> 514
<212> PRT
<213> Chimeric

<400> 80

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser
            260                 265                 270
```

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

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
    290                 295                 300

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
305                 310                 315                 320

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
                325                 330                 335

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
            340                 345                 350

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
        355                 360                 365

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
    370                 375                 380

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
385                 390                 395                 400

Thr Leu Val Thr Val Ser Ser Ala Ser Val Ala Ala Pro Ser Val Phe
                405                 410                 415

Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val
            420                 425                 430

Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp
        435                 440                 445

Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr
    450                 455                 460

Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr
465                 470                 475                 480

Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val
                485                 490                 495

Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly
            500                 505                 510

Glu Cys
```

<210> 81
<211> 232
<212> PRT

<213> Chimeric

<400> 81

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

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

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

Ser Arg Ile Arg Ser Lys Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp
    50                  55                  60

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

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

Tyr Cys Val Arg His Gly Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe
            100                 105                 110

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Val
        115                 120                 125

Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
    130                 135                 140

Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg
145                 150                 155                 160

Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn
                165                 170                 175

Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser
            180                 185                 190

Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys
        195                 200                 205

Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr
    210                 215                 220

Lys Ser Phe Asn Arg Gly Glu Cys
225                 230
```

<210> 82
<211> 956
<212> PRT
<213> Chimeric

<400> 82

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Val His
                245                 250                 255

Met Pro Leu Gly Phe Leu Gly Pro Arg Gln Ala Arg Val Val Asn Gly
```

260 265 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln
275 280 285

Glu Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys
290 295 300

Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val
305 310 315 320

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

Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly
340 345 350

Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala
355 360 365

Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly
370 375 380

Gly Thr Lys Leu Thr Val Leu Ser Ser Ala Ser Thr Lys Gly Pro Ser
385 390 395 400

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
405 410 415

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

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
435 440 445

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
450 455 460

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
465 470 475 480

Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
485 490 495

Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
500 505 510

Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
515 520 525

Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met Asn Trp Val

530 535 540

Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Leu Ile Thr Pro
545 550 555 560

Tyr Asn Gly Ala Ser Ser Tyr Asn Gln Lys Phe Arg Gly Lys Ala Thr
565 570 575

Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
580 585 590

Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Gly Tyr
595 600 605

Asp Gly Arg Gly Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
610 615 620

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
625 630 635 640

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Glu
645 650 655

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
660 665 670

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
675 680 685

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
690 695 700

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
705 710 715 720

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

Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe
740 745 750

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
755 760 765

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
770 775 780

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
785 790 795 800

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr

805 810 815

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
820 825 830

Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
835 840 845

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg
850 855 860

Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly
865 870 875 880

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
885 890 895

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
900 905 910

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
915 920 925

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
930 935 940

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
945 950 955

<210> 83
<211> 956
<212> PRT
<213> Chimeric

<400> 83

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
85 90 95

```
Lys Gly Ile Thr Thr Val Val Asp Asp Tyr Tyr Ala Met Asp Tyr Trp
            100                 105                 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser
            260                 265                 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln
        275                 280                 285

Glu Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys
    290                 295                 300

Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val
305                 310                 315                 320

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

Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly
            340                 345                 350

Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala
        355                 360                 365
```

```
Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly
    370                 375                 380

Gly Thr Lys Leu Thr Val Leu Ser Ser Ala Ser Thr Lys Gly Pro Ser
385                 390                 395                 400

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
                405                 410                 415

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

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
        435                 440                 445

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
    450                 455                 460

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
465                 470                 475                 480

Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
                485                 490                 495

Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
            500                 505                 510

Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
        515                 520                 525

Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met Asn Trp Val
    530                 535                 540

Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Leu Ile Thr Pro
545                 550                 555                 560

Tyr Asn Gly Ala Ser Ser Tyr Asn Gln Lys Phe Arg Gly Lys Ala Thr
                565                 570                 575

Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
            580                 585                 590

Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Gly Tyr
        595                 600                 605

Asp Gly Arg Gly Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
    610                 615                 620

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
625                 630                 635                 640
```

```
Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Glu
                645                 650                 655

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
            660                 665                 670

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
        675                 680                 685

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
    690                 695                 700

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
705                 710                 715                 720

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

Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe
            740                 745                 750

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
        755                 760                 765

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
    770                 775                 780

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
785                 790                 795                 800

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
                805                 810                 815

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
            820                 825                 830

Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
        835                 840                 845

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg
    850                 855                 860

Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly
865                 870                 875                 880

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
                885                 890                 895

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
            900                 905                 910
```

```
Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
        915                 920                 925

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
    930                 935                 940

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
945                 950                 955
```

<210> 84
<211> 674
<212> PRT
<213> Chimeric

<400> 84

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

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
        35                  40                  45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
    50                  55                  60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65                  70                  75                  80

Gln Pro Glu Asp Glu Ala Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn
                85                  90                  95

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Ser Ser Ala
            100                 105                 110

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

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

Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
145                 150                 155                 160

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

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

```
Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
        195                 200                 205

Val Glu Pro Lys Ser Cys Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly
    210                 215                 220

Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly
225                 230                 235                 240

Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly
                245                 250                 255

Tyr Thr Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp
            260                 265                 270

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

Phe Arg Gly Lys Ala Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val
    290                 295                 300

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

Cys Ala Arg Gly Gly Tyr Asp Gly Arg Gly Phe Asp Tyr Trp Gly Gln
                325                 330                 335

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
            340                 345                 350

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
        355                 360                 365

Leu Gly Cys Leu Val Glu Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
    370                 375                 380

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
385                 390                 395                 400

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
                405                 410                 415

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
            420                 425                 430

Pro Ser Asn Thr Lys Val Asp Glu Lys Val Glu Pro Lys Ser Cys Asp
        435                 440                 445

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
    450                 455                 460
```

```
Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
465                 470                 475                 480

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
                485                 490                 495

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
            500                 505                 510

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
        515                 520                 525

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
    530                 535                 540

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
545                 550                 555                 560

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
                565                 570                 575

Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
            580                 585                 590

Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
        595                 600                 605

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
    610                 615                 620

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
625                 630                 635                 640

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
                645                 650                 655

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
            660                 665                 670

Gly Lys
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<210> 85
<211> 971
<212> PRT
<213> Chimeric

<400> 85

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255

Gly Gly Ser Gly Gly Gly Gly Ser Phe Val Gly Gly Thr Gly Gly Gly
            260                 265                 270

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

```
Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
    290                 295                 300

Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr Ala Met Asn Trp Val Arg
305                 310                 315                 320

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Arg Ile Arg Ser Lys
                325                 330                 335

Tyr Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe
            340                 345                 350

Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn
        355                 360                 365

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg His Gly
    370                 375                 380

Asn Phe Gly Asn Ser Tyr Val Ser Trp Phe Ala Tyr Trp Gly Gln Gly
385                 390                 395                 400

Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
                405                 410                 415

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
            420                 425                 430

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
        435                 440                 445

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
    450                 455                 460

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
465                 470                 475                 480

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
                485                 490                 495

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Gly
            500                 505                 510

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser
        515                 520                 525

Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
    530                 535                 540

Ala Ser Gly Phe Thr Phe Ser Asn Ala Trp Met Ser Trp Val Arg Gln
545                 550                 555                 560
```

```
Ala Pro Gly Lys Gly Leu Glu Trp Val Gly Arg Ile Lys Ser Lys Thr
                565                 570                 575

Asp Gly Gly Thr Thr Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe Thr
            580                 585                 590

Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
        595                 600                 605

Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Pro Trp Glu
    610                 615                 620

Trp Ser Trp Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
625                 630                 635                 640

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
                645                 650                 655

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
            660                 665                 670

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
        675                 680                 685

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
    690                 695                 700

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
705                 710                 715                 720

Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
                725                 730                 735

Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
            740                 745                 750

Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
        755                 760                 765

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
    770                 775                 780

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
785                 790                 795                 800

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
                805                 810                 815

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
            820                 825                 830
```

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
835 840 845

Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
850 855 860

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp
865 870 875 880

Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe
885 890 895

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
900 905 910

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
915 920 925

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
930 935 940

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
945 950 955 960

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
965 970

<210> 86
<211> 33
<212> PRT
<213> Chimeric

<400> 86

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

Gln Ala Arg Val Val Asn Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly
20 25 30

Ser

<210> 87
<211> 35
<212> PRT
<213> Chimeric

<400> 87

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

Gln Ala Arg Val Val Asn Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly
20 25 30

Ser Gly Gly
35

<210> 88
<211> 33
<212> PRT
<213> Chimeric

<400> 88

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Phe
1 5 10 15

Val Gly Gly Thr Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Ser

<210> 89
<211> 33
<212> PRT
<213> Chimeric

<400> 89

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Lys Ala Ala Pro Val
1 5 10 15

Asn Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
20 25 30

Ser

<210> 90
<211> 33
<212> PRT
<213> Chimeric

<400> 90

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Pro Met Ala Lys Lys Val
1 5 10 15

Asn Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
20 25 30

Ser

<210> 91
<211> 33
<212> PRT
<213> Chimeric

<400> 91

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Arg Ala Lys Val
1 5 10 15

Asn Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
20 25 30

Ser

<210> 92
<211> 33
<212> PRT
<213> Chimeric

<400> 92

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Val His Met Pro Leu Gly
1 5 10 15

Phe Leu Gly Pro Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Ser

<210> 93
<211> 33
<212> PRT
<213> Chimeric

<400> 93

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Ser

<210> 94
<211> 33
<212> PRT
<213> Chimeric

<400> 94

Gly Gly Gly Gly Ser Val His Met Pro Leu Gly Phe Leu Gly Pro Pro
1 5 10 15

Met Ala Lys Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Ser

<210> 95
<211> 33
<212> PRT
<213> Chimeric

<400> 95

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Lys Ala Ala Pro Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Ser

<210> 96
<211> 33
<212> PRT
<213> Chimeric

<400> 96

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Pro Met Ala Lys Lys Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Ser

<210> 97
<211> 18
<212> PRT
<213> Chimeric

<400> 97

Val His Met Pro Leu Gly Phe Leu Gly Pro Arg Gln Ala Arg Val Val
1 5 10 15

Asn Gly

<210> 98
<211> 6
<212> PRT
<213> Chimeric

<400> 98

Phe Val Gly Gly Thr Gly
1 5

<210> 99

<211> 8
<212> PRT
<213> Chimeric

<400> 99

Lys Lys Ala Ala Pro Val Asn Gly
1 5

<210> 100
<211> 8
<212> PRT
<213> Chimeric

<400> 100

Pro Met Ala Lys Lys Val Asn Gly
1 5

<210> 101
<211> 8
<212> PRT
<213> Chimeric

<400> 101

Gln Ala Arg Ala Lys Val Asn Gly
1 5

<210> 102
<211> 10
<212> PRT
<213> Chimeric

<400> 102

Val His Met Pro Leu Gly Phe Leu Gly Pro
1 5 10

<210> 103
<211> 5
<212> PRT
<213> Chimeric

<400> 103

Gln Ala Arg Ala Lys
1 5

<210> 104
<211> 15
<212> PRT
<213> Chimeric

<400> 104

Val His Met Pro Leu Gly Phe Leu Gly Pro Pro Met Ala Lys Lys
1 5 10 15

<210> 105
<211> 5
<212> PRT

<213> Chimeric

<400> 105

Lys Lys Ala Ala Pro
1 5

<210> 106
<211> 5
<212> PRT
<213> Chimeric

<400> 106

Pro Met Ala Lys Lys
1 5

<210> 107
<211> 5
<212> PRT
<213> Chimeric

<400> 107

Gly Tyr Thr Met Asn
1 5

<210> 108
<211> 17
<212> PRT
<213> Chimeric

<400> 108

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

Gly

<210> 109
<211> 10
<212> PRT
<213> Chimeric

<400> 109

Gly Gly Tyr Asp Gly Arg Gly Phe Asp Tyr
1 5 10

<210> 110
<211> 10
<212> PRT
<213> Chimeric

<400> 110

Ser Ala Ser Ser Ser Val Ser Tyr Met His
1 5 10

<210> 111

<211> 7
<212> PRT
<213> Chimeric

<400> 111

Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 112
<211> 9
<212> PRT
<213> Chimeric

<400> 112

Gln Gln Trp Ser Lys His Pro Leu Thr
1 5

<210> 113
<211> 119
<212> PRT
<213> Chimeric

<400> 113

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

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

Thr Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Arg Gly Lys Ala Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Gly Gly Tyr Asp Gly Arg Gly Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 114
<211> 106
<212> PRT
<213> Chimeric

<400> 114

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

1 5 10 15

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

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

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

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

Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Lys His Pro Leu Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 115
<211> 120
<212> PRT
<213> Chimeric

<400> 115

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

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

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

Gly Tyr Phe Asn Pro Asn Ser Gly Tyr Ser Thr Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Leu Ser Pro Gly Gly Tyr Tyr Val Met Asp Ala Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 116
<211> 106

<212> PRT
<213> Chimeric

<400> 116

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

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

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

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

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

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

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 117
<211> 648
<212> DNA
<213> Chimeric

<400> 117
caggccgtcg tgacccagga acccagcctg acagtgtctc ctggcggcac cgtgaccctg 60

acatgtggca gttctacagg cgccgtgacc accagcaact acgccaactg ggtgcaggaa 120

aagcccggcc aggccttcag aggactgatc ggcggcacca acaagagagc ccctggcacc 180

cctgccagat tcagcggatc tctgctggga ggaaaggccg ccctgacact gtctggcgcc 240

cagccagaag atgaggccga gtactactgc gccctgtggt acagcaacct gtgggtgttc 300

ggcggaggca ccaagctgac agtcctaggt caacccaagg ctgcccccag cgtgaccctg 360

ttcccccca gcagcgagga actgcaggcc aacaaggcca ccctggtctg cctgatcagc 420

gacttctacc caggcgccgt gaccgtggcc tggaaggccg acagcagccc cgtgaaggcc 480

ggcgtggaga ccaccacccc cagcaagcag agcaacaaca agtacgccgc cagcagctac 540

ctgagcctga cccccgagca gtggaagagc cacaggtcct acagctgcca ggtgacccac 600

gagggcagca ccgtggagaa aaccgtggcc cccaccgagt gcagctga 648

<210> 118
<211> 2916
<212> DNA
<213> Chimeric

<400> 118

caagtgcagc tgaaagagtc cggccctgga ctggtggccc ctagccagag cctgagcatc 60

acctgtaccg tgtccggctt cagcctgacc agctacggcg tgtcatgggt gcgccagcct 120

ccaggcaagt gtctggaatg gctgggcatc atctggggcg acggcagcac caattaccac 180

agcgccctga tcagcagact gagcatctcc aaggacaaca gcaagagcca ggtgttcctg 240

aagctgaaca gcctgcagac cgacgacacc gccacctact actgcgccaa gggcatcacc 300

accgtggtgg acgactacta cgctatggac tactggggcc agggcaccag cgtgacagtg 360

tctagcggag gcggaggatc tggcggcgga ggaagtggcg gagggggatc tgggggaggc 420

ggaagcgata tccagatgac ccagagccct gccagcctgt ctgcctctgt gggcgagaca 480

gtgaccatca catgccgggc cagcgagaac atcgacagct acctggcctg gtatcagcag 540

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cccagcagat tcagcggcag cggaagcggc acacagtaca gcctgaagat caactccctg 660

cagagcgagg acgtggcccg gtactactgc cagcactact acagcacccc ctacaccttc 720

ggctgcggca ccaagctgga aatcaaagga ggcggcggaa gtgtgcacat gcccctgggc 780

ttcctgggcc ccagacaggc cagagtcgtg aacgggggg gcggaggcag tgggggggga 840

ggatccgagg tgcagctgct ggaatctggc ggcggactgg tgcagcctgg cggatctctg 900

agactgagct gtgccgccag cggcttcacc ttcagcacct acgccatgaa ctgggtgcgc 960

caggcccctg gcaaaggcct ggaatgggtg tcccggatca gaagcaagta caacaactac 1020

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aacaccctgt acctgcagat gaacagcctg cgggccgagg acaccgccgt gtactattgt 1140

gtgcggcacg gcaacttcgg caacagctat gtgtcttggt ttgcctactg gggccagggc 1200

accctcgtga ccgtgtcaag cgctagcaca aagggcccta gcgtgttccc tctggccccc 1260

agcagcaaga gcacaagcgg cggaacagcc gccctgggct gcctcgtgaa ggactacttc 1320

cccgagcccg tgacagtgtc ttggaacagc ggagccctga caagcggcgt gcacaccttc 1380

cctgccgtgc tgcagagcag cggcctgtac tccctgagca gcgtggtcac cgtgcctagc 1440

agcagcctgg gcacccagac ctacatctgc aacgtgaacc acaagcccag caacaccaaa 1500

gtggacaaga aggtggagcc caagagctgt gatggcggag gagggtccgg gggcggagga 1560

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ctgagctgcg cggcttccgg gttcaccttc tccaacgcgt ggatgagctg ggttcgccag 1680

gccccgggca aaggcctcga gtgggttggt cgtatcaagt ctaaaactga cggtggcacc 1740

acggattacg cggctccagt taaaggtcgt tttaccattt cccgcgacga tagcaaaaac 1800

actctgtatc tgcagatgaa ctctctgaaa actgaagaca ccgcagtcta ctactgtact 1860

accccgtggg aatggtcttg gtacgattat tggggccagg gcacgctggt tacggtgtct 1920

agcgctagta ccaagggccc cagcgtgttc cccctggcac ccagcagcaa gagcacatct 1980

ggcggaacag ccgctctggg ctgtctggtg aaagactact tccccgagcc cgtgaccgtg 2040

tcttggaact ctggcgccct gaccagcggc gtgcacacct ttccagccgt gctgcagagc 2100

agcggcctgt actccctgtc ctccgtggtc accgtgccct ctagctccct gggaacacag 2160

acatatatct gtaatgtcaa tcacaagcct tccaacacca aagtcgataa gaaagtcgag 2220

cccaagagct gcgacaaaac tcacacatgc ccaccgtgcc cagcacctga agctgcaggg 2280

ggaccgtcag tcttcctctt cccccaaaa cccaaggaca ccctcatgat ctcccggacc 2340

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aaggagtaca agtgcaaggt ctccaacaaa gccctcggcg cccccatcga gaaaaccatc 2580

tccaaagcca aagggcagcc ccgagaacca caggtgtaca ccctgccccc atgccgggat 2640

gagctgacca agaaccaggt cagcctgtgg tgcctggtca aaggcttcta tcccagcgac 2700

atcgccgtgg agtgggagag caatgggcag ccggagaaca actacaagac cacgcctccc 2760

gtgctggact ccgacggctc cttcttcctc tacagcaagc tcaccgtgga caagagcagg 2820

tggcagcagg ggaacgtctt ctcatgctcc gtgatgcatg aggctctgca caaccactac 2880

acgcagaaga gcctctccct gtctccgggt aaatga 2916

<210> 119
<211> 2070
<212> DNA
<213> Chimeric

<400> 119
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agctgcgcgg cttccggatt caccttctcc aacgcgtgga tgagctgggt tcgccaggcc 120

ccgggcaaag gcctcgagtg ggttggtcgt atcaagtcta aaactgacgg tggcaccacg 180

gattacgcgg ctccagttaa aggtcgtttt accatttccc gcgacgatag caaaaacact 240

ctgtatctgc agatgaactc tctgaaaact gaagacaccg cagtctacta ctgtactacc 300

ccgtgggaat ggtcttggta cgattattgg ggccagggca cgctggttac ggtgtcttcc 360

gctagcacaa agggccctag cgtgttccct ctggccccca gcagcaagag cacaagcggc 420

ggaacagccg ccctgggctg cctcgtgaag gactacttcc ccgagcccgt gacagtgtct 480

tggaacagcg gagccctgac aagcggcgtg cacactttcc ctgccgtgct gcagagcagc 540

ggcctgtact ccctgagcag cgtggtcacc gtgcctagca gcagcctggg cacccagacc 600

tacatctgca acgtgaacca caagcccagc aacaccaaag tggacaagaa ggtggagccc 660

aagagctgtg atggcggagg agggtccgga ggcggaggat ccgaggtgca gctgctggaa 720

tctggcggcg gactggtgca gcctggcgga tctctgagac tgagctgtgc cgccagcggc 780

ttcaccttca gcacctacgc catgaactgg gtgcgccagg cccctggcaa aggcctggaa 840

tgggtgtccc ggatcagaag caagtacaac aactacgcca cctactacgc cgacagcgtg 900

aagggccggt tcaccatcag ccgggacgac agcaagaaca ccctgtacct gcagatgaac 960

agcctgcggg ccgaggacac cgccgtgtac tattgtgtgc ggcacggcaa cttcggcaac 1020

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agtaccaagg gccccagcgt gttccccctg gcacccagca gcaagagcac atctggcgga 1140

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35 40 45

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

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

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

Ala Arg Asn Leu Gly Pro Phe Phe Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385                 390                 395                 400
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Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys
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Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
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Lys

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35 40 45

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

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

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
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Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
35 40 45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
50 55 60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65 70 75 80

Gln Pro Glu Asp Glu Ala Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn
85 90 95

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Ser Ser Ala
100 105 110

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

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

Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
145 150 155 160

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

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

Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys

195 200 205

Val Glu Pro Lys Ser Cys Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly
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Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
225 230 235 240

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp
245 250 255

Thr Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
260 265 270

Val Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser
275 280 285

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

Cys Ser Arg Trp Gly Gly Glu Gly Phe Tyr Ala Met Asp Tyr Trp Gly
325 330 335

Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
340 345 350

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
355 360 365

Ala Leu Gly Cys Leu Val Glu Asp Tyr Phe Pro Glu Pro Val Thr Val
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Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
385 390 395 400

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
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Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
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Lys Pro Ser Asn Thr Lys Val Asp Glu Lys Val Glu Pro Lys Ser Cys
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Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly
450 455 460

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

465 470 475 480

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
485 490 495

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
500 505 510

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
515 520 525

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
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Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile
545 550 555 560

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
565 570 575

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
580 585 590

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
595 600 605

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
610 615 620

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
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Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
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Pro Gly Lys
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Gly Ile Ile Trp Gly Asp Gly Ser Thr Asn Tyr His Ser Ala Leu Ile
    50                  55                  60

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser
            260                 265                 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln
        275                 280                 285

Glu Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys
    290                 295                 300
```

```
Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val
305                 310                 315                 320

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

Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly
            340                 345                 350

Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala
        355                 360                 365

Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly
    370                 375                 380

Gly Thr Lys Leu Thr Val Leu Ser Ser Ala Ser Thr Lys Gly Pro Ser
385                 390                 395                 400

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
                405                 410                 415

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

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
        435                 440                 445

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
    450                 455                 460

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
465                 470                 475                 480

Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
                485                 490                 495

Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val
            500                 505                 510

Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser
        515                 520                 525

Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr Tyr Ile His Trp Val
    530                 535                 540

Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Arg Ile Tyr Pro
545                 550                 555                 560

Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr
                565                 570                 575
```

```
Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr Leu Gln Met Asn Ser
            580                 585                 590

Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ser Arg Trp Gly Gly
        595                 600                 605

Glu Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr
    610                 615                 620

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
625                 630                 635                 640

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
                645                 650                 655

Glu Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
            660                 665                 670

Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly
        675                 680                 685

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
    690                 695                 700

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
705                 710                 715                 720

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

Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu
            740                 745                 750

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
        755                 760                 765

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
    770                 775                 780

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
785                 790                 795                 800

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
                805                 810                 815

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
            820                 825                 830

Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys
        835                 840                 845
```

```
Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys
    850                 855                 860

Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys
865                 870                 875                 880

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
                885                 890                 895

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
            900                 905                 910

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
        915                 920                 925

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
    930                 935                 940

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
945                 950                 955
```

<210> 136
<211> 957
<212> PRT
<213> Chimeric

<400> 136

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125
```

```
Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Val His
                245                 250                 255

Met Pro Leu Gly Phe Leu Gly Pro Arg Gln Ala Arg Val Val Asn Gly
            260                 265                 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln
        275                 280                 285

Glu Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys
    290                 295                 300

Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val
305                 310                 315                 320

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

Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly
            340                 345                 350

Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala
        355                 360                 365

Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly
    370                 375                 380

Gly Thr Lys Leu Thr Val Leu Ser Ser Ala Ser Thr Lys Gly Pro Ser
385                 390                 395                 400
```

```
Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
                405                 410                 415

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

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
        435                 440                 445

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
    450                 455                 460

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
465                 470                 475                 480

Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
                485                 490                 495

Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val
            500                 505                 510

Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser
        515                 520                 525

Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr Tyr Ile His Trp Val
    530                 535                 540

Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Arg Ile Tyr Pro
545                 550                 555                 560

Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr
                565                 570                 575

Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr Leu Gln Met Asn Ser
            580                 585                 590

Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ser Arg Trp Gly Gly
        595                 600                 605

Glu Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr
    610                 615                 620

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
625                 630                 635                 640

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
                645                 650                 655

Glu Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
            660                 665                 670
```

```
Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly
        675                 680                 685

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
    690                 695                 700

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
705                 710                 715                 720

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

Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu
            740                 745                 750

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
        755                 760                 765

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
    770                 775                 780

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
785                 790                 795                 800

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
                805                 810                 815

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
            820                 825                 830

Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys
        835                 840                 845

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys
    850                 855                 860

Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys
865                 870                 875                 880

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
                885                 890                 895

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
            900                 905                 910

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
        915                 920                 925

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
    930                 935                 940
```

```
His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
945                 950                 955


<210>  137
<211>  449
<212>  PRT
<213>  Chimeric

<400>  137

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


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


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


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


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


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


Ala Arg Ser Phe Phe Thr Gly Phe His Leu Asp Tyr Trp Gly Gln Gly
            100                 105                 110


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


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


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


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


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


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


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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225 230 235 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Lys

<210> 138
<211> 216
<212> PRT
<213> Chimeric

<400> 138

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly

1 5 10 15

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

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

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

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

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

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

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

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

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

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

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

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

Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 139
<211> 956
<212> PRT
<213> Chimeric

<400> 139

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

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

```
Gly Val Ser Trp Val Arg Gln Pro Pro Gly Lys Cys Leu Glu Trp Leu
        35                  40                  45

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Val His
                245                 250                 255

Met Pro Leu Gly Phe Leu Gly Pro Arg Gln Ala Arg Val Val Asn Gly
            260                 265                 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln
        275                 280                 285

Glu Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys
    290                 295                 300
```

```
Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val
305                 310                 315                 320

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

Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly
            340                 345                 350

Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala
        355                 360                 365

Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly
    370                 375                 380

Gly Thr Lys Leu Thr Val Leu Ser Ser Ala Ser Thr Lys Gly Pro Ser
385                 390                 395                 400

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
                405                 410                 415

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

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
        435                 440                 445

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
    450                 455                 460

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
465                 470                 475                 480

Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
                485                 490                 495

Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
            500                 505                 510

Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
        515                 520                 525

Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Tyr Met His Trp Val
    530                 535                 540

Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Ile Ile Asn Pro
545                 550                 555                 560

Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr
                565                 570                 575
```

```
Met Thr His Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
            580                 585                 590

Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Phe Phe
        595                 600                 605

Thr Gly Phe His Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
    610                 615                 620

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
625                 630                 635                 640

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Glu
                645                 650                 655

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
            660                 665                 670

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
        675                 680                 685

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
    690                 695                 700

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
705                 710                 715                 720

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

Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe
            740                 745                 750

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
        755                 760                 765

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
    770                 775                 780

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
785                 790                 795                 800

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
                805                 810                 815

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
            820                 825                 830

Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
        835                 840                 845
```

```
Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg
    850                 855                 860

Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly
865                 870                 875                 880

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
                885                 890                 895

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
            900                 905                 910

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
        915                 920                 925

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
    930                 935                 940

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
945                 950                 955


<210>  140
<211>  956
<212>  PRT
<213>  Chimeric

<400>  140

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

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

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

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

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

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala
                85                  90                  95

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

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125
```

```
Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly Glu Thr
145                 150                 155                 160

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

Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val Tyr Ala
            180                 185                 190

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

Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser Glu Asp
    210                 215                 220

Val Ala Arg Tyr Tyr Cys Gln His Tyr Tyr Ser Thr Pro Tyr Thr Phe
225                 230                 235                 240

Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly
                245                 250                 255

Gly Gly Ser Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser
            260                 265                 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ala Val Val Thr Gln
        275                 280                 285

Glu Pro Ser Leu Thr Val Ser Pro Gly Gly Thr Val Thr Leu Thr Cys
    290                 295                 300

Gly Ser Ser Thr Gly Ala Val Thr Thr Ser Asn Tyr Ala Asn Trp Val
305                 310                 315                 320

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

Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser Leu Leu Gly
            340                 345                 350

Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala Gln Pro Glu Asp Glu Ala
        355                 360                 365

Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn Leu Trp Val Phe Gly Gly
    370                 375                 380

Gly Thr Lys Leu Thr Val Leu Ser Ser Ala Ser Thr Lys Gly Pro Ser
385                 390                 395                 400
```

```
Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
                405                 410                 415

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

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
        435                 440                 445

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
    450                 455                 460

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
465                 470                 475                 480

Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
                485                 490                 495

Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
            500                 505                 510

Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
        515                 520                 525

Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Tyr Met His Trp Val
    530                 535                 540

Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Ile Ile Asn Pro
545                 550                 555                 560

Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr
                565                 570                 575

Met Thr His Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
            580                 585                 590

Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Phe Phe
        595                 600                 605

Thr Gly Phe His Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
    610                 615                 620

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
625                 630                 635                 640

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Glu
                645                 650                 655

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
            660                 665                 670
```

```
Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
        675                 680                 685

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
    690                 695                 700

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
705                 710                 715                 720

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

Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe
            740                 745                 750

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
        755                 760                 765

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
    770                 775                 780

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
785                 790                 795                 800

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
                805                 810                 815

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
            820                 825                 830

Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
        835                 840                 845

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg
    850                 855                 860

Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly
865                 870                 875                 880

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
                885                 890                 895

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
            900                 905                 910

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
        915                 920                 925

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
    930                 935                 940
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Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
945 950 955

<210> 141
<211> 674
<212> PRT
<213> Chimeric

<400> 141

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Gly Gln Ala Phe Arg Gly
35 40 45

Leu Ile Gly Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe
50 55 60

Ser Gly Ser Leu Leu Gly Gly Lys Ala Ala Leu Thr Leu Ser Gly Ala
65 70 75 80

Gln Pro Glu Asp Glu Ala Glu Tyr Tyr Cys Ala Leu Trp Tyr Ser Asn
85 90 95

Leu Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Ser Ser Ala
100 105 110

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

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

Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
145 150 155 160

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

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

Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
195 200 205

Val Glu Pro Lys Ser Cys Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly
210 215 220

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Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly
225                 230                 235                 240

Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser
                245                 250                 255

Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp
            260                 265                 270

Met Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys
        275                 280                 285

Phe Gln Gly Arg Val Thr Met Thr His Asp Thr Ser Thr Ser Thr Val
    290                 295                 300

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

Cys Ala Arg Ser Phe Phe Thr Gly Phe His Leu Asp Tyr Trp Gly Gln
                325                 330                 335

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
            340                 345                 350

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
        355                 360                 365

Leu Gly Cys Leu Val Glu Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
    370                 375                 380

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
385                 390                 395                 400

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
                405                 410                 415

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
            420                 425                 430

Pro Ser Asn Thr Lys Val Asp Glu Lys Val Glu Pro Lys Ser Cys Asp
        435                 440                 445

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
    450                 455                 460

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
465                 470                 475                 480

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
                485                 490                 495
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Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
500 505 510

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
515 520 525

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
530 535 540

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
545 550 555 560

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
565 570 575

Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
580 585 590

Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
595 600 605

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
610 615 620

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
625 630 635 640

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
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Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
660 665 670

Gly Lys

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<211> 5
<212> PRT
<213> Chimeric

<400> 142

Asp Tyr Thr Met Asp
1 5

<210> 143
<211> 17
<212> PRT
<213> Chimeric

<400> 143

Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Val Asn Arg Arg Phe Lys
1 5 10 15

Gly

<210> 144
<211> 10
<212> PRT
<213> Chimeric

<400> 144

Asn Leu Gly Pro Phe Phe Tyr Phe Asp Tyr
1 5 10

<210> 145
<211> 7
<212> PRT
<213> Chimeric

<400> 145

Thr Ser Asn Tyr Ala Asn Trp
1 5

<210> 146
<211> 20
<212> PRT
<213> Chimeric

<400> 146

Gly Thr Asn Lys Arg Ala Pro Gly Thr Pro Ala Arg Phe Ser Gly Ser
1 5 10 15

Leu Leu Gly Gly
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<210> 147
<211> 5
<212> PRT
<213> Chimeric

<400> 147

Thr Lys Leu Thr Val
1 5

<210> 148
<211> 11
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<400> 148

Lys Ala Ser Gln Asp Val Ser Thr Ala Val Ala
1 5 10

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<213> Chimeric

<400> 149

Ser Ala Ser Phe Arg Tyr Thr
1 5

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<400> 150

Gln Gln His Tyr Thr Thr Pro Pro Thr
1 5

<210> 151
<211> 5
<212> PRT
<213> Chimeric

<400> 151

Ser Tyr Tyr Met His
1 5

<210> 152
<211> 17
<212> PRT
<213> Chimeric

<400> 152

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

Gly

<210> 153
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<212> PRT
<213> Chimeric

<400> 153

Ser Phe Phe Thr Gly Phe His Leu Asp Tyr
1 5 10

<210> 154
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<213> Chimeric

<400> 154

Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala
1 5 10

<210> 155

<211> 7
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<213> Chimeric

<400> 155

Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 156
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<212> PRT
<213> Chimeric

<400> 156

Gln Gln Tyr Thr Asn Glu His Tyr Tyr Thr
1 5 10

<210> 157
<211> 119
<212> PRT
<213> Chimeric

<400> 157

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

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

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

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

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

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

Ala Arg Ser Phe Phe Thr Gly Phe His Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 158
<211> 109
<212> PRT
<213> Chimeric

<400> 158

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly

1 5 10 15

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

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

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

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

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

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

<210> 159
<211> 119
<212> PRT
<213> Chimeric

<400> 159

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

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

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

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

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

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

Ala Arg Asn Leu Gly Pro Phe Phe Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 160
<211> 120

<212> PRT
<213> Chimeric

<400> 160

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr
20 25 30

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

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

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

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

Ser Arg Trp Gly Gly Glu Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 161
<211> 107
<212> PRT
<213> Chimeric

<400> 161

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

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

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

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

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

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

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

<210> 162
<211> 1350
<212> DNA
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ccgggtaaag gtctggaatg ggttgcagat gttaatccga atagcggtgg tagcattgtt 180

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atctgcaacg tgaaccacaa gcccagcaac accaaggtgg acgagaaggt ggagcccaag 660

agctgcgaca aaactcacac atgcccaccg tgcccagcac ctgaagctgc agggggaccg 720

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<210> 163
<211> 645
<212> DNA
<213> Chimeric

<400> 163
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<210> 164
<211> 2874
<212> DNA
<213> Chimeric

<400> 164
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<212> DNA
<213> Chimeric

<400> 165
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accgtggtgg acgactacta cgctatggac tactggggcc agggcaccag cgtgacagtg 360

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