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<140> PCT/GB2020/052631
<141> 2020-10-19

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Glu Ser Ser Glu Val Ile Val His Lys Ala Met Asp Ile Glu Tyr Asn
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Ala Tyr Leu Ala Asn Lys Trp Val Phe Ile Thr Ile Thr Asn Asp Arg
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Glu Ile Thr Gly Leu Gly Ala Ile Arg Glu Asp Asn Asn Ile Thr Leu
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Lys Leu Asp Arg Cys Asn Asn Asn Asn Gln Tyr Val Ser Ile Asp Lys
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Phe Arg Ile Phe Cys Lys Ala Leu Asn Pro Lys Glu Ile Glu Lys Leu
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Gly Leu Arg Ile Leu Ser Asn Glu Pro Trp Glu Leu Glu Asn Pro Val
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Ala Asn Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala
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Glu His Phe Pro Glu Ile Ile Glu Arg Ala Thr Tyr Thr Leu Glu Lys
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Lys Asp Thr Pro Arg Leu Ser Leu Leu Leu Val Ile Leu Gly Val Ile
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Pro Pro Pro Leu Ala Trp Asp Ala Arg Gly Gly Ser Leu Lys Thr Phe
65                  70                  75                  80

Arg Ala Leu Leu Thr Leu Ala Ala Gly Ala Asp Gly Pro Pro Arg Gln
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Ser Arg Ser Glu Pro Arg Trp His Val Ser Ala Arg Gln Pro Arg Pro
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Glu Glu Ser Ala Ala Val His Gly Gly Val Phe Trp Ser Arg Gly Leu
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Glu Glu Gln Val Pro Pro Gly Phe Ser Glu Ala Gln Ala Ala Ala Trp
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Leu Ser Tyr Tyr Leu Ala Arg Leu Leu Gly Leu Gln Arg His Val Pro
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Pro Leu Ala Leu Ala Arg Val Glu Ala Arg Gly Ala Gln Trp Ala Gln
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Val Gln Glu Glu Leu Arg Ala Ala His Trp Thr Glu Gly Ser Val Val
225                 230                 235                 240

Ser Leu Thr Arg Trp Leu Pro Asn Leu Thr Asp Val Val Val Pro Ala
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Pro Trp Arg Ser Glu Asp Gly Arg Leu Arg Pro Leu Arg Asp Ala Gly
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Gly Glu Leu Ala Asn Leu Ser Gln Ala Glu Leu Val Asp Leu Val Gln
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Trp Thr Asp Leu Ile Leu Phe Asp Tyr Leu Thr Ala Asn Phe Asp Arg
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Leu Asp Asn Glu Ala Gly Leu Val His Gly Tyr Arg Val Ala Gly Met
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Glu Leu Ala Ala Leu Ala Asp Pro His Ala Gln Leu Leu Gln Arg Arg
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Glu Asp Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr
145                 150                 155                 160

Pro Glu Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr
                165                 170                 175

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

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

Cys Ala Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg
    210                 215                 220

Pro Ser Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln
225                 230                 235                 240

Pro Ala Gly Val Ser Gly Met Ala Phe Pro Arg Pro Lys Arg Pro Ala
                245                 250                 255

Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ala Ala Ser Gly Val
            260                 265                 270

Pro Gln Thr Gly Pro Gly Arg Glu Val Ala Ala Thr Arg Pro Lys Thr
        275                 280                 285

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

Asn Val Val Ala Ala Ala Ala Ala Lys Ala Lys Met Ala Thr Ser Ile
305                 310                 315                 320

Pro Glu Pro Glu Gly Ala Ala Ala Ala Thr Ala Gln His Ser Ala Glu
                325                 330                 335

Pro Trp Ala Arg Met Gly Gly Lys Arg Thr Lys Lys Ser Lys His Leu
            340                 345                 350

Asp Asp Glu Tyr Glu Ser Ser Glu Glu Glu Arg Glu Thr Pro Ala Val
        355                 360                 365

Pro Pro Thr Trp Arg Ala Ser Gln Pro Ser Leu Thr Val Arg Ala Gln
    370                 375                 380
```

```
Leu Ala Pro Arg Pro Pro Met Ala Pro Arg Ser Gln Ile Pro Ser Arg
385                 390                 395                 400

His Val Leu Cys Leu Pro Pro Arg Asn Val Thr Leu Leu Gln Glu Arg
                405                 410                 415

Ala Asn Lys Leu Val Lys Tyr Leu Met Ile Lys Asp Tyr Lys Lys Ile
            420                 425                 430

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

Glu His Phe Pro Glu Ile Ile Glu Arg Ala Thr Tyr Thr Leu Glu Lys
    450                 455                 460

Lys Phe Gly Ile His Leu Lys Glu Ile Asp Lys Glu Glu His Leu Tyr
465                 470                 475                 480

Ile Leu Val Cys Thr Arg Asp Ser Ser Ala Arg Leu Leu Gly Lys Thr
                485                 490                 495

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

Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp Glu Ala Leu
        515                 520                 525

Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Phe Leu Gly Asp
    530                 535                 540

Leu Arg Lys Leu Ile Thr Asp Asp Phe Val Lys Gln Lys Tyr Leu Glu
545                 550                 555                 560

Tyr Lys Lys Ile Pro Asn Ser Asn Pro Pro Glu Tyr Glu Phe Leu Trp
                565                 570                 575

Gly Leu Arg Ala Arg His Glu Thr Ser Lys Met Arg Val Leu Arg Phe
            580                 585                 590

Ile Ala Gln Asn Gln Asn Arg Asp Pro Arg Glu Trp Lys Ala His Phe
        595                 600                 605

Leu Glu Ala Val Asp Asp Ala Phe Lys Thr Met Asp Val Asp Met Ala
    610                 615                 620

Glu Glu His Ala Arg Ala Gln Met Arg Ala Gln Met Asn Ile Gly Asp
625                 630                 635                 640

Glu Ala Leu Ile Gly Arg Trp Ser Trp Asp Asp Ile Gln Val Glu Leu
                645                 650                 655

Leu Thr Trp Asp Glu Asp Gly Asp Phe Gly Asp Ala Trp Ala Arg Ile
```

660 665 670

Pro Phe Ala Phe Trp Ala Arg Tyr His Gln Tyr Ile Leu Asn Ser Asn
675 680 685

Arg Ala Asn Arg Arg Ala Thr Trp Arg Ala Gly Val Ser Ser Gly Thr
690 695 700

Asn Gly Gly Ala Ser Thr Ser Val Leu Asp Gly Pro Ser Thr Ser Ser
705 710 715 720

Thr Ile Arg Thr Arg Asn Ala Ala Arg Ala Gly Ala Ser Phe Phe Ser
725 730 735

Trp Ile Gln His Arg
740

<210> 32
<211> 1023
<212> PRT
<213> Homo sapiens

<400> 32

Met Gly Trp Ser Cys Ile Ile Phe Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Lys Asn Leu Asp Cys Trp Val Asp Asn Glu Glu Asp Ile
20 25 30

Asp Val Ile Leu Lys Lys Ser Thr Ile Leu Asn Leu Asp Ile Asn Asn
35 40 45

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

Pro Asp Ala Gln Leu Val Pro Gly Ile Asn Gly Lys Ala Ile His Leu
65 70 75 80

Val Asn Asn Glu Ser Ser Glu Val Ile Val His Lys Ala Met Asp Ile
85 90 95

Glu Tyr Asn Asp Met Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg
100 105 110

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

Tyr Ser Ile Ile Ser Ser Met Lys Lys His Ser Leu Ser Ile Gly Ser
130 135 140

Gly Trp Ser Val Ser Leu Lys Gly Asn Asn Leu Ile Trp Thr Leu Lys
145 150 155 160

```
Asp Ser Ala Gly Glu Val Arg Gln Ile Thr Phe Arg Asp Leu Pro Asp
                165                 170                 175

Lys Phe Asn Ala Tyr Leu Ala Asn Lys Trp Val Phe Ile Thr Ile Thr
            180                 185                 190

Asn Asp Arg Leu Ser Ser Ala Asn Leu Tyr Ile Asn Gly Val Leu Met
        195                 200                 205

Gly Ser Ala Glu Ile Thr Gly Leu Gly Ala Ile Arg Glu Asp Asn Asn
    210                 215                 220

Ile Thr Leu Lys Leu Asp Arg Cys Asn Asn Asn Asn Gln Tyr Val Ser
225                 230                 235                 240

Ile Asp Lys Phe Arg Ile Phe Cys Lys Ala Leu Asn Pro Lys Glu Ile
                245                 250                 255

Glu Lys Leu Tyr Thr Ser Tyr Leu Ser Ile Thr Phe Leu Arg Asp Phe
            260                 265                 270

Trp Gly Asn Ala Ala Ala Gly Pro Gly Pro Met Ala Glu Gly Ser Phe
        275                 280                 285

Ser Val Gln Ser Glu Ser Tyr Ser Val Glu Asp Met Asp Glu Gly Ser
    290                 295                 300

Asp Glu Val Gly Glu Glu Glu Met Val Glu Gly Asn Asp Tyr Glu Glu
305                 310                 315                 320

Phe Gly Ala Phe Gly Gly Tyr Gly Thr Leu Thr Ser Phe Asp Ile His
                325                 330                 335

Ile Leu Arg Ala Phe Gly Ser Leu Gly Pro Gly Leu Arg Ile Leu Ser
            340                 345                 350

Asn Glu Pro Trp Glu Leu Glu Asn Pro Val Leu Ala Gln Thr Leu Val
        355                 360                 365

Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu Ala Asn Glu Thr Ala Ala
    370                 375                 380

Arg Ala Ala Asn Val Ala Arg Ala Ala Ala Ser Asn Arg Ala Ala Arg
385                 390                 395                 400

Ala Ala Ala Ala Ala Ala Arg Thr Ala Phe Ser Gln Val Val Ala Ser
                405                 410                 415

His Arg Val Ala Thr Pro Gln Val Ser Gly Glu Asp Thr Gln Pro Thr
            420                 425                 430
```

```
Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr Pro Glu Pro Pro Leu Ala
        435                 440                 445

Ser Pro Gln Thr Ser Gln Met Leu Val Thr Ser Lys Met Ala Ala Pro
    450                 455                 460

Glu Ala Pro Ala Thr Ser Ala Gln Ser Gln Thr Gly Ser Pro Ala Gln
465                 470                 475                 480

Glu Ala Ala Thr Glu Gly Pro Ser Ser Ala Cys Ala Phe Ser Gln Ala
                485                 490                 495

Pro Cys Ala Arg Glu Val Asp Ala Asn Arg Pro Ser Thr Ala Phe Leu
            500                 505                 510

Gly Gln Asn Asp Val Phe Asp Phe Thr Gln Pro Ala Gly Val Ser Gly
        515                 520                 525

Met Ala Phe Pro Arg Pro Lys Arg Pro Ala Pro Ala Gln Glu Ala Ala
    530                 535                 540

Thr Glu Gly Pro Ser Ala Ala Ser Gly Val Pro Gln Thr Gly Pro Gly
545                 550                 555                 560

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

Leu Ala Lys Thr Arg Trp Val Glu Pro Gln Asn Val Val Ala Ala Ala
            580                 585                 590

Ala Ala Lys Ala Lys Met Ala Thr Ser Ile Pro Glu Pro Glu Gly Ala
        595                 600                 605

Ala Ala Ala Thr Ala Gln His Ser Ala Glu Pro Trp Ala Arg Met Gly
    610                 615                 620

Gly Lys Arg Thr Lys Lys Ser Lys His Leu Asp Asp Glu Tyr Glu Ser
625                 630                 635                 640

Ser Glu Glu Glu Arg Glu Thr Pro Ala Val Pro Pro Thr Trp Arg Ala
                645                 650                 655

Ser Gln Pro Ser Leu Thr Val Arg Ala Gln Leu Ala Pro Arg Pro Pro
            660                 665                 670

Met Ala Pro Arg Ser Gln Ile Pro Ser Arg His Val Leu Cys Leu Pro
        675                 680                 685

Pro Arg Asn Val Thr Leu Leu Gln Glu Arg Ala Asn Lys Leu Val Lys
    690                 695                 700

Tyr Leu Met Ile Lys Asp Tyr Lys Lys Ile Pro Ile Lys Arg Ala Asp
```

```
705                 710                 715                 720

Met Leu Lys Asp Val Ile Arg Glu Tyr Asp Glu His Phe Pro Glu Ile
                725                 730                 735

Ile Glu Arg Ala Thr Tyr Thr Leu Glu Lys Lys Phe Gly Ile His Leu
            740                 745                 750

Lys Glu Ile Asp Lys Glu Glu His Leu Tyr Ile Leu Val Cys Thr Arg
        755                 760                 765

Asp Ser Ser Ala Arg Leu Leu Gly Lys Thr Lys Asp Thr Pro Arg Leu
    770                 775                 780

Ser Leu Leu Leu Val Ile Leu Gly Val Ile Phe Met Asn Gly Asn Arg
785                 790                 795                 800

Ala Ser Glu Ala Val Leu Trp Glu Ala Leu Arg Lys Met Gly Leu Arg
                805                 810                 815

Pro Gly Val Arg His Pro Phe Leu Gly Asp Leu Arg Lys Leu Ile Thr
            820                 825                 830

Asp Asp Phe Val Lys Gln Lys Tyr Leu Glu Tyr Lys Lys Ile Pro Asn
        835                 840                 845

Ser Asn Pro Pro Glu Tyr Glu Phe Leu Trp Gly Leu Arg Ala Arg His
    850                 855                 860

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

Arg Asp Pro Arg Glu Trp Lys Ala His Phe Leu Glu Ala Val Asp Asp
                885                 890                 895

Ala Phe Lys Thr Met Asp Val Asp Met Ala Glu Glu His Ala Arg Ala
            900                 905                 910

Gln Met Arg Ala Gln Met Asn Ile Gly Asp Glu Ala Leu Ile Gly Arg
        915                 920                 925

Trp Ser Trp Asp Asp Ile Gln Val Glu Leu Leu Thr Trp Asp Glu Asp
    930                 935                 940

Gly Asp Phe Gly Asp Ala Trp Ala Arg Ile Pro Phe Ala Phe Trp Ala
945                 950                 955                 960

Arg Tyr His Gln Tyr Ile Leu Asn Ser Asn Arg Ala Asn Arg Arg Ala
                965                 970                 975

Thr Trp Arg Ala Gly Val Ser Ser Gly Thr Asn Gly Gly Ala Ser Thr
            980                 985                 990
```

```
Ser Val Leu Asp Gly Pro Ser Thr  Ser Ser Thr Ile Arg  Thr Arg Asn
        995                 1000                1005


Ala Ala  Arg Ala Gly Ala Ser  Phe Phe Ser Trp Ile  Gln His Arg
    1010                1015                1020


<210>  33
<211>  437
<212>  PRT
<213>  Homo sapiens

<400>  33

Met Gly Arg Arg Met Arg Gly Ala Ala Ala Thr Ala Gly Leu Trp Leu
1               5                   10                  15


Leu Ala Leu Gly Ser Leu Leu Ala Leu Trp Gly Gly Leu Leu Pro Pro
            20                  25                  30


Arg Thr Glu Leu Pro Ala Ser Arg Pro Pro Glu Asp Arg Leu Pro Arg
        35                  40                  45


Arg Pro Ala Arg Ser Gly Gly Pro Ala Pro Ala Pro Arg Phe Pro Leu
    50                  55                  60


Pro Pro Pro Leu Ala Trp Asp Ala Arg Gly Gly Ser Leu Lys Thr Phe
65                  70                  75                  80


Arg Ala Leu Leu Thr Leu Ala Ala Gly Ala Asp Gly Pro Pro Arg Gln
                85                  90                  95


Ser Arg Ser Glu Pro Arg Trp His Val Ser Ala Arg Gln Pro Arg Pro
            100                 105                 110


Glu Glu Ser Ala Ala Val His Gly Gly Val Phe Trp Ser Arg Gly Leu
        115                 120                 125


Glu Glu Gln Val Pro Pro Gly Phe Ser Glu Ala Gln Ala Ala Ala Trp
    130                 135                 140


Leu Glu Ala Ala Arg Gly Ala Arg Met Val Ala Leu Glu Arg Gly Gly
145                 150                 155                 160


Cys Gly Arg Ser Ser Asn Arg Leu Ala Arg Phe Ala Asp Gly Thr Arg
                165                 170                 175


Ala Cys Val Arg Tyr Gly Ile Asn Pro Glu Gln Ile Gln Gly Glu Ala
            180                 185                 190


Leu Ser Tyr Tyr Leu Ala Arg Leu Leu Gly Leu Gln Arg His Val Pro
        195                 200                 205
```

```
Pro Leu Ala Leu Ala Arg Val Glu Ala Arg Gly Ala Gln Trp Ala Gln
    210                 215                 220

Val Gln Glu Glu Leu Arg Ala Ala His Trp Thr Glu Gly Ser Val Val
225                 230                 235                 240

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

Pro Trp Arg Ser Glu Asp Gly Arg Leu Arg Pro Leu Arg Asp Ala Gly
            260                 265                 270

Gly Glu Leu Ala Asn Leu Ser Gln Ala Glu Leu Val Asp Leu Val Gln
        275                 280                 285

Trp Thr Asp Leu Ile Leu Phe Asp Tyr Leu Thr Ala Asn Phe Asp Arg
    290                 295                 300

Leu Val Ser Asn Leu Phe Ser Leu Gln Trp Asp Pro Arg Val Met Gln
305                 310                 315                 320

Arg Ala Thr Ser Asn Leu His Arg Gly Pro Gly Gly Ala Leu Val Phe
                325                 330                 335

Leu Asp Asn Glu Ala Gly Leu Val His Gly Tyr Arg Val Ala Gly Met
            340                 345                 350

Trp Asp Lys Tyr Asn Glu Pro Leu Leu Gln Ser Val Cys Val Phe Arg
        355                 360                 365

Glu Arg Thr Ala Arg Arg Val Leu Glu Leu His Arg Gly Gln Asp Ala
    370                 375                 380

Ala Ala Arg Leu Leu Arg Leu Tyr Arg Arg His Glu Pro Arg Phe Pro
385                 390                 395                 400

Glu Leu Ala Ala Leu Ala Asp Pro His Ala Gln Leu Leu Gln Arg Arg
                405                 410                 415

Leu Asp Phe Leu Ala Lys His Ile Leu His Cys Lys Ala Lys Tyr Gly
            420                 425                 430

Arg Arg Ser Gly Thr
        435


<210>  34
<211>  719
<212>  PRT
<213>  Homo sapiens

<400>  34

Met Gly Trp Ser Cys Ile Ile Phe Phe Leu Val Ala Thr Ala Thr Gly
1               5                   10                  15
```

```
Val His Ser Lys Asn Leu Asp Cys Trp Val Asp Asn Glu Glu Asp Ile
            20                  25                  30

Asp Val Ile Leu Lys Lys Ser Thr Ile Leu Asn Leu Asp Ile Asn Asn
        35                  40                  45

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

Pro Asp Ala Gln Leu Val Pro Gly Ile Asn Gly Lys Ala Ile His Leu
65                  70                  75                  80

Val Asn Asn Glu Ser Ser Glu Val Ile Val His Lys Ala Met Asp Ile
                85                  90                  95

Glu Tyr Asn Asp Met Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg
            100                 105                 110

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

Tyr Ser Ile Ile Ser Ser Met Lys Lys His Ser Leu Ser Ile Gly Ser
    130                 135                 140

Gly Trp Ser Val Ser Leu Lys Gly Asn Asn Leu Ile Trp Thr Leu Lys
145                 150                 155                 160

Asp Ser Ala Gly Glu Val Arg Gln Ile Thr Phe Arg Asp Leu Pro Asp
                165                 170                 175

Lys Phe Asn Ala Tyr Leu Ala Asn Lys Trp Val Phe Ile Thr Ile Thr
            180                 185                 190

Asn Asp Arg Leu Ser Ser Ala Asn Leu Tyr Ile Asn Gly Val Leu Met
        195                 200                 205

Gly Ser Ala Glu Ile Thr Gly Leu Gly Ala Ile Arg Glu Asp Asn Asn
    210                 215                 220

Ile Thr Leu Lys Leu Asp Arg Cys Asn Asn Asn Asn Gln Tyr Val Ser
225                 230                 235                 240

Ile Asp Lys Phe Arg Ile Phe Cys Lys Ala Leu Asn Pro Lys Glu Ile
                245                 250                 255

Glu Lys Leu Tyr Thr Ser Tyr Leu Ser Ile Thr Phe Leu Arg Asp Phe
            260                 265                 270

Trp Gly Asn Ala Ala Ala Gly Pro Gly Pro Met Gly Arg Arg Met Arg
        275                 280                 285
```

```
Gly Ala Ala Ala Thr Ala Gly Leu Trp Leu Leu Ala Leu Gly Ser Leu
    290                 295                 300

Leu Ala Leu Trp Gly Gly Leu Leu Pro Pro Arg Thr Glu Leu Pro Ala
305                 310                 315                 320

Ser Arg Pro Pro Glu Asp Arg Leu Pro Arg Arg Pro Ala Arg Ser Gly
                325                 330                 335

Gly Pro Ala Pro Ala Pro Arg Phe Pro Leu Pro Pro Pro Leu Ala Trp
            340                 345                 350

Asp Ala Arg Gly Gly Ser Leu Lys Thr Phe Arg Ala Leu Leu Thr Leu
        355                 360                 365

Ala Ala Gly Ala Asp Gly Pro Pro Arg Gln Ser Arg Ser Glu Pro Arg
    370                 375                 380

Trp His Val Ser Ala Arg Gln Pro Arg Pro Glu Glu Ser Ala Ala Val
385                 390                 395                 400

His Gly Gly Val Phe Trp Ser Arg Gly Leu Glu Glu Gln Val Pro Pro
                405                 410                 415

Gly Phe Ser Glu Ala Gln Ala Ala Ala Trp Leu Glu Ala Ala Arg Gly
            420                 425                 430

Ala Arg Met Val Ala Leu Glu Arg Gly Gly Cys Gly Arg Ser Ser Asn
        435                 440                 445

Arg Leu Ala Arg Phe Ala Asp Gly Thr Arg Ala Cys Val Arg Tyr Gly
    450                 455                 460

Ile Asn Pro Glu Gln Ile Gln Gly Glu Ala Leu Ser Tyr Tyr Leu Ala
465                 470                 475                 480

Arg Leu Leu Gly Leu Gln Arg His Val Pro Pro Leu Ala Leu Ala Arg
                485                 490                 495

Val Glu Ala Arg Gly Ala Gln Trp Ala Gln Val Gln Glu Glu Leu Arg
            500                 505                 510

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

Pro Asn Leu Thr Asp Val Val Val Pro Ala Pro Trp Arg Ser Glu Asp
    530                 535                 540

Gly Arg Leu Arg Pro Leu Arg Asp Ala Gly Gly Glu Leu Ala Asn Leu
545                 550                 555                 560
```

```
Ser Gln Ala Glu Leu Val Asp Leu Val Gln Trp Thr Asp Leu Ile Leu
                565                 570                 575


Phe Asp Tyr Leu Thr Ala Asn Phe Asp Arg Leu Val Ser Asn Leu Phe
            580                 585                 590


Ser Leu Gln Trp Asp Pro Arg Val Met Gln Arg Ala Thr Ser Asn Leu
        595                 600                 605


His Arg Gly Pro Gly Gly Ala Leu Val Phe Leu Asp Asn Glu Ala Gly
    610                 615                 620


Leu Val His Gly Tyr Arg Val Ala Gly Met Trp Asp Lys Tyr Asn Glu
625                 630                 635                 640


Pro Leu Leu Gln Ser Val Cys Val Phe Arg Glu Arg Thr Ala Arg Arg
                645                 650                 655


Val Leu Glu Leu His Arg Gly Gln Asp Ala Ala Ala Arg Leu Leu Arg
            660                 665                 670


Leu Tyr Arg Arg His Glu Pro Arg Phe Pro Glu Leu Ala Ala Leu Ala
        675                 680                 685


Asp Pro His Ala Gln Leu Leu Gln Arg Arg Leu Asp Phe Leu Ala Lys
    690                 695                 700


His Ile Leu His Cys Lys Ala Lys Tyr Gly Arg Arg Ser Gly Thr
705                 710                 715


<210>  35
<211>  479
<212>  PRT
<213>  Homo sapiens

<400>  35

Met Ala Glu Gly Ser Phe Ser Val Gln Ser Glu Ser Tyr Ser Val Glu
1               5                   10                  15


Asp Met Asp Glu Gly Ser Asp Glu Val Gly Glu Glu Glu Met Val Glu
            20                  25                  30


Gly Asn Asp Tyr Glu Glu Phe Gly Ala Phe Gly Gly Tyr Gly Thr Leu
        35                  40                  45


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


Gly Leu Arg Ile Leu Ser Asn Glu Pro Trp Glu Leu Glu Asn Pro Val
65                  70                  75                  80


Leu Ala Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu
                85                  90                  95
```

```
Ala Asn Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala
            100                 105                 110

Ser Asn Arg Ala Ala Arg Ala Ala Ala Ala Ala Ala Arg Thr Ala Phe
        115                 120                 125

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

Glu Asp Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr
145                 150                 155                 160

Pro Glu Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr
                165                 170                 175

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

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

Cys Ala Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg
    210                 215                 220

Pro Ser Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln
225                 230                 235                 240

Pro Ala Gly Val Ser Gly Met Ala Phe Pro Arg Pro Lys Arg Pro Ala
                245                 250                 255

Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ala Ala Ser Gly Val
            260                 265                 270

Pro Gln Thr Gly Pro Gly Arg Glu Val Ala Ala Thr Arg Pro Lys Thr
        275                 280                 285

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

Asn Val Val Ala Ala Ala Ala Ala Lys Ala Lys Met Ala Thr Ser Ile
305                 310                 315                 320

Pro Glu Pro Glu Gly Ala Ala Ala Ala Thr Ala Gln His Ser Ala Glu
                325                 330                 335

Pro Trp Ala Arg Met Gly Gly Lys Arg Thr Lys Lys Ser Lys His Leu
            340                 345                 350

Asp Asp Glu Tyr Glu Ser Ser Glu Glu Glu Arg Glu Thr Pro Ala Val
        355                 360                 365
```

```
Pro Pro Thr Trp Arg Ala Ser Gln Pro Ser Leu Thr Val Arg Ala Gln
    370                 375                 380

Leu Ala Pro Arg Pro Pro Met Ala Pro Arg Ser Gln Ile Pro Ser Arg
385                 390                 395                 400

His Val Leu Cys Leu Pro Pro Arg Asn Val Thr Arg Leu Ser Leu Leu
                405                 410                 415

Leu Val Ile Leu Tyr Ile Leu Asn Ser Asn Arg Ala Asn Arg Arg Ala
            420                 425                 430

Thr Trp Arg Ala Gly Val Ser Ser Gly Thr Asn Gly Gly Ala Ser Thr
        435                 440                 445

Ser Val Leu Asp Gly Pro Ser Thr Ser Ser Thr Ile Arg Thr Arg Asn
    450                 455                 460

Ala Ala Arg Ala Gly Ala Ser Phe Phe Ser Trp Ile Gln His Arg
465                 470                 475
```

<210> 36
<211> 652
<212> PRT
<213> Homo sapiens

<400> 36

```
Met Ala Glu Gly Ser Phe Ser Val Gln Ser Glu Ser Tyr Ser Val Glu
1               5                   10                  15

Asp Met Asp Glu Gly Ser Asp Glu Val Gly Glu Glu Glu Met Val Glu
            20                  25                  30

Gly Asn Asp Tyr Glu Glu Phe Gly Ala Phe Gly Gly Tyr Gly Thr Leu
        35                  40                  45

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

Gly Leu Arg Ile Leu Ser Asn Glu Pro Trp Glu Leu Glu Asn Pro Val
65                  70                  75                  80

Leu Ala Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu
                85                  90                  95

Ala Asn Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala
            100                 105                 110

Ser Asn Arg Ala Ala Arg Ala Ala Ala Ala Ala Ala Arg Thr Ala Phe
        115                 120                 125

Ser Gln Val Val Ala Ser His Arg Val Ala Thr Pro Gln Val Ser Gly
```

```
    130                 135                 140

Glu Asp Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr
145                 150                 155                 160

Pro Glu Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr
                165                 170                 175

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

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

Cys Ala Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg
    210                 215                 220

Pro Ser Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln
225                 230                 235                 240

Pro Ala Gly Val Ser Gly Met Ala Phe Pro Arg Pro Lys Arg Pro Ala
                245                 250                 255

Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ala Ala Ser Gly Val
            260                 265                 270

Pro Gln Thr Gly Pro Gly Arg Glu Val Ala Ala Thr Arg Pro Lys Thr
        275                 280                 285

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

Asn Val Val Ala Ala Ala Ala Ala Lys Ala Lys Met Ala Thr Ser Ile
305                 310                 315                 320

Pro Glu Pro Glu Gly Ala Ala Ala Ala Thr Ala Gln His Ser Ala Glu
                325                 330                 335

Pro Trp Ala Arg Met Gly Gly Lys Arg Thr Lys Lys Ser Lys His Leu
            340                 345                 350

Asp Asp Glu Tyr Glu Ser Ser Glu Glu Glu Arg Glu Thr Pro Ala Val
        355                 360                 365

Pro Pro Thr Trp Arg Ala Ser Gln Pro Ser Leu Thr Val Arg Ala Gln
    370                 375                 380

Leu Ala Pro Arg Pro Pro Met Ala Pro Arg Ser Gln Ile Pro Ser Arg
385                 390                 395                 400

His Val Leu Cys Leu Pro Pro Arg Asn Val Thr Arg Leu Ser Leu Leu
                405                 410                 415
```

```
Leu Val Ile Leu Gly Val Ile Phe Met Asn Gly Asn Arg Ala Ser Glu
            420                 425                 430

Ala Val Leu Trp Glu Ala Leu Arg Lys Met Gly Leu Arg Pro Gly Val
        435                 440                 445

Arg His Pro Phe Leu Gly Asp Leu Arg Lys Leu Ile Thr Asp Asp Phe
    450                 455                 460

Val Lys Gln Lys Tyr Leu Glu Tyr Lys Lys Ile Pro Asn Ser Asn Pro
465                 470                 475                 480

Pro Glu Tyr Glu Phe Leu Trp Gly Leu Arg Ala Arg His Glu Thr Ser
                485                 490                 495

Lys Met Arg Val Leu Arg Phe Ile Ala Gln Asn Gln Asn Arg Asp Pro
            500                 505                 510

Arg Glu Trp Lys Ala His Phe Leu Glu Ala Val Asp Asp Ala Phe Lys
        515                 520                 525

Thr Met Asp Val Asp Met Ala Glu Glu His Ala Arg Ala Gln Met Arg
    530                 535                 540

Ala Gln Met Asn Ile Gly Asp Glu Ala Leu Ile Gly Arg Trp Ser Trp
545                 550                 555                 560

Asp Asp Ile Gln Val Glu Leu Leu Thr Trp Asp Glu Asp Gly Asp Phe
                565                 570                 575

Gly Asp Ala Trp Ala Arg Ile Pro Phe Ala Phe Trp Ala Arg Tyr His
            580                 585                 590

Gln Tyr Ile Leu Asn Ser Asn Arg Ala Asn Arg Arg Ala Thr Trp Arg
        595                 600                 605

Ala Gly Val Ser Ser Gly Thr Asn Gly Gly Ala Ser Thr Ser Val Leu
    610                 615                 620

Asp Gly Pro Ser Thr Ser Ser Thr Ile Arg Thr Arg Asn Ala Ala Arg
625                 630                 635                 640

Ala Gly Ala Ser Phe Phe Ser Trp Ile Gln His Arg
                645                 650
```

<210> 37
<211> 568
<212> PRT
<213> Homo sapiens

<400> 37

```
Met Ala Glu Gly Ser Phe Ser Val Gln Ser Glu Ser Tyr Ser Val Glu
1               5                   10                  15

Asp Met Asp Glu Gly Ser Asp Glu Val Gly Glu Glu Glu Met Val Glu
            20                  25                  30

Gly Asn Asp Tyr Glu Glu Phe Gly Ala Phe Gly Gly Tyr Gly Thr Leu
        35                  40                  45

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

Gly Leu Arg Ile Leu Ser Asn Glu Pro Trp Glu Leu Glu Asn Pro Val
65                  70                  75                  80

Leu Ala Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu
                85                  90                  95

Ala Asn Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala
            100                 105                 110

Ser Asn Arg Ala Ala Arg Ala Ala Ala Ala Ala Ala Arg Thr Ala Phe
        115                 120                 125

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

Glu Asp Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr
145                 150                 155                 160

Pro Glu Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr
                165                 170                 175

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

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

Cys Ala Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg
    210                 215                 220

Pro Ser Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln
225                 230                 235                 240

Pro Ala Gly Val Ser Gly Met Ala Phe Pro Arg Pro Lys Arg Pro Ala
                245                 250                 255

Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ala Ala Ser Gly Val
            260                 265                 270

Pro Gln Thr Gly Pro Gly Arg Glu Val Ala Ala Thr Arg Pro Lys Thr
```

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        275                 280                 285

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

Asn Val Val Ala Ala Ala Ala Ala Lys Ala Lys Met Ala Thr Ser Ile
305                 310                 315                 320

Pro Glu Pro Glu Gly Ala Ala Ala Ala Thr Ala Gln His Ser Ala Glu
                325                 330                 335

Pro Trp Ala Arg Met Gly Gly Lys Arg Thr Lys Lys Ser Lys His Leu
            340                 345                 350

Asp Asp Glu Tyr Glu Ser Ser Glu Glu Glu Arg Glu Thr Pro Ala Val
        355                 360                 365

Pro Pro Thr Trp Arg Ala Ser Gln Pro Ser Leu Thr Val Arg Ala Gln
    370                 375                 380

Leu Ala Pro Arg Pro Pro Met Ala Pro Arg Ser Gln Ile Pro Ser Arg
385                 390                 395                 400

His Val Leu Cys Leu Pro Pro Arg Asn Val Thr Leu Leu Gln Glu Arg
                405                 410                 415

Ala Asn Lys Leu Val Lys Tyr Leu Met Ile Lys Asp Tyr Lys Lys Ile
            420                 425                 430

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

Glu His Phe Pro Glu Ile Ile Glu Arg Ala Thr Tyr Thr Leu Glu Lys
    450                 455                 460

Lys Phe Gly Ile His Leu Lys Glu Ile Asp Lys Glu Glu His Leu Tyr
465                 470                 475                 480

Ile Leu Val Cys Thr Arg Asp Ser Ser Ala Arg Leu Leu Gly Lys Thr
                485                 490                 495

Lys Asp Thr Pro Arg Leu Ser Leu Leu Leu Val Ile Leu Tyr Ile Leu
            500                 505                 510

Asn Ser Asn Arg Ala Asn Arg Arg Ala Thr Trp Arg Ala Gly Val Ser
        515                 520                 525

Ser Gly Thr Asn Gly Gly Ala Ser Thr Ser Val Leu Asp Gly Pro Ser
    530                 535                 540

Thr Ser Ser Thr Ile Arg Thr Arg Asn Ala Ala Arg Ala Gly Ala Ser
545                 550                 555                 560
```

```
Phe Phe Ser Trp Ile Gln His Arg
                565


<210>  38
<211>  237
<212>  PRT
<213>  Homo sapiens

<400>  38

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


Thr Thr Thr Lys Thr Ala Gly Ala Thr Pro Ala Thr Ala Ser Gly Leu
            20                  25                  30


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


Ala Ser Asn Ala Val Ala Thr Asn Glu Asp Leu Ser Lys Ile Glu Ala
    50                  55                  60


Ile Trp Lys Asp Met Lys Val Pro Thr Asp Thr Met Ala Gln Ala Ala
65                  70                  75                  80


Trp Asp Leu Val Arg His Cys Ala Asp Val Gly Ser Ser Ala Gln Thr
                85                  90                  95


Glu Met Ile Asp Thr Gly Pro Tyr Ser Asn Gly Ile Ser Arg Ala Arg
            100                 105                 110


Leu Ala Ala Ala Ile Lys Glu Val Cys Thr Leu Arg Gln Phe Cys Met
        115                 120                 125


Lys Tyr Ala Pro Val Val Trp Asn Trp Met Leu Thr Asn Asn Ser Pro
    130                 135                 140


Pro Ala Asn Trp Gln Ala Gln Gly Phe Lys Pro Glu His Lys Phe Ala
145                 150                 155                 160


Ala Phe Asp Phe Phe Asn Gly Val Thr Asn Pro Ala Ala Ile Met Pro
                165                 170                 175


Lys Glu Gly Leu Ile Arg Pro Pro Ser Glu Ala Glu Met Asn Ala Ala
            180                 185                 190


Gln Thr Ala Ala Phe Val Lys Ile Thr Lys Ala Arg Ala Gln Ser Asn
        195                 200                 205


Asp Phe Ala Ser Leu Asp Ala Ala Val Thr Arg Gly Arg Ile Thr Gly
    210                 215                 220
```

Thr Thr Thr Ala Glu Ala Val Val Thr Leu Pro Pro Pro
225 230 235

<210> 39
<211> 96
<212> PRT
<213> Homo sapiens

<400> 39

Met Cys Cys Thr Lys Ser Leu Leu Leu Ala Ala Leu Met Ser Val Leu
1 5 10 15

Leu Leu His Leu Cys Gly Glu Ser Glu Ala Ala Ser Asn Phe Asp Cys
20 25 30

Cys Leu Gly Tyr Thr Asp Arg Ile Leu His Pro Lys Phe Ile Val Gly
35 40 45

Phe Thr Arg Gln Leu Ala Asn Glu Gly Cys Asp Ile Asn Ala Ile Ile
50 55 60

Phe His Thr Lys Lys Lys Leu Ser Val Cys Ala Asn Pro Lys Gln Thr
65 70 75 80

Trp Val Lys Tyr Ile Val Arg Leu Leu Ser Lys Lys Val Lys Asn Met
85 90 95

<210> 40
<211> 55
<212> PRT
<213> Homo sapiens

<400> 40

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

Gly Ala Val Val Ala Ala Val Met Trp Arg Arg Lys Ser Ser Asp Arg
20 25 30

Lys Gly Gly Ser Tyr Ser Gln Ala Ala Ser Ser Asp Ser Ala Gln Gly
35 40 45

Ser Asp Val Ser Leu Thr Ala
50 55

<210> 41
<211> 739
<212> PRT
<213> Homo sapiens

<400> 41

Met Ala Glu Gly Ser Phe Ser Val Gln Ser Glu Ser Tyr Ser Val Glu
1 5 10 15

```
Asp Met Asp Glu Gly Ser Asp Glu Val Gly Glu Glu Glu Met Val Glu
            20                  25                  30

Gly Asn Asp Tyr Glu Glu Phe Gly Ala Phe Gly Gly Tyr Gly Thr Leu
        35                  40                  45

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

Gly Leu Arg Ile Leu Ser Asn Glu Pro Trp Glu Leu Glu Asn Pro Val
65                  70                  75                  80

Leu Ala Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu
                85                  90                  95

Ala Asn Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala
            100                 105                 110

Ser Asn Arg Ala Ala Arg Ala Ala Ala Ala Ala Ala Arg Thr Ala Phe
        115                 120                 125

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

Glu Asp Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr
145                 150                 155                 160

Pro Glu Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr
                165                 170                 175

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

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

Cys Ala Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg
    210                 215                 220

Pro Ser Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln
225                 230                 235                 240

Pro Ala Gly Val Ser Gly Met Ala Phe Pro Arg Pro Lys Arg Pro Ala
                245                 250                 255

Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ala Ala Ser Gly Val
            260                 265                 270

Pro Gln Thr Gly Pro Gly Arg Glu Val Ala Ala Thr Arg Pro Lys Thr
        275                 280                 285

Thr Lys Ser Gly Lys Ala Leu Ala Lys Thr Arg Trp Val Glu Pro Gln
```

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    290                 295                 300

Asn Val Val Ala Ala Ala Ala Ala Lys Ala Lys Met Ala Thr Ser Ile
305                 310                 315                 320

Pro Glu Pro Glu Gly Ala Ala Ala Ala Thr Ala Gln His Ser Ala Glu
                325                 330                 335

Pro Trp Ala Arg Met Gly Gly Lys Arg Thr Lys Lys Ser Lys His Leu
            340                 345                 350

Asp Asp Glu Tyr Glu Ser Ser Glu Glu Glu Arg Glu Thr Pro Ala Val
        355                 360                 365

Pro Pro Thr Trp Arg Ala Ser Gln Pro Ser Leu Thr Val Arg Ala Gln
    370                 375                 380

Leu Ala Pro Arg Pro Pro Met Ala Pro Arg Ser Gln Ile Pro Ser Arg
385                 390                 395                 400

His Val Leu Cys Leu Pro Pro Arg Asn Val Thr Leu Leu Gln Glu Arg
                405                 410                 415

Ala Asn Lys Leu Val Lys Tyr Leu Met Ile Lys Asp Tyr Lys Lys Ile
            420                 425                 430

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

Glu His Phe Pro Glu Ile Ile Glu Arg Ala Thr Tyr Thr Leu Glu Lys
    450                 455                 460

Lys Phe Gly Ile His Leu Lys Glu Ile Asp Lys Glu Glu His Leu Tyr
465                 470                 475                 480

Ile Leu Val Cys Thr Arg Asp Ser Ser Ala Arg Leu Leu Gly Lys Thr
                485                 490                 495

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

Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp Glu Ala Leu
        515                 520                 525

Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Phe Leu Gly Asp
    530                 535                 540

Leu Arg Lys Leu Ile Thr Asp Asp Phe Val Lys Gln Lys Tyr Leu Glu
545                 550                 555                 560

Tyr Lys Lys Ile Pro Asn Ser Asn Pro Pro Glu Tyr Glu Phe Leu Trp
                565                 570                 575
```

```
Gly Leu Arg Ala Arg His Glu Thr Ser Lys Met Arg Val Leu Arg Phe
            580                 585                 590

Ile Ala Gln Asn Gln Asn Arg Asp Pro Arg Glu Trp Lys Ala His Phe
        595                 600                 605

Leu Glu Ala Val Asp Asp Ala Phe Lys Thr Met Asp Val Asp Met Ala
    610                 615                 620

Glu Glu His Ala Arg Ala Gln Met Arg Ala Gln Met Asn Ile Gly Asp
625                 630                 635                 640

Glu Ala Leu Ile Gly Arg Trp Ser Trp Asp Asp Ile Gln Val Glu Leu
                645                 650                 655

Leu Thr Trp Asp Glu Asp Gly Asp Phe Gly Asp Ala Trp Ala Arg Ile
            660                 665                 670

Pro Phe Ala Phe Trp Ala Arg Tyr His Gln Tyr Ile Leu Asn Ser Asn
        675                 680                 685

Arg Ala Asn Arg Arg Ala Thr Trp Arg Ala Gly Val Ser Ser Gly Thr
    690                 695                 700

Asn Gly Gly Ala Ser Thr Ser Val Leu Asp Gly Pro Ser Thr Ser Ser
705                 710                 715                 720

Thr Ile Arg Thr Arg Asn Ala Ala Arg Ala Gly Ala Ser Phe Phe Ser
                725                 730                 735

Trp Ile Gln
```

<210> 42
<211> 414
<212> PRT
<213> Homo sapiens

<400> 42

```
Met Ala Glu Gly Ser Phe Ser Val Gln Ser Glu Ser Tyr Ser Val Glu
1               5                   10                  15

Asp Met Asp Glu Gly Ser Asp Glu Val Gly Glu Glu Glu Met Val Glu
            20                  25                  30

Gly Asn Asp Tyr Glu Glu Phe Gly Ala Phe Gly Gly Tyr Gly Thr Leu
        35                  40                  45

Thr Ser Phe Asp Ile His Ile Leu Arg Ala Phe Gly Ser Leu Gly Pro
    50                  55                  60
```

```
Gly Leu Arg Ile Leu Ser Asn Glu Pro Trp Glu Leu Glu Asn Pro Val
65                  70                  75                  80

Leu Ala Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu
                85                  90                  95

Ala Asn Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala
            100                 105                 110

Ser Asn Arg Ala Ala Arg Ala Ala Ala Ala Ala Ala Arg Thr Ala Phe
        115                 120                 125

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

Glu Asp Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr
145                 150                 155                 160

Pro Glu Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr
                165                 170                 175

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

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

Cys Ala Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg
    210                 215                 220

Pro Ser Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln
225                 230                 235                 240

Pro Ala Gly Val Ser Gly Met Ala Phe Pro Arg Pro Lys Arg Pro Ala
                245                 250                 255

Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ala Ala Ser Gly Val
            260                 265                 270

Pro Gln Thr Gly Pro Gly Arg Glu Val Ala Ala Thr Arg Pro Lys Thr
        275                 280                 285

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

Asn Val Val Ala Ala Ala Ala Ala Lys Ala Lys Met Ala Thr Ser Ile
305                 310                 315                 320

Pro Glu Pro Glu Gly Ala Ala Ala Ala Thr Ala Gln His Ser Ala Glu
                325                 330                 335

Pro Trp Ala Arg Met Gly Gly Lys Arg Thr Lys Lys Val Arg Ser Pro
```

340 345 350

Cys Pro Leu Pro Pro Pro His Pro Leu Ala Pro Val Leu Ser Phe Ser
355 360 365

Ser Leu Ser Cys Ser Ser Pro Pro Ser Pro Leu Pro Leu Leu Pro Leu
370 375 380

Phe Ser Ser Phe Pro Ser Phe Ser Pro His Leu Pro Ser Pro Pro Leu
385 390 395 400

Leu Ser Ser Gln Leu Val His Val Ser Pro Thr Gln Val Cys
405 410

<210> 43
<211> 757
<212> PRT
<213> Homo sapiens

<400> 43

Met Ala Glu Gly Ser Phe Ser Val Gln Ser Glu Ser Tyr Ser Val Glu
1 5 10 15

Asp Met Asp Glu Gly Ser Asp Glu Val Gly Glu Glu Glu Met Val Glu
20 25 30

Gly Asn Asp Tyr Glu Glu Phe Gly Ala Phe Gly Gly Tyr Gly Thr Leu
35 40 45

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

Gly Leu Arg Ile Leu Ser Asn Glu Pro Trp Glu Leu Glu Asn Pro Val
65 70 75 80

Leu Ala Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu
85 90 95

Ala Asn Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala
100 105 110

Ser Asn Arg Ala Ala Arg Ala Ala Ala Ala Ala Ala Arg Thr Ala Phe
115 120 125

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

Glu Asp Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr
145 150 155 160

Pro Glu Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr
165 170 175

```
Ser Lys Met Ala Ala Pro Glu Ala Pro Ala Thr Ser Ala Gln Ser Gln
            180                 185                 190

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

Cys Ala Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg
    210                 215                 220

Pro Ser Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln
225                 230                 235                 240

Pro Ala Gly Val Ser Gly Met Ala Phe Pro Arg Pro Lys Arg Pro Ala
                245                 250                 255

Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ala Ala Ser Gly Val
            260                 265                 270

Pro Gln Thr Gly Pro Gly Arg Glu Val Ala Ala Thr Arg Pro Lys Thr
        275                 280                 285

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

Asn Val Val Ala Ala Ala Ala Ala Lys Ala Lys Met Ala Thr Ser Ile
305                 310                 315                 320

Pro Glu Pro Glu Gly Ala Ala Ala Ala Thr Ala Gln His Ser Ala Glu
                325                 330                 335

Pro Trp Ala Arg Met Gly Gly Lys Arg Thr Lys Lys Ser Lys His Leu
            340                 345                 350

Asp Asp Glu Tyr Glu Ser Ser Glu Glu Glu Arg Glu Thr Pro Ala Val
        355                 360                 365

Pro Pro Thr Trp Arg Ala Ser Gln Pro Ser Leu Thr Val Arg Ala Gln
    370                 375                 380

Leu Ala Pro Arg Pro Pro Met Ala Pro Arg Ser Gln Ile Pro Ser Arg
385                 390                 395                 400

His Val Leu Cys Leu Pro Pro Arg Asn Val Thr Leu Leu Gln Glu Arg
                405                 410                 415

Ala Asn Lys Leu Val Lys Tyr Leu Met Ile Lys Asp Tyr Lys Lys Ile
            420                 425                 430

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

```
Glu His Phe Pro Glu Ile Ile Glu Arg Ala Thr Tyr Thr Leu Glu Lys
    450                 455                 460

Lys Phe Gly Ile His Leu Lys Glu Ile Asp Lys Glu Glu His Leu Tyr
465                 470                 475                 480

Ile Leu Val Cys Thr Arg Asp Ser Ser Ala Arg Leu Leu Gly Lys Thr
                485                 490                 495

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

Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp Glu Ala Leu
        515                 520                 525

Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Phe Leu Gly Asp
    530                 535                 540

Leu Arg Lys Leu Ile Thr Asp Asp Phe Val Lys Gln Lys Asn Pro Glu
545                 550                 555                 560

Leu Arg Glu Glu Thr Pro Leu Ser Met Ala Pro Ser Trp Tyr Leu Glu
                565                 570                 575

Tyr Lys Lys Ile Pro Asn Ser Asn Pro Pro Glu Tyr Glu Phe Leu Trp
            580                 585                 590

Gly Leu Arg Ala Arg His Glu Thr Ser Lys Met Arg Val Leu Arg Phe
        595                 600                 605

Ile Ala Gln Asn Gln Asn Arg Asp Pro Arg Glu Trp Lys Ala His Phe
    610                 615                 620

Leu Glu Ala Val Asp Asp Ala Phe Lys Thr Met Asp Val Asp Met Ala
625                 630                 635                 640

Glu Glu His Ala Arg Ala Gln Met Arg Ala Gln Met Asn Ile Gly Asp
                645                 650                 655

Glu Ala Leu Ile Gly Arg Trp Ser Trp Asp Asp Ile Gln Val Glu Leu
            660                 665                 670

Leu Thr Trp Asp Glu Asp Gly Asp Phe Gly Asp Ala Trp Ala Arg Ile
        675                 680                 685

Pro Phe Ala Phe Trp Ala Arg Tyr His Gln Tyr Ile Leu Asn Ser Asn
    690                 695                 700

Arg Ala Asn Arg Arg Ala Thr Trp Arg Ala Gly Val Ser Ser Gly Thr
705                 710                 715                 720

Asn Gly Gly Ala Ser Thr Ser Val Leu Asp Gly Pro Ser Thr Ser Ser
```

```
                725                 730                 735

Thr Ile Arg Thr Arg Asn Ala Ala Arg Ala Gly Ala Ser Phe Phe Ser
            740                 745                 750

Trp Ile Gln His Arg
        755
```