SEQUENCE LISTING

<110> SANA BIOTECHNOLOGY, INC.

<120> CD8-SPECIFIC ANTIBODY CONSTRUCTS AND COMPOSITIONS THEREOF

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<150> 63/299,254
<151> 2022-01-13

<150> 63/172,518
<151> 2021-04-08

<160> 1231

<170> PatentIn version 3.5

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1   5   10   15

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

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Glu Arg Ala Ala Ala Gly Tyr Tyr Tyr Tyr Met Asp Val Trp
            100   105   110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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<211> 122
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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 Gly Thr Phe Asn Thr Tyr
            20   25   30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Glu His Ala Ala Gly Thr Tyr Tyr Tyr Tyr Met Asp Val Trp
            100   105   110

Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115   120

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<400> 407
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 Gly Thr Phe Ser Ser Tyr
            20   25   30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Glu Arg Ala Ala Ala Gly Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120
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<211> 119
<212> PRT
<213> Homo sapiens

<400> 408

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1               5                   10                  15

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

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

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

Gln Gly Arg Val Thr Met Thr Arg 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
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Ala Lys Glu Gly Asp Tyr Tyr Tyr Gly Met Asp Ala Trp Gly Gln Gly
            100                 105                 110


Thr Met Val Thr Val Ser Ser
        115


<210> 409
<211> 117
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<400> 409
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1               5                   10                  15


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


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


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


Gln Gly Arg Val Thr Met Thr Arg 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 Glu Arg Gly Gly Met Pro Asp Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110


Val Thr Val Ser Ser
        115


<210> 410
<211> 116
<212> PRT
<213> Homo sapiens

<400> 410
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

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 His Gly Ile Pro Lys Tyr Trp Gly Gln Gly Thr Leu Val
            100                 105                 110

Thr Val Ser Ser
        115
```

<210> 411
<211> 117
<212> PRT
<213> Homo sapiens

<400> 411

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Val Arg Ser Gly Ser Pro Gln His Trp Gly Gln Gly Thr Leu
            100                 105                 110


Val Thr Val Ser Ser
        115


<210> 412
<211> 120
<212> PRT
<213> Homo sapiens

<400> 412
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 His Thr Phe Ser Arg His
            20                  25                  30


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


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


Gln Gly Arg Val Thr Met Thr Arg 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 Pro Trp Ile Val Asp Ala Phe Asp Ile Trp Gly Gln
            100                 105                 110


Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 413
<211> 122
```

<212> PRT
<213> Homo sapiens

<400> 413
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 Gly Thr Phe Ser Asn Thr
            20   25   30

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

Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 414
<211> 116
<212> PRT
<213> Homo sapiens

<400> 414
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 Arg Ser
            20   25   30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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

Val Arg Asn Lys Asp Gly Leu Gln His Trp Gly Gln Gly Thr Leu Val
            100                 105                 110

Thr Val Ser Ser
        115
```

<210> 415
<211> 122
<212> PRT
<213> Homo sapiens

<400> 415

```
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 Asp Thr Phe Thr Gly 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 Asn Ser Gly Asp Thr Lys Tyr Ala His Gln Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Asp Ala Lys Arg Val Gly Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110
```

```
Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 416
<211> 117
<212> PRT
<213> Homo sapiens

<400> 416
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 Arg Tyr
            20                  25                  30


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


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


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


Val Thr Val Ser Ser
        115


<210> 417
<211> 115
<212> PRT
<213> Homo sapiens

<400> 417
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 Asn Tyr
            20                  25                  30
```

```
Asp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

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

Val Ser Ser
        115


<210> 418
<211> 122
<212> PRT
<213> Homo sapiens

<400> 418
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 Gly Thr Phe Ser Asn Thr
            20                  25                  30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asn Tyr Val Gly Ser Tyr Tyr Tyr Gly Met Asp Val Trp
            100                 105                 110


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


<210> 419
<211> 119
<212> PRT
<213> Homo sapiens

<400> 419
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 Asn Tyr
            20                  25                  30


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


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


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


Thr Leu Val Thr Val Ser Ser
        115


<210> 420
<211> 118
<212> PRT
<213> Homo sapiens

<400> 420
```

```
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 Gly Phe Thr Arg Tyr
            20                  25                  30


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


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


Gln Gly Arg Val Thr Met Thr Arg 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


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


Leu Val Thr Val Ser Ser
        115


<210> 421
<211> 122
<212> PRT
<213> Homo sapiens

<400> 421
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 Arg
            20                  25                  30


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


Gly Trp Ile Asp Pro Lys Ser Gly Asp Thr Thr Tyr Ala Gln Lys Phe
    50                  55                  60
```

```
Gln Gly Arg Val Thr Met Thr Arg 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 Leu Lys Glu Leu Ser Ser Ile Leu Asp Ala Phe Asp Ile Trp
            100                 105                 110


Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 422
<211> 122
<212> PRT
<213> Homo sapiens

<400> 422
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


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


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


Gln Gly Arg Val Thr Met Thr Arg 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 Glu Arg Phe Gly Thr Gly Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110


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

<210> 423
<211> 121
<212> PRT
<213> Homo sapiens

<400> 423
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 Asn Ser
            20   25   30

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

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

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

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

Ala Arg Val Ile Gly Glu Met Val Asp Asp Ala Phe Asp Leu Trp Gly
            100   105   110

Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 424
<211> 122
<212> PRT
<213> Homo sapiens

<400> 424
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 Gly Tyr
            20   25   30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Glu Arg Leu Phe Gly Thr Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110

Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 425
<211> 117
<212> PRT
<213> Homo sapiens

<400> 425

```
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 Tyr Thr Phe Thr Thr Tyr
            20                  25                  30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 Ala Asp Gly Glu Leu Thr Asp Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110
```

```
Val Thr Val Ser Ser
        115


<210> 426
<211> 121
<212> PRT
<213> Homo sapiens

<400> 426
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1               5                   10                  15


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


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


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


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


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


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


Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 427
<211> 122
<212> PRT
<213> Homo sapiens

<400> 427
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 Gly Thr Phe Ser Arg Tyr
            20                  25                  30

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

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

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

Gly Lys Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 428
<211> 122
<212> PRT
<213> Homo sapiens

<400> 428

```
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 Asn 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 Met Ile Asn Pro Ser Asp Gly Ser Thr Arg Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Asp Arg Gly Val Gly Arg Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110


Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 429
<211> 122
<212> PRT
<213> Homo sapiens

<400> 429
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 Gly Thr Phe Ser Arg Tyr
            20                  25                  30


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


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


Gln Gly Arg Val Thr Met Thr Arg 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 Lys Asp Ser Arg Tyr Gly Arg Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110


Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 430
<211> 122
<212> PRT
<213> Homo sapiens
```

<400> 430
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 Gly Thr Phe Ser Asn Tyr
            20   25   30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 Lys Glu Ile Val Val Gly Pro Tyr Tyr Tyr Tyr Met Asp Val Trp
            100   105   110

Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 431
<211> 122
<212> PRT
<213> Homo sapiens

<400> 431
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 Gly Thr Phe Thr Arg Tyr
            20   25   30

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

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

```
Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 Gly Met Val Arg Gly Pro Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110


Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 432
<211> 122
<212> PRT
<213> Homo sapiens

<400> 432
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 Gly Thr Phe Ser Ser Tyr
            20                  25                  30


Ala Ile Ser 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 Thr Phe
    50                  55                  60


Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 Glu Gly Val Thr Gly Pro Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110


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

<210> 433
<211> 125
<212> PRT
<213> Homo sapiens

<400> 433
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 Gly Thr Phe Ser Arg Phe
            20   25   30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Ala Ala Ala Gly Thr Arg Tyr Tyr Tyr Tyr Tyr Gly Met
            100   105   110

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

<210> 434
<211> 122
<212> PRT
<213> Homo sapiens

<400> 434
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 Gly Thr Phe Ser Ser His
            20   25   30

```
Ala Ile Ser 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 Arg 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 Glu Leu Tyr Ser Ser Thr Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110

Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 435
<211> 122
<212> PRT
<213> Homo sapiens

<400> 435

```
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 Gly Thr Phe Ser Ser Tyr
            20                  25                  30

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

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

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


Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 436
<211> 122
<212> PRT
<213> Homo sapiens

<400> 436
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 Asn Ser
            20                  25                  30


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


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


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


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


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


Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 437
<211> 122
<212> PRT
<213> Homo sapiens

<400> 437
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 Gly Thr Phe Gly Ser Tyr
            20                  25                  30

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

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

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

Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 438
<211> 115
<212> PRT
<213> Homo sapiens

<400> 438

```
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 Ile Phe Thr Asp Tyr
            20                  25                  30

Asp Ile Tyr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Leu
        35                  40                  45

Gly Trp Ile Ser Ala Asp Asn Gly Asn Thr Asn Tyr Glu Gln Lys Val
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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 Arg Ser Glu Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr
100 105 110

Val Ser Ser
115

<210> 439
<211> 115
<212> PRT
<213> Homo sapiens

<400> 439
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

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Asp Asn Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr
100 105 110

Val Ser Ser
115

<210> 440
<211> 115

<212> PRT
<213> Homo sapiens

<400> 440
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

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Glu Glu Val Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr
            100   105   110

Val Ser Ser
        115

<210> 441
<211> 116
<212> PRT
<213> Homo sapiens

<400> 441
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

Pro Met Asn 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 Arg Tyr Ala Gln Lys Phe
    50                  55                  60

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

Thr Val Ser Ser
        115
```

<210> 442
<211> 116
<212> PRT
<213> Homo sapiens

<400> 442

```
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 Asp Tyr
            20                  25                  30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Val Thr Thr Asp Tyr Trp Gly Gln Gly Thr Leu Val
            100                 105                 110
```

Thr Val Ser Ser
        115

<210> 443
<211> 116
<212> PRT
<213> Homo sapiens

<400> 443
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1   5   10   15

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

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

Ser Arg Ile Ser Glu Ser Gly Asp Ser Ser Phe Tyr Ala Asp Ser Val
    50   55   60

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

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

Ala Ser Gly Arg Glu Leu Ile Glu Tyr Trp Gly Gln Gly Thr Leu Val
            100   105   110

Thr Val Ser Ser
        115

<210> 444
<211> 115
<212> PRT
<213> Homo sapiens

<400> 444
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 Asp Asp Tyr
            20   25   30

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

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

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

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

Arg Val Tyr Asp Phe Pro Asp Val Trp Gly Gln Gly Thr Thr Val Thr
            100                 105                 110

Val Ser Ser
        115
```

<210> 445
<211> 117
<212> PRT
<213> Homo sapiens

<400> 445

```
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 Asp Ser
            20                  25                  30

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

Gly Trp Met Asn Pro Ser Asn Gly Asp Thr Gly Tyr Ala Arg Lys Phe
    50                  55                  60

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


Val Thr Val Ser Ser
        115


<210> 446
<211> 117
<212> PRT
<213> Homo sapiens

<400> 446
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 Asn Tyr
            20                  25                  30


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


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


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


Val Thr Val Ser Ser
        115


<210> 447
<211> 117
<212> PRT
<213> Homo sapiens

<400> 447
```

```
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 Met Asn Tyr
            20                  25                  30


Tyr Ile 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 Thr Tyr Ala Gln Lys Phe
    50                  55                  60


Gln Gly Arg Val Thr Met Thr Arg 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 Asp Gln Gly Gly Gly Phe Asp Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110


Val Thr Val Ser Ser
        115


<210> 448
<211> 117
<212> PRT
<213> Homo sapiens

<400> 448
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 Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe
    50                  55                  60
```

```
Gln Gly Arg Val Thr Met Thr Arg 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 Asp Gln Gly Trp Gly Met Asp Val Trp Gly Gln Gly Thr Thr
            100                 105                 110


Val Thr Val Ser Ser
        115
```

<210> 449
<211> 117
<212> PRT
<213> Homo sapiens

<400> 449

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


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


Gln Gly Arg Val Thr Met Thr Arg 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 Leu Thr Glu Gly Ile Pro Asp Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110


Val Thr Val Ser Ser
        115
```

<210> 450
<211> 117
<212> PRT
<213> Homo sapiens

<400> 450
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 Leu Asn Asp Tyr
            20   25   30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Arg Tyr Gly Pro Phe Asp Tyr Trp Gly Gln Gly Thr Leu
            100   105   110

Val Thr Val Ser Ser
        115

<210> 451
<211> 118
<212> PRT
<213> Homo sapiens

<400> 451
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

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

```
Gly Leu Met Asn Pro Lys Thr Gly Asp Thr Asn Tyr Ala Glu Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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

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

Leu Val Thr Val Ser Ser
        115
```

<210> 452
<211> 118
<212> PRT
<213> Homo sapiens

<400> 452

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Gly Phe Thr Gly Asp Ile Ala Tyr Trp Gly Gln Gly Thr
            100                 105                 110
```

```
Leu Val Thr Val Ser Ser
        115


<210> 453
<211> 118
<212> PRT
<213> Homo sapiens

<400> 453
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 Tyr Thr Phe Thr Gly Tyr
            20                  25                  30


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


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


Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 Val Asp Asp Ser Ser Ser Pro Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110


Leu Val Thr Val Ser Ser
        115


<210> 454
<211> 118
<212> PRT
<213> Homo sapiens

<400> 454
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 Tyr Thr Phe Thr Gly Tyr
            20                  25                  30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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

Thr Thr Gly Pro Asp Gly Thr Glu Val Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser
        115


<210> 455
<211> 118
<212> PRT
<213> Homo sapiens

<400> 455
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 Asn His
            20                  25                  30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Ser Ser Glu Ser Gly Ser Asp Leu Asp Tyr Trp Gly Gln Gly Thr
            100   105   110

Leu Val Thr Val Ser Ser
        115

<210> 456
<211> 119
<212> PRT
<213> Homo sapiens

<400> 456
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 Asn Tyr
            20   25   30

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

Gly Trp Met Ser Pro Thr Ser Gly Asp Thr Gly Tyr Ala Gln Lys Phe
    50   55   60

Gln Gly Arg Val Thr Met Thr Arg 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 Glu Val Glu Ile Glu Gly Tyr Met Asp Val Trp Gly Gln Gly
            100   105   110

Thr Thr Val Thr Val Ser Ser
        115

<210> 457
<211> 119
<212> PRT
<213> Homo sapiens

<400> 457
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 Trp Ile Asn Pro Asn Ser Gly Asp Thr Ser Tyr Ala Gln Lys Phe
    50   55   60

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Asp Leu Asp Asp Asp Trp Tyr Met Asp Val Trp Gly Lys Gly
            100   105   110

Thr Thr Val Thr Val Ser Ser
        115

<210> 458
<211> 119
<212> PRT
<213> Homo sapiens

<400> 458
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 Asp Pro Ser Gly Asp Ile Thr Ser Tyr Ala Gln Lys Phe
    50   55   60

```
Gln Gly Arg Val Thr Met Thr Arg 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


Thr Thr Asp Ser Thr Thr Trp Asp Ala Phe Asp Ile Trp Gly Gln Gly
            100                 105                 110


Thr Met Val Thr Val Ser Ser
        115


<210> 459
<211> 119
<212> PRT
<213> Homo sapiens

<400> 459
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 Asp Tyr
            20                  25                  30


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


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


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


Thr Leu Val Thr Val Ser Ser
        115
```

<210> 460
<211> 119
<212> PRT
<213> Homo sapiens

<400> 460
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 Glu Asn
            20   25   30

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

Gly Ile Ile Glu Thr Ser Gly Gly Ser Thr Asp Tyr Ala Gln Lys Phe
    50   55   60

Gln Gly Arg Val Thr Met Thr Arg 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 Glu Ala Ala Ala Gly Leu Asp Phe Gln His Trp Gly Gln Gly
            100   105   110

Thr Leu Val Thr Val Ser Ser
        115

<210> 461
<211> 120
<212> PRT
<213> Homo sapiens

<400> 461
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 Ala Ser Tyr
            20   25   30

```
Asp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

Gln Gly Arg Val Thr Met Thr Arg 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 Ala Asn Ser Trp Asp Ala Met Val Ile Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 462
<211> 120
<212> PRT
<213> Homo sapiens

<400> 462

```
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 Asn Ser
            20                  25                  30

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

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

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

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

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


Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 463
<211> 120
<212> PRT
<213> Homo sapiens

<400> 463
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 Ala Tyr
            20                  25                  30


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


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


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


Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 464
<211> 120
<212> PRT
<213> Homo sapiens

<400> 464
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 Asn Tyr
            20                  25                  30

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

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

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

Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 465
<211> 120
<212> PRT
<213> Homo sapiens

<400> 465
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 Asp Tyr
            20                  25                  30

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

Gly Trp Ile Asn Pro Asp Ser Gly Gly Thr Asn Tyr Glu Gln Lys Phe
    50                  55                  60

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


Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 466
<211> 120
<212> PRT
<213> Homo sapiens

<400> 466
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 Tyr Pro Phe Thr Asp Tyr
            20                  25                  30


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


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


Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 Val Arg Gly Asp Gly Tyr Asn Leu Gly Asp Tyr Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 467
<211> 120
```

<212> PRT
<213> Homo sapiens

<400> 467
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 Ser Asp Tyr
            20   25   30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Val Asp Thr Ala Met Gly Ala Gly Asp Tyr Trp Gly Gln
            100   105   110

Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 468
<211> 121
<212> PRT
<213> Homo sapiens

<400> 468
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 Asp Tyr
            20   25   30

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

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

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

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

<210> 469
<211> 121
<212> PRT
<213> Homo sapiens

<400> 469

```
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 Asp Thr Phe Thr Thr His
            20                  25                  30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Arg Asn Gly Asp Tyr Tyr Tyr Gly Met Asp Val Trp Gly
            100                 105                 110
```

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


<210> 470
<211> 121
<212> PRT
<213> Homo sapiens

<400> 470
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 Asp Thr Phe Thr Asn Tyr
            20                  25                  30


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


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


Gln Gly Arg Val Thr Met Thr Arg 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 Glu Gly Leu Gly Ser Ser Trp Tyr Val Leu Asp Tyr Trp Gly
            100                 105                 110


Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 471
<211> 121
<212> PRT
<213> Homo sapiens

<400> 471
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
```

```
Asp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

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

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

<210> 472
<211> 121
<212> PRT
<213> Homo sapiens

<400> 472

```
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 Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 Ser Pro Gly Pro Glu Gly Tyr Tyr Tyr Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 473
<211> 121
<212> PRT
<213> Homo sapiens

<400> 473
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 Asp Asn
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Ser Tyr His Trp Asp Tyr Gly Asp Tyr Arg Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 474
<211> 121
<212> PRT
<213> Homo sapiens

<400> 474

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


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


Gln Gly Arg Val Thr Met Thr Arg 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 Val Glu Ile Asp Tyr Gly Asp Ser Pro Pro Asp Tyr Trp Gly
            100                 105                 110


Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 475
<211> 121
<212> PRT
<213> Homo sapiens

<400> 475
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 Gly Thr Ser Ser Ser Tyr
            20                  25                  30


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


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

```
Gln Gly Arg Val Thr Met Thr Arg 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 Ala Glu Trp Glu Leu Arg Tyr Ala Phe Asp Ile Trp Gly
            100                 105                 110


Gln Gly Thr Met Val Thr Val Ser Ser
        115                 120


<210> 476
<211> 122
<212> PRT
<213> Homo sapiens

<400> 476
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 Thr Tyr
            20                  25                  30


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


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


Gln Gly Arg Val Thr Met Thr Arg 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 Glu Thr Tyr Tyr Gly Leu Tyr Tyr Tyr Gly Met Asp Val Trp
            100                 105                 110


Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 477
<211> 122
<212> PRT
<213> Homo sapiens

<400> 477
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

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

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

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

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 478
<211> 122
<212> PRT
<213> Homo sapiens

<400> 478
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 Gly Thr Phe Thr Ser Tyr
            20   25   30

Asp Ile Asn 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 Arg 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 Lys Asp Arg Gln Glu Arg Tyr Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110

Gly Lys Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 479
<211> 122
<212> PRT
<213> Homo sapiens

<400> 479

```
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

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Asp Arg Ser Tyr Gly Asp Tyr Tyr Tyr Gly Met Asp Val Trp
            100                 105                 110
```

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


<210> 480
<211> 122
<212> PRT
<213> Homo sapiens

<400> 480
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 Gly Thr Phe Thr Ser Tyr
            20                  25                  30


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


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


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


Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 481
<211> 122
<212> PRT
<213> Homo sapiens

<400> 481
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 Asp Gly Ser Thr Thr Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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 Glu Trp Asp Tyr Thr His Tyr Tyr Tyr Gly Met Asp Val Trp
            100                 105                 110

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


<210> 482
<211> 122
<212> PRT
<213> Homo sapiens

<400> 482
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 Asn Thr Phe Thr Ser His
            20                  25                  30

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

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

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


Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 483
<211> 122
<212> PRT
<213> Homo sapiens

<400> 483
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 Tyr Thr Phe Thr Ser Tyr
            20                  25                  30


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


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


Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 Gly Ser Trp Asp Ser Ser Ser Trp Tyr Ile Pro Glu Tyr Trp
            100                 105                 110


Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 484
<211> 122
<212> PRT
<213> Homo sapiens
```

<400> 484
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 Phe Thr Phe Ser Asp Tyr
            20   25   30

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

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

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

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

<210> 485
<211> 122
<212> PRT
<213> Homo sapiens

<400> 485
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

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

Gly Trp Met Asn Pro Asn Asn Gly Asp Thr Asp Tyr Ala Gln Lys Phe
    50   55   60

```
Gln Gly Arg Val Thr Met Thr Arg 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


Thr Thr Pro Val Phe Ser Gly Ser Tyr Tyr Trp Tyr Phe Asp Pro Trp
            100                 105                 110


Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210> 486
<211> 123
<212> PRT
<213> Homo sapiens

<400> 486
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


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


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


Gln Gly Arg Val Thr Met Thr Arg 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


Thr Thr Asp Gln Ala Val Ala Gly Pro Tyr Tyr Tyr Gly Met Asp Val
            100                 105                 110


Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 487
<211> 123
<212> PRT
<213> Homo sapiens

<400> 487
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 Gly Thr Phe Ser Ser Tyr
            20   25   30

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

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

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

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 488
<211> 123
<212> PRT
<213> Homo sapiens

<400> 488
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 Tyr Met Phe Thr Gly His
            20   25   30

```
Asp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu 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 Val Met Gly Pro Val Asp Tyr Tyr Tyr Tyr Gly Met Asp Val
            100                 105                 110

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

<210> 489
<211> 123
<212> PRT
<213> Homo sapiens

<400> 489

```
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 Ile Phe Ser Asn Tyr
            20                  25                  30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Leu Gly Pro Phe Gly Ser Tyr Tyr Tyr Tyr Met Asp Val
100 105 110

Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 490
<211> 123
<212> PRT
<213> Homo sapiens

<400> 490
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 Ser Tyr
20 25 30

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

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

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

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

Ala Arg Glu Gly Val Val Val Pro Pro Tyr Tyr Tyr Tyr Met Asp Val
100 105 110

Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 491
<211> 123
<212> PRT
<213> Homo sapiens

<400> 491
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 Thr Tyr
            20                  25                  30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Ser Gly Trp Ser Arg Tyr Tyr Tyr Tyr Tyr Met Asp Val
            100                 105                 110

Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 492
<211> 123
<212> PRT
<213> Homo sapiens

<400> 492

```
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 Ser Thr Phe Thr Asn Tyr
            20                  25                  30

Gln Ile 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 Arg 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 Asp Asn Gly Met Thr Thr Gly Tyr Tyr Tyr Tyr Met Asp Val
            100                 105                 110


Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 493
<211> 123
<212> PRT
<213> Homo sapiens

<400> 493
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


Asp Ile Val 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 Arg 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 Asp Arg Ala Met Val Thr Gly Tyr Tyr Tyr Gly Met Asp Val
            100                 105                 110


Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 494
<211> 124
```

<212> PRT
<213> Homo sapiens

<400> 494
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

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Arg Gly Tyr Gly Asp Arg Gly Tyr Tyr Tyr Gly Met Asp
            100   105   110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 495
<211> 124
<212> PRT
<213> Homo sapiens

<400> 495
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 Gly Thr Leu Ser Ser Tyr
            20   25   30

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

```
Gly Trp Ile Asn Thr Tyr Asn Gly Asn Thr Tyr Tyr Ala Gln Lys Leu
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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 Thr Ser Pro Lys Ala Thr Ala Asp Tyr Tyr Tyr Tyr Tyr Met Asp
            100                 105                 110

Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 496
<211> 124
<212> PRT
<213> Homo sapiens

<400> 496

```
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

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

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

Gln Gly Arg Val Thr Met Thr Arg 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

Thr Thr Ser Thr Val Thr Pro Ser Tyr Tyr Tyr Tyr Tyr Gly Met Asp
            100                 105                 110
```

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


<210> 497
<211> 125
<212> PRT
<213> Homo sapiens

<400> 497
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 His
            20                  25                  30


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


Gly Ile Ile Asn Pro Arg Asp Gly Asp Thr Val Tyr Ala Gln Lys Phe
    50                  55                  60


Gln Gly Arg Val Thr Met Thr Arg 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 Glu Pro Val Ala Gly Thr Gly Tyr Tyr Tyr Tyr Tyr Gly Met
            100                 105                 110


Asp Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125


<210> 498
<211> 126
<212> PRT
<213> Homo sapiens

<400> 498
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 Gly Thr Phe Asn Ser Tyr
            20                  25                  30
```

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Asn Leu Ala Gly Phe Trp Ser Asp Tyr Tyr Tyr Tyr Gly
            100                 105                 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120                 125
```

<210> 499
<211> 108
<212> PRT
<213> Homo sapiens

<400> 499

```
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 Ser Ile Ser Ser Tyr
            20                  25                  30

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

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

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

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

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

<210> 500
<211> 108
<212> PRT
<213> Homo sapiens

<400> 500
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

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

Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105

<210> 501
<211> 108
<212> PRT
<213> Homo sapiens

<400> 501
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 Ser Ile Ser Ser Tyr
20 25 30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 502
<211> 113
<212> PRT
<213> Homo sapiens

<400> 502

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

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

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

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

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

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

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

Arg

<210> 503
<211> 113
<212> PRT
<213> Homo sapiens

<400> 503
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1   5   10   15

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

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

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

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

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

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

Arg

<210> 504
<211> 107
<212> PRT
<213> Homo sapiens

<400> 504
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 Ser Ile Ser Arg Asn
            20   25   30

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

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

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

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

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210> 505
<211> 113
<212> PRT
<213> Homo sapiens

<400> 505
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1               5                   10                  15

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

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

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

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

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

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

Arg

<210> 506
<211> 109
<212> PRT
<213> Homo sapiens

<400> 506
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1   5   10   15

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

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

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

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

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

Gly Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100   105

<210> 507
<211> 108
<212> PRT
<213> Homo sapiens

<400> 507
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 Gln Ala Ser Gln Asp Ile Gly Asn Tyr
            20   25   30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 508
<211> 107
<212> PRT
<213> Homo sapiens

<400> 508

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Asn Ser Arg Thr
                85                  90                  95

Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 509
<211> 108
<212> PRT
<213> Homo sapiens

<400> 509
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 Thr Ile Ser Asn Tyr
            20   25   30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100   105

<210> 510
<211> 108
<212> PRT
<213> Homo sapiens

<400> 510
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1   5   10   15

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

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

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

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


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


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210> 511
<211> 108
<212> PRT
<213> Homo sapiens

<400> 511
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 Ser Ile Ser Asn Tyr
            20                  25                  30


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


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


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


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


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210> 512
<211> 113
<212> PRT
<213> Homo sapiens

<400> 512
```

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

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

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

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

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

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

Ala His Trp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110

Arg
```

<210> 513
<211> 108
<212> PRT
<213> Homo sapiens

<400> 513

```
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 Ser Asp Ser
            20                  25                  30

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

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

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


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Arg Thr Pro Tyr
                85                  90                  95


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210> 514
<211> 108
<212> PRT
<213> Homo sapiens

<400> 514
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 Ser Ile Ser Asn Tyr
            20                  25                  30


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


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


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


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Glu Ser Phe Thr Thr Gln Trp
                85                  90                  95


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


<210> 515
<211> 108
<212> PRT
<213> Homo sapiens

<400> 515
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 Gln Ala Ser Gln Asp Ile His Asn Tyr
            20                  25                  30

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

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

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

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105


<210> 516
<211> 109
<212> PRT
<213> Homo sapiens

<400> 516
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
                85                  90                  95
```

```
Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105


<210> 517
<211> 108
<212> PRT
<213> Homo sapiens

<400> 517
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 Ser Ile Ser Asp Trp
            20                  25                  30


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


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


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


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


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


<210> 518
<211> 108
<212> PRT
<213> Homo sapiens

<400> 518
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30
```

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

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

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

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105
```

<210> 519
<211> 108
<212> PRT
<213> Homo sapiens

<400> 519

```
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 Ser Ile Ser Thr Trp
            20                  25                  30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 520
<211> 108
<212> PRT
<213> Homo sapiens

<400> 520
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 Ser Ile Ser Asn Tyr
            20   25   30

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

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

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

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

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
            100   105

<210> 521
<211> 113
<212> PRT
<213> Homo sapiens

<400> 521
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1   5   10   15

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

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

Pro Gln Leu Leu Ile Tyr Asp Ala Ser His Leu Glu Thr Gly Val Pro
    50   55   60

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


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


Tyr Ser Tyr Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110


Arg



<210> 522
<211> 108
<212> PRT
<213> Homo sapiens

<400> 522
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30


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


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


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


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


Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105


<210> 523
<211> 108
```

<212> PRT
<213> Homo sapiens

<400> 523
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20   25   30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Phe Ser Thr Phe Tyr
                85   90   95

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

<210> 524
<211> 108
<212> PRT
<213> Homo sapiens

<400> 524
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20   25   30

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

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

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


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


Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105


<210> 525
<211> 108
<212> PRT
<213> Homo sapiens

<400> 525
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 Ser Ile Asn Arg Phe
            20                  25                  30


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


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


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


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


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


<210> 526
<211> 108
<212> PRT
<213> Homo sapiens

<400> 526
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

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

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
            100                 105


<210> 527
<211> 108
<212> PRT
<213> Homo sapiens

<400> 527
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 Ser Val Ser Thr Tyr
            20                  25                  30

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

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

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

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

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

<210> 528
<211> 108
<212> PRT
<213> Homo sapiens

<400> 528
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 Gln Ala Ser Gln Asp Ile Ala Lys Tyr
20 25 30

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

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

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

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

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

<210> 529
<211> 108
<212> PRT
<213> Homo sapiens

<400> 529
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 Gln Ala Ser Gln Gly Ile Thr Asn Tyr
20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Trp
                85                  90                  95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105
```

<210> 530
<211> 108
<212> PRT
<213> Homo sapiens

<400> 530

```
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 Gln Ala Ser Gln Asp Ile His Asn Tyr
            20                  25                  30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 531
<211> 108
<212> PRT
<213> Homo sapiens

<400> 531
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20   25   30

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

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

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

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

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
            100   105

<210> 532
<211> 109
<212> PRT
<213> Homo sapiens

<400> 532
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 Ser Ile Ser Ser Tyr
            20   25   30

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

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

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


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Pro
                85                  90                  95


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


<210> 533
<211> 108
<212> PRT
<213> Homo sapiens

<400> 533
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 Gln Ala Asn Gln Asp Ile Ser Asn Phe
            20                  25                  30


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


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


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


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


Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
            100                 105


<210> 534
<211> 108
<212> PRT
<213> Homo sapiens

<400> 534
```

```
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 Ser Asn Asn
            20                  25                  30


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


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


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


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


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


<210> 535
<211> 113
<212> PRT
<213> Homo sapiens

<400> 535
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1               5                   10                  15


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


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


Pro Gln Leu Leu Ile Tyr Gly Ala Ser Thr Leu Glu Thr Gly Val Pro
    50                  55                  60


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

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

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

Arg

<210> 536
<211> 108
<212> PRT
<213> Homo sapiens

<400> 536
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 Ser Ile Ser Arg Ser
20 25 30

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

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

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

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
100 105

<210> 537
<211> 108
<212> PRT
<213> Homo sapiens

<400> 537
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

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

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


<210> 538
<211> 108
<212> PRT
<213> Homo sapiens

<400> 538
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 Gln Ala Ser His Asp Ile Ser Lys Ser
            20                  25                  30

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

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

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

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

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

<210> 539
<211> 108
<212> PRT
<213> Homo sapiens

<400> 539
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 Asp Ile Gly Ala Tyr
20 25 30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 540
<211> 108
<212> PRT
<213> Homo sapiens

<400> 540
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 Ser Ile Ser Ser Tyr
20 25 30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105
```

<210> 541
<211> 108
<212> PRT
<213> Homo sapiens

<400> 541

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

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

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105
```

<210> 542
<211> 108
<212> PRT
<213> Homo sapiens

<400> 542
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 Ser Ile Ser Ser Tyr
            20   25   30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100   105

<210> 543
<211> 108
<212> PRT
<213> Homo sapiens

<400> 543
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 Asn Ile Gly Thr Trp
            20   25   30

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

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

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


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


Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105


<210> 544
<211> 108
<212> PRT
<213> Homo sapiens

<400> 544
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 Thr Ile Ser Tyr Tyr
            20                  25                  30


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


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


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


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Arg Thr Pro Tyr
                85                  90                  95


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210> 545
<211> 112
<212> PRT
<213> Homo sapiens

<400> 545
```

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

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

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

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

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

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

Thr His Trp Pro Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
            100                 105                 110
```

<210> 546
<211> 108
<212> PRT
<213> Homo sapiens

<400> 546

```
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 Asn Ile Asn Asn Tyr
            20                  25                  30

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

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

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

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


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


<210> 547
<211> 108
<212> PRT
<213> Homo sapiens

<400> 547
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 Thr Ile Ser Thr Tyr
            20                  25                  30


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


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


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


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


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210> 548
<211> 108
<212> PRT
<213> Homo sapiens

<400> 548
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 Arg Gly Ile Gly Asn Asp
            20                  25                  30
```

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Tyr Asn Met Pro Leu
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 549
<211> 108
<212> PRT
<213> Homo sapiens

<400> 549

```
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 Thr Ile Gly Asn Tyr
            20                  25                  30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 550
<211> 108
<212> PRT
<213> Homo sapiens

<400> 550
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 Phe Ile Gly Ser Trp
            20   25   30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Phe Pro Trp
                85   90   95

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

<210> 551
<211> 108
<212> PRT
<213> Homo sapiens

<400> 551
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 Ser Ile Ser Ser Trp
            20   25   30

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

```
Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

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

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

Ile Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 552
<211> 108
<212> PRT
<213> Homo sapiens

<400> 552

```
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 Ser Asn Asn
            20                  25                  30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Ser Pro Trp
                85                  90                  95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 553
<211> 114
<212> PRT
<213> Homo sapiens

<400> 553
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1   5   10   15

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

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50   55   60

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

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
                85   90   95

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

Lys Arg

<210> 554
<211> 108
<212> PRT
<213> Homo sapiens

<400> 554
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 Ser Ile Ser Ser Tyr
            20   25   30

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

Tyr Lys Thr Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

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


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


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


<210> 555
<211> 108
<212> PRT
<213> Homo sapiens

<400> 555
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 Val Ser Gln Gly Ile Ser Ser Tyr
            20                  25                  30


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


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


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


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


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


<210> 556
<211> 108
<212> PRT
<213> Homo sapiens

<400> 556
```

```
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 Ser Ile Ser Asp Trp
            20                  25                  30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 557
<211> 108
<212> PRT
<213> Homo sapiens

<400> 557

```
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 Ser Asn Tyr
            20                  25                  30

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

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

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

```
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr Arg Thr Pro Pro
                85                  90                  95


Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105


<210> 558
<211> 108
<212> PRT
<213> Homo sapiens

<400> 558
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 Ser Ile Arg Asn Tyr
            20                  25                  30


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


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


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


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


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


<210> 559
<211> 108
<212> PRT
<213> Homo sapiens

<400> 559
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 Asn Ile Arg Leu Tyr
            20                  25                  30
```

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

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

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

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105
```

<210> 560
<211> 108
<212> PRT
<213> Homo sapiens

<400> 560

```
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 Gln Ala Ser Gln Asp Ile Arg Lys Phe
            20                  25                  30

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

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

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

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

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
            100                 105
```

<210> 561
<211> 108
<212> PRT
<213> Homo sapiens

<400> 561
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 Ser Ile Ser Ser Tyr
            20   25   30

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

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

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

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

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

<210> 562
<211> 108
<212> PRT
<213> Homo sapiens

<400> 562
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20   25   30

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

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

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

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105
```

<210> 563
<211> 108
<212> PRT
<213> Homo sapiens

<400> 563

```
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 Asn Val Arg Ser Trp
            20                  25                  30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105
```

<210> 564
<211> 108
<212> PRT
<213> Homo sapiens

<400> 564
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 Gly Asn Asp
            20   25   30

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

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

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

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

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

<210> 565
<211> 108
<212> PRT
<213> Homo sapiens

<400> 565
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 Ser Ile Ser Asn Trp
            20   25   30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 566
<211> 113
<212> PRT
<213> Homo sapiens

<400> 566
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

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

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

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

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

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

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

Arg

<210> 567
<211> 108
<212> PRT
<213> Homo sapiens

<400> 567

```
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 Ser Ile Ser Ser Tyr
            20                  25                  30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 568
<211> 108
<212> PRT
<213> Homo sapiens

<400> 568

```
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

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


Asn Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210> 569
<211> 108
<212> PRT
<213> Homo sapiens

<400> 569
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 Glu Ser Ile Gly Ser Trp
            20                  25                  30


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


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


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


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


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210> 570
<211> 108
<212> PRT
<213> Homo sapiens

<400> 570
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 Ser Ile Ser Asn Tyr
            20                  25                  30
```

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

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

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

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

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


<210> 571
<211> 108
<212> PRT
<213> Homo sapiens

<400> 571
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1               5                   10                  15

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

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

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

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

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

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

<210> 572
<211> 108
<212> PRT
<213> Homo sapiens

<400> 572
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 Ser Ser Tyr
            20   25   30

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

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

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

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100   105

<210> 573
<211> 108
<212> PRT
<213> Homo sapiens

<400> 573
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 Asp Ile Gly Asn Tyr
            20   25   30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105
```

<210> 574
<211> 108
<212> PRT
<213> Homo sapiens

<400> 574

```
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105
```

<210> 575
<211> 108
<212> PRT
<213> Homo sapiens

<400> 575
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 Ser Asn Tyr
            20   25   30

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

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

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

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

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

<210> 576
<211> 108
<212> PRT
<213> Homo sapiens

<400> 576
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 Ser Asn Gly
            20   25   30

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

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

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

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


Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105


<210> 577
<211> 108
<212> PRT
<213> Homo sapiens

<400> 577
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 Asn Ile Arg Asn Tyr
            20                  25                  30


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


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


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


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


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


<210> 578
<211> 108
<212> PRT
<213> Homo sapiens

<400> 578
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 Gln Ala Ser Leu Asp Ile Asn Asn Tyr
            20                  25                  30

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

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

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

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105
```

<210> 579
<211> 108
<212> PRT
<213> Homo sapiens

<400> 579

```
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Thr Thr Pro Trp
                85                  90                  95
```

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 580
<211> 108
<212> PRT
<213> Homo sapiens

<400> 580
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

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

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

<210> 581
<211> 108
<212> PRT
<213> Homo sapiens

<400> 581
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

```
Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


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


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


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


<210> 582
<211> 108
<212> PRT
<213> Homo sapiens

<400> 582
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30


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


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


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


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


Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
            100                 105


<210> 583
<211> 108
```

<212> PRT
<213> Homo sapiens

<400> 583
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 Ser Ile Ser Asn Tyr
            20   25   30

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

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

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

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100   105

<210> 584
<211> 109
<212> PRT
<213> Homo sapiens

<400> 584
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 Asn Ile Gly Asn Tyr
            20   25   30

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

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

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


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


Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105


<210> 585
<211> 108
<212> PRT
<213> Homo sapiens

<400> 585
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30


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


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


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


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


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


<210> 586
<211> 108
<212> PRT
<213> Homo sapiens

<400> 586
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

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

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


<210> 587
<211> 108
<212> PRT
<213> Homo sapiens

<400> 587
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

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

```
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105


<210> 588
<211> 108
<212> PRT
<213> Homo sapiens

<400> 588
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15


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


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


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


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


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


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210> 589
<211> 108
<212> PRT
<213> Homo sapiens

<400> 589
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 Thr Trp
            20                  25                  30
```

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

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

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

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

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
            100                 105
```

<210> 590
<211> 108
<212> PRT
<213> Homo sapiens

<400> 590

```
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
            20                  25                  30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 591
<211> 108
<212> PRT
<213> Homo sapiens

<400> 591
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 Gln Ala Ser Gln Asp Ile Arg Tyr Phe
            20   25   30

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

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

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

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

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

<210> 592
<211> 546
<212> PRT
<213> Nipah henipavirus

<400> 592
Met Val Val Ile Leu Asp Lys Arg Cys Tyr Cys Asn Leu Leu Ile Leu
1   5   10   15

Ile Leu Met Ile Ser Glu Cys Ser Val Gly Ile Leu His Tyr Glu Lys
            20   25   30

Leu Ser Lys Ile Gly Leu Val Lys Gly Val Thr Arg Lys Tyr Lys Ile
        35   40   45

Lys Ser Asn Pro Leu Thr Lys Asp Ile Val Ile Lys Met Ile Pro Asn
    50   55   60

```
Val Ser Asn Met Ser Gln Cys Thr Gly Ser Val Met Glu Asn Tyr Lys
65                  70                  75                  80

Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile Lys Gly Ala Leu Glu Ile
                85                  90                  95

Tyr Lys Asn Asn Thr His Asp Leu Val Gly Asp Val Arg Leu Ala Gly
            100                 105                 110

Val Ile Met Ala Gly Val Ala Ile Gly Ile Ala Thr Ala Ala Gln Ile
        115                 120                 125

Thr Ala Gly Val Ala Leu Tyr Glu Ala Met Lys Asn Ala Asp Asn Ile
    130                 135                 140

Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr Asn Glu Ala Val Val Lys
145                 150                 155                 160

Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr Val Leu Thr Ala Leu Gln
                165                 170                 175

Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr Ile Asp Lys Ile Ser Cys
            180                 185                 190

Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala Leu Ser Lys Tyr Leu Ser
        195                 200                 205

Asp Leu Leu Phe Val Phe Gly Pro Asn Leu Gln Asp Pro Val Ser Asn
    210                 215                 220

Ser Met Thr Ile Gln Ala Ile Ser Gln Ala Phe Gly Gly Asn Tyr Glu
225                 230                 235                 240

Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr Glu Asp Phe Asp Asp Leu
                245                 250                 255

Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile Ile Tyr Val Asp Leu Ser
            260                 265                 270
```

```
Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe Pro Ile Leu Thr Glu Ile
        275                 280                 285

Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro Val Ser Phe Asn Asn Asp
    290                 295                 300

Asn Ser Glu Trp Ile Ser Ile Val Pro Asn Phe Ile Leu Val Arg Asn
305                 310                 315                 320

Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe Cys Leu Ile Thr Lys Arg
                325                 330                 335

Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr Pro Met Thr Asn Asn Met
            340                 345                 350

Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys Cys Pro Arg Glu Leu Val
        355                 360                 365

Val Ser Ser His Val Pro Arg Phe Ala Leu Ser Asn Gly Val Leu Phe
    370                 375                 380

Ala Asn Cys Ile Ser Val Thr Cys Gln Cys Gln Thr Thr Gly Arg Ala
385                 390                 395                 400

Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu Met Ile Asp Asn Thr Thr
                405                 410                 415

Cys Pro Thr Ala Val Leu Gly Asn Val Ile Ile Ser Leu Gly Lys Tyr
            420                 425                 430

Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly Ile Ala Ile Gly Pro Pro
        435                 440                 445

Val Phe Thr Asp Lys Val Asp Ile Ser Ser Gln Ile Ser Ser Met Asn
    450                 455                 460

Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile Lys Glu Ala Gln Arg Leu
465                 470                 475                 480

Leu Asp Thr Val Asn Pro Ser Leu Ile Ser Met Leu Ser Met Ile Ile
                485                 490                 495
```

Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys Ile Gly Leu Ile Thr Phe
500 505 510

Ile Ser Phe Ile Ile Val Glu Lys Lys Arg Asn Thr Tyr Ser Arg Leu
515 520 525

Glu Asp Arg Arg Val Arg Pro Thr Ser Ser Gly Asp Leu Tyr Tyr Ile
530 535 540

Gly Thr
545

<210> 593
<211> 520
<212> PRT
<213> Nipah henipavirus

<400> 593
Ile Leu His Tyr Glu Lys Leu Ser Lys Ile Gly Leu Val Lys Gly Val
1 5 10 15

Thr Arg Lys Tyr Lys Ile Lys Ser Asn Pro Leu Thr Lys Asp Ile Val
20 25 30

Ile Lys Met Ile Pro Asn Val Ser Asn Met Ser Gln Cys Thr Gly Ser
35 40 45

Val Met Glu Asn Tyr Lys Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile
50 55 60

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

Asp Val Arg Leu Ala Gly Val Ile Met Ala Gly Val Ala Ile Gly Ile
85 90 95

Ala Thr Ala Ala Gln Ile Thr Ala Gly Val Ala Leu Tyr Glu Ala Met
100 105 110

Lys Asn Ala Asp Asn Ile Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr
115 120 125

```
Asn Glu Ala Val Val Lys Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr
    130                 135                 140

Val Leu Thr Ala Leu Gln Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr
145                 150                 155                 160

Ile Asp Lys Ile Ser Cys Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala
                165                 170                 175

Leu Ser Lys Tyr Leu Ser Asp Leu Leu Phe Val Phe Gly Pro Asn Leu
            180                 185                 190

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

Phe Gly Gly Asn Tyr Glu Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr
    210                 215                 220

Glu Asp Phe Asp Asp Leu Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile
225                 230                 235                 240

Ile Tyr Val Asp Leu Ser Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe
                245                 250                 255

Pro Ile Leu Thr Glu Ile Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro
            260                 265                 270

Val Ser Phe Asn Asn Asp Asn Ser Glu Trp Ile Ser Ile Val Pro Asn
        275                 280                 285

Phe Ile Leu Val Arg Asn Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe
    290                 295                 300

Cys Leu Ile Thr Lys Arg Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr
305                 310                 315                 320

Pro Met Thr Asn Asn Met Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys
                325                 330                 335
```

```
Cys Pro Arg Glu Leu Val Val Ser Ser His Val Pro Arg Phe Ala Leu
            340                 345                 350

Ser Asn Gly Val Leu Phe Ala Asn Cys Ile Ser Val Thr Cys Gln Cys
        355                 360                 365

Gln Thr Thr Gly Arg Ala Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu
    370                 375                 380

Met Ile Asp Asn Thr Thr Cys Pro Thr Ala Val Leu Gly Asn Val Ile
385                 390                 395                 400

Ile Ser Leu Gly Lys Tyr Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly
                405                 410                 415

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

Gln Ile Ser Ser Met Asn Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile
        435                 440                 445

Lys Glu Ala Gln Arg Leu Leu Asp Thr Val Asn Pro Ser Leu Ile Ser
    450                 455                 460

Met Leu Ser Met Ile Ile Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys
465                 470                 475                 480

Ile Gly Leu Ile Thr Phe Ile Ser Phe Ile Ile Val Glu Lys Lys Arg
                485                 490                 495

Asn Thr Tyr Ser Arg Leu Glu Asp Arg Arg Val Arg Pro Thr Ser Ser
            500                 505                 510

Gly Asp Leu Tyr Tyr Ile Gly Thr
        515                 520
```

<210> 594
<211> 83
<212> PRT
<213> Nipah henipavirus

<400> 594

```
Ile Leu His Tyr Glu Lys Leu Ser Lys Ile Gly Leu Val Lys Gly Val
1               5                   10                  15


Thr Arg Lys Tyr Lys Ile Lys Ser Asn Pro Leu Thr Lys Asp Ile Val
            20                  25                  30


Ile Lys Met Ile Pro Asn Val Ser Asn Met Ser Gln Cys Thr Gly Ser
        35                  40                  45


Val Met Glu Asn Tyr Lys Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile
    50                  55                  60


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


Asp Val Arg



<210> 595
<211> 437
<212> PRT
<213> Nipah henipavirus

<400> 595
Leu Ala Gly Val Ile Met Ala Gly Val Ala Ile Gly Ile Ala Thr Ala
1               5                   10                  15


Ala Gln Ile Thr Ala Gly Val Ala Leu Tyr Glu Ala Met Lys Asn Ala
            20                  25                  30


Asp Asn Ile Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr Asn Glu Ala
        35                  40                  45


Val Val Lys Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr Val Leu Thr
    50                  55                  60


Ala Leu Gln Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr Ile Asp Lys
65                  70                  75                  80


Ile Ser Cys Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala Leu Ser Lys
                85                  90                  95
```

```
Tyr Leu Ser Asp Leu Leu Phe Val Phe Gly Pro Asn Leu Gln Asp Pro
            100                 105                 110

Val Ser Asn Ser Met Thr Ile Gln Ala Ile Ser Gln Ala Phe Gly Gly
        115                 120                 125

Asn Tyr Glu Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr Glu Asp Phe
    130                 135                 140

Asp Asp Leu Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile Ile Tyr Val
145                 150                 155                 160

Asp Leu Ser Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe Pro Ile Leu
                165                 170                 175

Thr Glu Ile Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro Val Ser Phe
            180                 185                 190

Asn Asn Asp Asn Ser Glu Trp Ile Ser Ile Val Pro Asn Phe Ile Leu
        195                 200                 205

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

Thr Lys Arg Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr Pro Met Thr
225                 230                 235                 240

Asn Asn Met Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys Cys Pro Arg
                245                 250                 255

Glu Leu Val Val Ser Ser His Val Pro Arg Phe Ala Leu Ser Asn Gly
            260                 265                 270

Val Leu Phe Ala Asn Cys Ile Ser Val Thr Cys Gln Cys Gln Thr Thr
        275                 280                 285

Gly Arg Ala Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu Met Ile Asp
    290                 295                 300

Asn Thr Thr Cys Pro Thr Ala Val Leu Gly Asn Val Ile Ile Ser Leu
305                 310                 315                 320
```

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


Gly Pro Pro Val Phe Thr Asp Lys Val Asp Ile Ser Ser Gln Ile Ser
            340                 345                 350


Ser Met Asn Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile Lys Glu Ala
        355                 360                 365


Gln Arg Leu Leu Asp Thr Val Asn Pro Ser Leu Ile Ser Met Leu Ser
    370                 375                 380


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


Ile Thr Phe Ile Ser Phe Ile Ile Val Glu Lys Lys Arg Asn Thr Tyr
                405                 410                 415


Ser Arg Leu Glu Asp Arg Arg Val Arg Pro Thr Ser Ser Gly Asp Leu
            420                 425                 430


Tyr Tyr Ile Gly Thr
        435


<210> 596
<211> 500
<212> PRT
<213> Artificial Sequence

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

<400> 596
Ile Leu His Tyr Glu Lys Leu Ser Lys Ile Gly Leu Val Lys Gly Val
1               5                   10                  15


Thr Arg Lys Tyr Lys Ile Lys Ser Asn Pro Leu Thr Lys Asp Ile Val
            20                  25                  30


Ile Lys Met Ile Pro Asn Val Ser Asn Met Ser Gln Cys Thr Gly Ser
        35                  40                  45
```

```
Val Met Glu Asn Tyr Lys Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile
    50                  55                  60

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

Asp Val Arg Leu Ala Gly Val Ile Met Ala Gly Val Ala Ile Gly Ile
                85                  90                  95

Ala Thr Ala Ala Gln Ile Thr Ala Gly Val Ala Leu Tyr Glu Ala Met
            100                 105                 110

Lys Asn Ala Asp Asn Ile Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr
        115                 120                 125

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

Val Leu Thr Ala Leu Gln Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr
145                 150                 155                 160

Ile Asp Lys Ile Ser Cys Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala
                165                 170                 175

Leu Ser Lys Tyr Leu Ser Asp Leu Leu Phe Val Phe Gly Pro Asn Leu
            180                 185                 190

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

Phe Gly Gly Asn Tyr Glu Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr
    210                 215                 220

Glu Asp Phe Asp Asp Leu Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile
225                 230                 235                 240

Ile Tyr Val Asp Leu Ser Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe
                245                 250                 255
```

```
Pro Ile Leu Thr Glu Ile Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro
            260                 265                 270

Val Ser Phe Asn Asn Asp Asn Ser Glu Trp Ile Ser Ile Val Pro Asn
        275                 280                 285

Phe Ile Leu Val Arg Asn Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe
    290                 295                 300

Cys Leu Ile Thr Lys Arg Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr
305                 310                 315                 320

Pro Met Thr Asn Asn Met Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys
                325                 330                 335

Cys Pro Arg Glu Leu Val Val Ser Ser His Val Pro Arg Phe Ala Leu
            340                 345                 350

Ser Asn Gly Val Leu Phe Ala Asn Cys Ile Ser Val Thr Cys Gln Cys
        355                 360                 365

Gln Thr Thr Gly Arg Ala Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu
    370                 375                 380

Met Ile Asp Asn Thr Thr Cys Pro Thr Ala Val Leu Gly Asn Val Ile
385                 390                 395                 400

Ile Ser Leu Gly Lys Tyr Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly
                405                 410                 415

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

Gln Ile Ser Ser Met Asn Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile
        435                 440                 445

Lys Glu Ala Gln Arg Leu Leu Asp Thr Val Asn Pro Ser Leu Ile Ser
    450                 455                 460

Met Leu Ser Met Ile Ile Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys
465                 470                 475                 480
```

```
Ile Gly Leu Ile Thr Phe Ile Ser Phe Ile Ile Val Glu Lys Lys Arg
                485                 490                 495


Asn Thr Gly Thr
            500
```

<210> 597
<211> 417
<212> PRT
<213> Artificial Sequence

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

<400> 597

```
Leu Ala Gly Val Ile Met Ala Gly Val Ala Ile Gly Ile Ala Thr Ala
1               5                   10                  15


Ala Gln Ile Thr Ala Gly Val Ala Leu Tyr Glu Ala Met Lys Asn Ala
            20                  25                  30


Asp Asn Ile Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr Asn Glu Ala
        35                  40                  45


Val Val Lys Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr Val Leu Thr
    50                  55                  60


Ala Leu Gln Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr Ile Asp Lys
65                  70                  75                  80


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


Tyr Leu Ser Asp Leu Leu Phe Val Phe Gly Pro Asn Leu Gln Asp Pro
            100                 105                 110


Val Ser Asn Ser Met Thr Ile Gln Ala Ile Ser Gln Ala Phe Gly Gly
        115                 120                 125


Asn Tyr Glu Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr Glu Asp Phe
    130                 135                 140
```

```
Asp Asp Leu Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile Ile Tyr Val
145                 150                 155                 160

Asp Leu Ser Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe Pro Ile Leu
                165                 170                 175

Thr Glu Ile Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro Val Ser Phe
            180                 185                 190

Asn Asn Asp Asn Ser Glu Trp Ile Ser Ile Val Pro Asn Phe Ile Leu
        195                 200                 205

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

Thr Lys Arg Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr Pro Met Thr
225                 230                 235                 240

Asn Asn Met Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys Cys Pro Arg
                245                 250                 255

Glu Leu Val Val Ser Ser His Val Pro Arg Phe Ala Leu Ser Asn Gly
            260                 265                 270

Val Leu Phe Ala Asn Cys Ile Ser Val Thr Cys Gln Cys Gln Thr Thr
        275                 280                 285

Gly Arg Ala Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu Met Ile Asp
    290                 295                 300

Asn Thr Thr Cys Pro Thr Ala Val Leu Gly Asn Val Ile Ile Ser Leu
305                 310                 315                 320

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

Gly Pro Pro Val Phe Thr Asp Lys Val Asp Ile Ser Ser Gln Ile Ser
            340                 345                 350
```

Ser Met Asn Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile Lys Glu Ala
        355   360   365

Gln Arg Leu Leu Asp Thr Val Asn Pro Ser Leu Ile Ser Met Leu Ser
    370   375   380

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

Ile Thr Phe Ile Ser Phe Ile Ile Val Glu Lys Lys Arg Asn Thr Gly
                405   410   415

Thr

<210> 598
<211> 500
<212> PRT
<213> Artificial Sequence

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

<400> 598
Ile Leu His Tyr Glu Lys Leu Ser Lys Ile Gly Leu Val Lys Gly Val
1   5   10   15

Thr Arg Lys Tyr Lys Ile Lys Ser Asn Pro Leu Thr Lys Asp Ile Val
            20   25   30

Ile Lys Met Ile Pro Asn Val Ser Asn Met Ser Gln Cys Thr Gly Ser
        35   40   45

Val Met Glu Asn Tyr Lys Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile
    50   55   60

Lys Gly Ala Leu Glu Ile Tyr Lys Asn Gln Thr His Asp Leu Val Gly
65   70   75   80

Asp Val Arg Leu Ala Gly Val Ile Met Ala Gly Val Ala Ile Gly Ile
                85   90   95

```
Ala Thr Ala Ala Gln Ile Thr Ala Gly Val Ala Leu Tyr Glu Ala Met
            100                 105                 110

Lys Asn Ala Asp Asn Ile Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr
        115                 120                 125

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

Val Leu Thr Ala Leu Gln Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr
145                 150                 155                 160

Ile Asp Lys Ile Ser Cys Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala
                165                 170                 175

Leu Ser Lys Tyr Leu Ser Asp Leu Leu Phe Val Phe Gly Pro Asn Leu
            180                 185                 190

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

Phe Gly Gly Asn Tyr Glu Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr
    210                 215                 220

Glu Asp Phe Asp Asp Leu Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile
225                 230                 235                 240

Ile Tyr Val Asp Leu Ser Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe
                245                 250                 255

Pro Ile Leu Thr Glu Ile Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro
            260                 265                 270

Val Ser Phe Asn Asn Asp Asn Ser Glu Trp Ile Ser Ile Val Pro Asn
        275                 280                 285

Phe Ile Leu Val Arg Asn Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe
    290                 295                 300

Cys Leu Ile Thr Lys Arg Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr
305                 310                 315                 320
```

```
Pro Met Thr Asn Asn Met Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys
                325                 330                 335

Cys Pro Arg Glu Leu Val Val Ser Ser His Val Pro Arg Phe Ala Leu
            340                 345                 350

Ser Asn Gly Val Leu Phe Ala Asn Cys Ile Ser Val Thr Cys Gln Cys
        355                 360                 365

Gln Thr Thr Gly Arg Ala Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu
    370                 375                 380

Met Ile Asp Asn Thr Thr Cys Pro Thr Ala Val Leu Gly Asn Val Ile
385                 390                 395                 400

Ile Ser Leu Gly Lys Tyr Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly
                405                 410                 415

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

Gln Ile Ser Ser Met Asn Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile
        435                 440                 445

Lys Glu Ala Gln Arg Leu Leu Asp Thr Val Asn Pro Ser Leu Ile Ser
    450                 455                 460

Met Leu Ser Met Ile Ile Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys
465                 470                 475                 480

Ile Gly Leu Ile Thr Phe Ile Ser Phe Ile Ile Val Glu Lys Lys Arg
                485                 490                 495

Asn Thr Gly Thr
            500
```

<210> 599
<211> 524
<212> PRT
<213> Artificial Sequence

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

<400> 599
Met Val Val Ile Leu Asp Lys Arg Cys Tyr Cys Asn Leu Leu Ile Leu
1 5 10 15

Ile Leu Met Ile Ser Glu Cys Ser Val Gly Ile Leu His Tyr Glu Lys
20 25 30

Leu Ser Lys Ile Gly Leu Val Lys Gly Val Thr Arg Lys Tyr Lys Ile
35 40 45

Lys Ser Asn Pro Leu Thr Lys Asp Ile Val Ile Lys Met Ile Pro Asn
50 55 60

Val Ser Asn Met Ser Gln Cys Thr Gly Ser Val Met Glu Asn Tyr Lys
65 70 75 80

Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile Lys Gly Ala Leu Glu Ile
85 90 95

Tyr Lys Asn Asn Thr His Asp Leu Val Gly Asp Val Arg Leu Ala Gly
100 105 110

Val Ile Met Ala Gly Val Ala Ile Gly Ile Ala Thr Ala Ala Gln Ile
115 120 125

Thr Ala Gly Val Ala Leu Tyr Glu Ala Met Lys Asn Ala Asp Asn Ile
130 135 140

Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr Asn Glu Ala Val Val Lys
145 150 155 160

Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr Val Leu Thr Ala Leu Gln
165 170 175

Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr Ile Asp Lys Ile Ser Cys
180 185 190

```
Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala Leu Ser Lys Tyr Leu Ser
        195                 200                 205

Asp Leu Leu Phe Val Phe Gly Pro Asn Leu Gln Asp Pro Val Ser Asn
    210                 215                 220

Ser Met Thr Ile Gln Ala Ile Ser Gln Ala Phe Gly Gly Asn Tyr Glu
225                 230                 235                 240

Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr Glu Asp Phe Asp Asp Leu
                245                 250                 255

Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile Ile Tyr Val Asp Leu Ser
            260                 265                 270

Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe Pro Ile Leu Thr Glu Ile
        275                 280                 285

Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro Val Ser Phe Asn Asn Asp
    290                 295                 300

Asn Ser Glu Trp Ile Ser Ile Val Pro Asn Phe Ile Leu Val Arg Asn
305                 310                 315                 320

Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe Cys Leu Ile Thr Lys Arg
                325                 330                 335

Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr Pro Met Thr Asn Asn Met
            340                 345                 350

Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys Cys Pro Arg Glu Leu Val
        355                 360                 365

Val Ser Ser His Val Pro Arg Phe Ala Leu Ser Asn Gly Val Leu Phe
    370                 375                 380

Ala Asn Cys Ile Ser Val Thr Cys Gln Cys Gln Thr Thr Gly Arg Ala
385                 390                 395                 400

Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu Met Ile Asp Asn Thr Thr
                405                 410                 415
```

```
Cys Pro Thr Ala Val Leu Gly Asn Val Ile Ile Ser Leu Gly Lys Tyr
            420                 425                 430

Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly Ile Ala Ile Gly Pro Pro
        435                 440                 445

Val Phe Thr Asp Lys Val Asp Ile Ser Ser Gln Ile Ser Ser Met Asn
    450                 455                 460

Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile Lys Glu Ala Gln Arg Leu
465                 470                 475                 480

Leu Asp Thr Val Asn Pro Ser Leu Ile Ser Met Leu Ser Met Ile Ile
                485                 490                 495

Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys Ile Gly Leu Ile Thr Phe
            500                 505                 510

Ile Ser Phe Ile Ile Val Glu Lys Lys Arg Asn Thr
        515                 520


<210> 600
<211> 602
<212> PRT
<213> Nipah henipavirus

<400> 600
Met Gly Pro Ala Glu Asn Lys Lys Val Arg Phe Glu Asn Thr Thr Ser
1               5                   10                  15

Asp Lys Gly Lys Ile Pro Ser Lys Val Ile Lys Ser Tyr Tyr Gly Thr
            20                  25                  30

Met Asp Ile Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu
        35                  40                  45

Ser Ala Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile
    50                  55                  60

Val Met Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn
65                  70                  75                  80
```

```
Gln Ala Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys
                85                  90                  95

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

Ile Asp Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu
        115                 120                 125

Gly Ser Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn
    130                 135                 140

Glu Lys Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn
145                 150                 155                 160

Ile Ser Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr
                165                 170                 175

Glu Gly Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln
            180                 185                 190

Lys Thr Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu
        195                 200                 205

Pro Val Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala
    210                 215                 220

Met Asp Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser
225                 230                 235                 240

Cys Ser Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val
                245                 250                 255

Leu Asp Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp
            260                 265                 270

Thr Pro Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn
        275                 280                 285
```

```
Asn Glu Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro
    290                 295                 300

Ile Leu Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu
305                 310                 315                 320

Ala Val Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu
                325                 330                 335

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

Gly Pro Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val
        355                 360                 365

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

Ile Thr Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met
385                 390                 395                 400

Gly Ile Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys
                405                 410                 415

Tyr Asn Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile
            420                 425                 430

Ser Asp Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser
        435                 440                 445

Leu Gly Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met
    450                 455                 460

Ile Lys Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp
465                 470                 475                 480

Arg Asn Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg
                485                 490                 495

Phe Asn Thr Cys Pro Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala
            500                 505                 510
```

Phe Leu Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp
515 520 525

Ser Asn Gln Thr Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp Asn
530 535 540

Glu Ile Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln
545 550 555 560

Lys Thr Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile
565 570 575

Ser Leu Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys
580 585 590

Leu Phe Ala Val Lys Ile Pro Glu Gln Cys
595 600

<210> 601
<211> 597
<212> PRT
<213> Artificial Sequence

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

<400> 601
Met Gly Lys Val Arg Phe Glu Asn Thr Thr Ser Asp Lys Gly Lys Ile
1 5 10 15

Pro Ser Lys Val Ile Lys Ser Tyr Tyr Gly Thr Met Asp Ile Lys Lys
20 25 30

Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe Asn Thr
35 40 45

Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn Ile Met
50 55 60

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

```
Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala Asp Lys
                85                  90                  95

Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp Thr Ser Ser
            100                 105                 110

Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys Ile Ser
        115                 120                 125

Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys Lys Phe
    130                 135                 140

Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys Pro Asn
145                 150                 155                 160

Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val Ser Asn
                165                 170                 175

Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser Asn Gln
            180                 185                 190

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

Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu Gly Tyr
    210                 215                 220

Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg Gly Val
225                 230                 235                 240

Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg Gly Asp
                245                 250                 255

Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro Asn Pro
            260                 265                 270

Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe Tyr Tyr
        275                 280                 285
```

```
Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn Ser Thr
    290                 295                 300

Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys Pro Lys
305                 310                 315                 320

Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg Ser Ile
                325                 330                 335

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

Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe Leu Val Arg
        355                 360                 365

Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys Cys Gln
    370                 375                 380

Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg Pro Asn
385                 390                 395                 400

Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu Ser Asp
                405                 410                 415

Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln Arg Leu
            420                 425                 430

Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln Pro Val
        435                 440                 445

Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe Gly Asp
    450                 455                 460

Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn Thr Val
465                 470                 475                 480

Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr Cys Pro
                485                 490                 495

Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile Asp Arg
            500                 505                 510
```

Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Gln Thr Ala
515 520 525

Glu Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu Tyr Arg
530 535 540

Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile Thr Asn
545 550 555 560

Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val Glu Ile
565 570 575

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

Ile Pro Glu Gln Cys
595

<210> 602
<211> 592
<212> PRT
<213> Artificial Sequence

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

<400> 602
Met Gly Asn Thr Thr Ser Asp Lys Gly Lys Ile Pro Ser Lys Val Ile
1 5 10 15

Lys Ser Tyr Tyr Gly Thr Met Asp Ile Lys Lys Ile Asn Glu Gly Leu
20 25 30

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

Gly Ser Ile Val Ile Ile Val Met Asn Ile Met Ile Ile Gln Asn Tyr
50 55 60

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

```
Ile Gln Gln Gln Ile Lys Gly Leu Ala Asp Lys Ile Gly Thr Glu Ile
                85                  90                  95

Gly Pro Lys Val Ser Leu Ile Asp Thr Ser Ser Thr Ile Thr Ile Pro
            100                 105                 110

Ala Asn Ile Gly Leu Leu Gly Ser Lys Ile Ser Gln Ser Thr Ala Ser
        115                 120                 125

Ile Asn Glu Asn Val Asn Glu Lys Cys Lys Phe Thr Leu Pro Pro Leu
    130                 135                 140

Lys Ile His Glu Cys Asn Ile Ser Cys Pro Asn Pro Leu Pro Phe Arg
145                 150                 155                 160

Glu Tyr Arg Pro Gln Thr Glu Gly Val Ser Asn Leu Val Gly Leu Pro
                165                 170                 175

Asn Asn Ile Cys Leu Gln Lys Thr Ser Asn Gln Ile Leu Lys Pro Lys
            180                 185                 190

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

Thr Asp Pro Leu Leu Ala Met Asp Glu Gly Tyr Phe Ala Tyr Ser His
    210                 215                 220

Leu Glu Arg Ile Gly Ser Cys Ser Arg Gly Val Ser Lys Gln Arg Ile
225                 230                 235                 240

Ile Gly Val Gly Glu Val Leu Asp Arg Gly Asp Glu Val Pro Ser Leu
                245                 250                 255

Phe Met Thr Asn Val Trp Thr Pro Pro Asn Pro Asn Thr Val Tyr His
            260                 265                 270

Cys Ser Ala Val Tyr Asn Asn Glu Phe Tyr Tyr Val Leu Cys Ala Val
        275                 280                 285
```

```
Ser Thr Val Gly Asp Pro Ile Leu Asn Ser Thr Tyr Trp Ser Gly Ser
    290                 295                 300

Leu Met Met Thr Arg Leu Ala Val Lys Pro Lys Ser Asn Gly Gly Gly
305                 310                 315                 320

Tyr Asn Gln His Gln Leu Ala Leu Arg Ser Ile Glu Lys Gly Arg Tyr
                325                 330                 335

Asp Lys Val Met Pro Tyr Gly Pro Ser Gly Ile Lys Gln Gly Asp Thr
            340                 345                 350

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

Asn Asp Ser Asn Cys Pro Ile Thr Lys Cys Gln Tyr Ser Lys Pro Glu
    370                 375                 380

Asn Cys Arg Leu Ser Met Gly Ile Arg Pro Asn Ser His Tyr Ile Leu
385                 390                 395                 400

Arg Ser Gly Leu Leu Lys Tyr Asn Leu Ser Asp Gly Glu Asn Pro Lys
                405                 410                 415

Val Val Phe Ile Glu Ile Ser Asp Gln Arg Leu Ser Ile Gly Ser Pro
            420                 425                 430

Ser Lys Ile Tyr Asp Ser Leu Gly Gln Pro Val Phe Tyr Gln Ala Ser
        435                 440                 445

Phe Ser Trp Asp Thr Met Ile Lys Phe Gly Asp Val Leu Thr Val Asn
    450                 455                 460

Pro Leu Val Val Asn Trp Arg Asn Asn Thr Val Ile Ser Arg Pro Gly
465                 470                 475                 480

Gln Ser Gln Cys Pro Arg Phe Asn Thr Cys Pro Glu Ile Cys Trp Glu
                485                 490                 495

Gly Val Tyr Asn Asp Ala Phe Leu Ile Asp Arg Ile Asn Trp Ile Ser
            500                 505                 510
```

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

Thr Val Phe Lys Asp Asn Glu Ile Leu Tyr Arg Ala Gln Leu Ala Ser
530 535 540

Glu Asp Thr Asn Ala Gln Lys Thr Ile Thr Asn Cys Phe Leu Leu Lys
545 550 555 560

Asn Lys Ile Trp Cys Ile Ser Leu Val Glu Ile Tyr Asp Thr Gly Asp
565 570 575

Asn Val Ile Arg Pro Lys Leu Phe Ala Val Lys Ile Pro Glu Gln Cys
580 585 590

<210> 603
<211> 587
<212> PRT
<213> Artificial Sequence

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

<400> 603
Met Gly Lys Gly Lys Ile Pro Ser Lys Val Ile Lys Ser Tyr Tyr Gly
1 5 10 15

Thr Met Asp Ile Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile
20 25 30

Leu Ser Ala Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile
35 40 45

Ile Val Met Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp
50 55 60

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

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

```
Leu Ile Asp Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu
            100                 105                 110

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

Asn Glu Lys Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys
    130                 135                 140

Asn Ile Ser Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln
145                 150                 155                 160

Thr Glu Gly Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu
                165                 170                 175

Gln Lys Thr Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr
            180                 185                 190

Leu Pro Val Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu
        195                 200                 205

Ala Met Asp Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly
    210                 215                 220

Ser Cys Ser Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu
225                 230                 235                 240

Val Leu Asp Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val
                245                 250                 255

Trp Thr Pro Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr
            260                 265                 270

Asn Asn Glu Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp
        275                 280                 285

Pro Ile Leu Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg
    290                 295                 300
```

```
Leu Ala Val Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln
305                 310                 315                 320

Leu Ala Leu Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro
                325                 330                 335

Tyr Gly Pro Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala
            340                 345                 350

Val Gly Phe Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys
        355                 360                 365

Pro Ile Thr Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser
    370                 375                 380

Met Gly Ile Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu
385                 390                 395                 400

Lys Tyr Asn Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu
                405                 410                 415

Ile Ser Asp Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp
            420                 425                 430

Ser Leu Gly Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr
        435                 440                 445

Met Ile Lys Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn
    450                 455                 460

Trp Arg Asn Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro
465                 470                 475                 480

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

Ala Phe Leu Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu
            500                 505                 510

Asp Ser Asn Gln Thr Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp
        515                 520                 525
```

Asn Glu Ile Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala
530 535 540

Gln Lys Thr Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys
545 550 555 560

Ile Ser Leu Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro
565 570 575

Lys Leu Phe Ala Val Lys Ile Pro Glu Gln Cys
580 585

<210> 604
<211> 582
<212> PRT
<213> Artificial Sequence

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

<400> 604
Met Gly Ser Lys Val Ile Lys Ser Tyr Tyr Gly Thr Met Asp Ile Lys
1 5 10 15

Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe Asn
20 25 30

Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn Ile
35 40 45

Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala Val Ile
50 55 60

Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala Asp
65 70 75 80

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

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

```
Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys Lys
        115                 120                 125

Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys Pro
    130                 135                 140

Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val Ser
145                 150                 155                 160

Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser Asn
                165                 170                 175

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

Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu Gly
        195                 200                 205

Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg Gly
    210                 215                 220

Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg Gly
225                 230                 235                 240

Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro Asn
                245                 250                 255

Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe Tyr
            260                 265                 270

Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn Ser
        275                 280                 285

Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys Pro
    290                 295                 300

Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg Ser
305                 310                 315                 320
```

```
Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser Gly
                325                 330                 335

Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe Leu Val
            340                 345                 350

Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys Cys
        355                 360                 365

Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg Pro
    370                 375                 380

Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu Ser
385                 390                 395                 400

Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln Arg
                405                 410                 415

Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln Pro
            420                 425                 430

Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe Gly
        435                 440                 445

Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn Thr
    450                 455                 460

Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr Cys
465                 470                 475                 480

Pro Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile Asp
                485                 490                 495

Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Gln Thr
            500                 505                 510

Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu Tyr
        515                 520                 525

Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile Thr
    530                 535                 540
```

```
Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val Glu
545                 550                 555                 560


Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala Val
                565                 570                 575


Lys Ile Pro Glu Gln Cys
            580
```

<210> 605
<211> 577
<212> PRT
<213> Artificial Sequence

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

<400> 605

```
Met Gly Ser Tyr Tyr Gly Thr Met Asp Ile Lys Lys Ile Asn Glu Gly
1               5                   10                  15


Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe Asn Thr Val Ile Ala Leu
            20                  25                  30


Leu Gly Ser Ile Val Ile Ile Val Met Asn Ile Met Ile Ile Gln Asn
        35                  40                  45


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


Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala Asp Lys Ile Gly Thr Glu
65                  70                  75                  80


Ile Gly Pro Lys Val Ser Leu Ile Asp Thr Ser Ser Thr Ile Thr Ile
                85                  90                  95


Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys Ile Ser Gln Ser Thr Ala
            100                 105                 110


Ser Ile Asn Glu Asn Val Asn Glu Lys Cys Lys Phe Thr Leu Pro Pro
        115                 120                 125
```

```
Leu Lys Ile His Glu Cys Asn Ile Ser Cys Pro Asn Pro Leu Pro Phe
    130                 135                 140

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

Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser Asn Gln Ile Leu Lys Pro
                165                 170                 175

Lys Leu Ile Ser Tyr Thr Leu Pro Val Val Gly Gln Ser Gly Thr Cys
            180                 185                 190

Ile Thr Asp Pro Leu Leu Ala Met Asp Glu Gly Tyr Phe Ala Tyr Ser
        195                 200                 205

His Leu Glu Arg Ile Gly Ser Cys Ser Arg Gly Val Ser Lys Gln Arg
    210                 215                 220

Ile Ile Gly Val Gly Glu Val Leu Asp Arg Gly Asp Glu Val Pro Ser
225                 230                 235                 240

Leu Phe Met Thr Asn Val Trp Thr Pro Pro Asn Pro Asn Thr Val Tyr
                245                 250                 255

His Cys Ser Ala Val Tyr Asn Asn Glu Phe Tyr Tyr Val Leu Cys Ala
            260                 265                 270

Val Ser Thr Val Gly Asp Pro Ile Leu Asn Ser Thr Tyr Trp Ser Gly
        275                 280                 285

Ser Leu Met Met Thr Arg Leu Ala Val Lys Pro Lys Ser Asn Gly Gly
    290                 295                 300

Gly Tyr Asn Gln His Gln Leu Ala Leu Arg Ser Ile Glu Lys Gly Arg
305                 310                 315                 320

Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser Gly Ile Lys Gln Gly Asp
                325                 330                 335
```

```
Thr Leu Tyr Phe Pro Ala Val Gly Phe Leu Val Arg Thr Glu Phe Lys
            340                 345                 350

Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys Cys Gln Tyr Ser Lys Pro
        355                 360                 365

Glu Asn Cys Arg Leu Ser Met Gly Ile Arg Pro Asn Ser His Tyr Ile
    370                 375                 380

Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu Ser Asp Gly Glu Asn Pro
385                 390                 395                 400

Lys Val Val Phe Ile Glu Ile Ser Asp Gln Arg Leu Ser Ile Gly Ser
                405                 410                 415

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

Ser Phe Ser Trp Asp Thr Met Ile Lys Phe Gly Asp Val Leu Thr Val
        435                 440                 445

Asn Pro Leu Val Val Asn Trp Arg Asn Asn Thr Val Ile Ser Arg Pro
    450                 455                 460

Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr Cys Pro Glu Ile Cys Trp
465                 470                 475                 480

Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile Asp Arg Ile Asn Trp Ile
                485                 490                 495

Ser Ala Gly Val Phe Leu Asp Ser Asn Gln Thr Ala Glu Asn Pro Val
            500                 505                 510

Phe Thr Val Phe Lys Asp Asn Glu Ile Leu Tyr Arg Ala Gln Leu Ala
        515                 520                 525

Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile Thr Asn Cys Phe Leu Leu
    530                 535                 540

Lys Asn Lys Ile Trp Cys Ile Ser Leu Val Glu Ile Tyr Asp Thr Gly
545                 550                 555                 560
```

Asp Asn Val Ile Arg Pro Lys Leu Phe Ala Val Lys Ile Pro Glu Gln
565 570 575

Cys

<210> 606
<211> 573
<212> PRT
<213> Artificial Sequence

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

<400> 606
Met Gly Thr Met Asp Ile Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser
1 5 10 15

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

Val Ile Ile Val Met Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser
35 40 45

Thr Asp Asn Gln Ala Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln
50 55 60

Gln Ile Lys Gly Leu Ala Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys
65 70 75 80

Val Ser Leu Ile Asp Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile
85 90 95

Gly Leu Leu Gly Ser Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu
100 105 110

Asn Val Asn Glu Lys Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His
115 120 125

Glu Cys Asn Ile Ser Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg
130 135 140

```
Pro Gln Thr Glu Gly Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile
145                 150                 155                 160

Cys Leu Gln Lys Thr Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser
                165                 170                 175

Tyr Thr Leu Pro Val Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro
            180                 185                 190

Leu Leu Ala Met Asp Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg
        195                 200                 205

Ile Gly Ser Cys Ser Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val
    210                 215                 220

Gly Glu Val Leu Asp Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr
225                 230                 235                 240

Asn Val Trp Thr Pro Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala
                245                 250                 255

Val Tyr Asn Asn Glu Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val
            260                 265                 270

Gly Asp Pro Ile Leu Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met
        275                 280                 285

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

His Gln Leu Ala Leu Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val
305                 310                 315                 320

Met Pro Tyr Gly Pro Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe
                325                 330                 335

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

```
Asn Cys Pro Ile Thr Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg
        355                 360                 365

Leu Ser Met Gly Ile Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly
    370                 375                 380

Leu Leu Lys Tyr Asn Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe
385                 390                 395                 400

Ile Glu Ile Ser Asp Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile
                405                 410                 415

Tyr Asp Ser Leu Gly Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp
            420                 425                 430

Asp Thr Met Ile Lys Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val
        435                 440                 445

Val Asn Trp Arg Asn Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln
    450                 455                 460

Cys Pro Arg Phe Asn Thr Cys Pro Glu Ile Cys Trp Glu Gly Val Tyr
465                 470                 475                 480

Asn Asp Ala Phe Leu Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val
                485                 490                 495

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

Lys Asp Asn Glu Ile Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr
        515                 520                 525

Asn Ala Gln Lys Thr Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile
    530                 535                 540

Trp Cys Ile Ser Leu Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile
545                 550                 555                 560

Arg Pro Lys Leu Phe Ala Val Lys Ile Pro Glu Gln Cys
                565                 570
```

<210> 607
<211> 569
<212> PRT
<213> Artificial Sequence

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

<400> 607
Met Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala
1 5 10 15

Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met
20 25 30

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala
35 40 45

Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu
50 55 60

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

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
85 90 95

Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys
100 105 110

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
115 120 125

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly
130 135 140

Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr
145 150 155 160

Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val
165 170 175

```
Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp
            180                 185                 190

Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser
        195                 200                 205

Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
    210                 215                 220

Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro
225                 230                 235                 240

Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu
                245                 250                 255

Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu
            260                 265                 270

Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val
        275                 280                 285

Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu
    290                 295                 300

Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro
305                 310                 315                 320

Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe
                325                 330                 335

Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr
            340                 345                 350

Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile
        355                 360                 365

Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
    370                 375                 380
```

```
Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp
385                 390                 395                 400


Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly
                405                 410                 415


Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys
            420                 425                 430


Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn
        435                 440                 445


Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
    450                 455                 460


Thr Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu
465                 470                 475                 480


Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn
                485                 490                 495


Ala Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile
            500                 505                 510


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


Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu
    530                 535                 540


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


Ala Val Lys Ile Pro Glu Gln Cys Thr
                565
```

<210> 608
<211> 546
<212> PRT
<213> Hendra henipavirus

<400> 608

```
Met Ala Thr Gln Glu Val Arg Leu Lys Cys Leu Leu Cys Gly Ile Ile
1               5                  10                  15

Val Leu Val Leu Ser Leu Glu Gly Leu Gly Ile Leu His Tyr Glu Lys
            20                  25                  30

Leu Ser Lys Ile Gly Leu Val Lys Gly Ile Thr Arg Lys Tyr Lys Ile
        35                  40                  45

Lys Ser Asn Pro Leu Thr Lys Asp Ile Val Ile Lys Met Ile Pro Asn
    50                  55                  60

Val Ser Asn Val Ser Lys Cys Thr Gly Thr Val Met Glu Asn Tyr Lys
65                  70                  75                  80

Ser Arg Leu Thr Gly Ile Leu Ser Pro Ile Lys Gly Ala Ile Glu Leu
                85                  90                  95

Tyr Asn Asn Asn Thr His Asp Leu Val Gly Asp Val Lys Leu Ala Gly
            100                 105                 110

Val Val Met Ala Gly Ile Ala Ile Gly Ile Ala Thr Ala Ala Gln Ile
        115                 120                 125

Thr Ala Gly Val Ala Leu Tyr Glu Ala Met Lys Asn Ala Asp Asn Ile
    130                 135                 140

Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr Asn Glu Ala Val Val Lys
145                 150                 155                 160

Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr Val Leu Thr Ala Leu Gln
                165                 170                 175

Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr Ile Asp Gln Ile Ser Cys
            180                 185                 190

Lys Gln Thr Glu Leu Ala Leu Asp Leu Ala Leu Ser Lys Tyr Leu Ser
        195                 200                 205

Asp Leu Leu Phe Val Phe Gly Pro Asn Leu Gln Asp Pro Val Ser Asn
    210                 215                 220
```

```
Ser Met Thr Ile Gln Ala Ile Ser Gln Ala Phe Gly Gly Asn Tyr Glu
225                 230                 235                 240

Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr Glu Asp Phe Asp Asp Leu
                245                 250                 255

Leu Glu Ser Asp Ser Ile Ala Gly Gln Ile Val Tyr Val Asp Leu Ser
            260                 265                 270

Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe Pro Ile Leu Thr Glu Ile
        275                 280                 285

Gln Gln Ala Tyr Val Gln Glu Leu Leu Pro Val Ser Phe Asn Asn Asp
    290                 295                 300

Asn Ser Glu Trp Ile Ser Ile Val Pro Asn Phe Val Leu Ile Arg Asn
305                 310                 315                 320

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

Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr Pro Met Thr Ala Ser Val
            340                 345                 350

Arg Glu Cys Leu Thr Gly Ser Thr Asp Lys Cys Pro Arg Glu Leu Val
        355                 360                 365

Val Ser Ser His Val Pro Arg Phe Ala Leu Ser Gly Gly Val Leu Phe
    370                 375                 380

Ala Asn Cys Ile Ser Val Thr Cys Gln Cys Gln Thr Thr Gly Arg Ala
385                 390                 395                 400

Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu Met Ile Asp Asn Thr Thr
                405                 410                 415

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

```
Leu Gly Ser Ile Asn Tyr Asn Ser Glu Ser Ile Ala Val Gly Pro Pro
        435                 440                 445


Val Tyr Thr Asp Lys Val Asp Ile Ser Ser Gln Ile Ser Ser Met Asn
    450                 455                 460


Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile Lys Glu Ala Gln Lys Ile
465                 470                 475                 480


Leu Asp Thr Val Asn Pro Ser Leu Ile Ser Met Leu Ser Met Ile Ile
                485                 490                 495


Leu Tyr Val Leu Ser Ile Ala Ala Leu Cys Ile Gly Leu Ile Thr Phe
            500                 505                 510


Ile Ser Phe Val Ile Val Glu Lys Lys Arg Gly Asn Tyr Ser Arg Leu
        515                 520                 525


Asp Asp Arg Gln Val Arg Pro Val Ser Asn Gly Asp Leu Tyr Tyr Ile
    530                 535                 540


Gly Thr
545
```

<210> 609
<211> 604
<212> PRT
<213> Hendra henipavirus

<400> 609

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


Lys Ile Lys Asp Gln Gly Lys Val Ile Lys Asn Tyr Tyr Gly Thr Met
            20                  25                  30


Asp Ile Lys Lys Ile Asn Asp Gly Leu Leu Asp Ser Lys Ile Leu Gly
        35                  40                  45


Ala Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Ile Ile Ile Val
    50                  55                  60
```

```
Met Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Thr Thr Asp Asn Gln
65                  70                  75                  80

Ala Leu Ile Lys Glu Ser Leu Gln Ser Val Gln Gln Gln Ile Lys Ala
                85                  90                  95

Leu Thr Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile
            100                 105                 110

Asp Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly
        115                 120                 125

Ser Lys Ile Ser Gln Ser Thr Ser Ser Ile Asn Glu Asn Val Asn Asp
    130                 135                 140

Lys Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile
145                 150                 155                 160

Ser Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Ile Ser Gln
                165                 170                 175

Gly Val Ser Asp Leu Val Gly Leu Pro Asn Gln Ile Cys Leu Gln Lys
            180                 185                 190

Thr Thr Ser Thr Ile Leu Lys Pro Arg Leu Ile Ser Tyr Thr Leu Pro
        195                 200                 205

Ile Asn Thr Arg Glu Gly Val Cys Ile Thr Asp Pro Leu Leu Ala Val
    210                 215                 220

Asp Asn Gly Phe Phe Ala Tyr Ser His Leu Glu Lys Ile Gly Ser Cys
225                 230                 235                 240

Thr Arg Gly Ile Ala Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu
                245                 250                 255

Asp Arg Gly Asp Lys Val Pro Ser Met Phe Met Thr Asn Val Trp Thr
            260                 265                 270

Pro Pro Asn Pro Ser Thr Ile His His Cys Ser Ser Thr Tyr His Glu
        275                 280                 285
```

```
Asp Phe Tyr Tyr Thr Leu Cys Ala Val Ser His Val Gly Asp Pro Ile
    290                 295                 300

Leu Asn Ser Thr Ser Trp Thr Glu Ser Leu Ser Leu Ile Arg Leu Ala
305                 310                 315                 320

Val Arg Pro Lys Ser Asp Ser Gly Asp Tyr Asn Gln Lys Tyr Ile Ala
                325                 330                 335

Ile Thr Lys Val Glu Arg Gly Lys Tyr Asp Lys Val Met Pro Tyr Gly
            340                 345                 350

Pro Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly
        355                 360                 365

Phe Leu Pro Arg Thr Glu Phe Gln Tyr Asn Asp Ser Asn Cys Pro Ile
    370                 375                 380

Ile His Cys Lys Tyr Ser Lys Ala Glu Asn Cys Arg Leu Ser Met Gly
385                 390                 395                 400

Val Asn Ser Lys Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr
                405                 410                 415

Asn Leu Ser Leu Gly Gly Asp Ile Ile Leu Gln Phe Ile Glu Ile Ala
            420                 425                 430

Asp Asn Arg Leu Thr Ile Gly Ser Pro Ser Lys Ile Tyr Asn Ser Leu
        435                 440                 445

Gly Gln Pro Val Phe Tyr Gln Ala Ser Tyr Ser Trp Asp Thr Met Ile
    450                 455                 460

Lys Leu Gly Asp Val Asp Thr Val Asp Pro Leu Arg Val Gln Trp Arg
465                 470                 475                 480

Asn Asn Ser Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe
                485                 490                 495
```

```
Asn Val Cys Pro Glu Val Cys Trp Glu Gly Thr Tyr Asn Asp Ala Phe
            500                 505                 510

Leu Ile Asp Arg Leu Asn Trp Val Ser Ala Gly Val Tyr Leu Asn Ser
        515                 520                 525

Asn Gln Thr Ala Glu Asn Pro Val Phe Ala Val Phe Lys Asp Asn Glu
    530                 535                 540

Ile Leu Tyr Gln Val Pro Leu Ala Glu Asp Asp Thr Asn Ala Gln Lys
545                 550                 555                 560

Thr Ile Thr Asp Cys Phe Leu Leu Glu Asn Val Ile Trp Cys Ile Ser
                565                 570                 575

Leu Val Glu Ile Tyr Asp Thr Gly Asp Ser Val Ile Arg Pro Lys Leu
            580                 585                 590

Phe Ala Val Lys Ile Pro Ala Gln Cys Ser Glu Ser
        595                 600


<210> 610
<211> 526
<212> PRT
<213> Artificial Sequence

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

<400> 610
Met Val Val Ile Leu Asp Lys Arg Cys Tyr Cys Asn Leu Leu Ile Leu
1               5                   10                  15

Ile Leu Met Ile Ser Glu Cys Ser Val Gly Ile Leu His Tyr Glu Lys
            20                  25                  30

Leu Ser Lys Ile Gly Leu Val Lys Gly Val Thr Arg Lys Tyr Lys Ile
        35                  40                  45

Lys Ser Asn Pro Leu Thr Lys Asp Ile Val Ile Lys Met Ile Pro Asn
    50                  55                  60
```

```
Val Ser Asn Met Ser Gln Cys Thr Gly Ser Val Met Glu Asn Tyr Lys
65                  70                  75                  80

Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile Lys Gly Ala Leu Glu Ile
                85                  90                  95

Tyr Lys Asn Asn Thr His Asp Leu Val Gly Asp Val Arg Leu Ala Gly
            100                 105                 110

Val Ile Met Ala Gly Val Ala Ile Gly Ile Ala Thr Ala Ala Gln Ile
        115                 120                 125

Thr Ala Gly Val Ala Leu Tyr Glu Ala Met Lys Asn Ala Asp Asn Ile
    130                 135                 140

Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr Asn Glu Ala Val Val Lys
145                 150                 155                 160

Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr Val Leu Thr Ala Leu Gln
                165                 170                 175

Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr Ile Asp Lys Ile Ser Cys
            180                 185                 190

Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala Leu Ser Lys Tyr Leu Ser
        195                 200                 205

Asp Leu Leu Phe Val Phe Gly Pro Asn Leu Gln Asp Pro Val Ser Asn
    210                 215                 220

Ser Met Thr Ile Gln Ala Ile Ser Gln Ala Phe Gly Gly Asn Tyr Glu
225                 230                 235                 240

Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr Glu Asp Phe Asp Asp Leu
                245                 250                 255

Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile Ile Tyr Val Asp Leu Ser
            260                 265                 270

Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe Pro Ile Leu Thr Glu Ile
        275                 280                 285
```

```
Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro Val Ser Phe Asn Asn Asp
    290                 295                 300

Asn Ser Glu Trp Ile Ser Ile Val Pro Asn Phe Ile Leu Val Arg Asn
305                 310                 315                 320

Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe Cys Leu Ile Thr Lys Arg
                325                 330                 335

Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr Pro Met Thr Asn Asn Met
            340                 345                 350

Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys Cys Pro Arg Glu Leu Val
        355                 360                 365

Val Ser Ser His Val Pro Arg Phe Ala Leu Ser Asn Gly Val Leu Phe
    370                 375                 380

Ala Asn Cys Ile Ser Val Thr Cys Gln Cys Gln Thr Thr Gly Arg Ala
385                 390                 395                 400

Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu Met Ile Asp Asn Thr Thr
                405                 410                 415

Cys Pro Thr Ala Val Leu Gly Asn Val Ile Ile Ser Leu Gly Lys Tyr
            420                 425                 430

Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly Ile Ala Ile Gly Pro Pro
        435                 440                 445

Val Phe Thr Asp Lys Val Asp Ile Ser Ser Gln Ile Ser Ser Met Asn
    450                 455                 460

Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile Lys Glu Ala Gln Arg Leu
465                 470                 475                 480

Leu Asp Thr Val Asn Pro Ser Leu Ile Ser Met Leu Ser Met Ile Ile
                485                 490                 495
```

```
Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys Ile Gly Leu Ile Thr Phe
            500                 505                 510


Ile Ser Phe Ile Ile Val Glu Lys Lys Arg Asn Thr Gly Thr
        515                 520                 525


<210> 611
<211> 526
<212> PRT
<213> Artificial Sequence

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

<400> 611
Met Val Val Ile Leu Asp Lys Arg Cys Tyr Cys Asn Leu Leu Ile Leu
1               5                   10                  15


Ile Leu Met Ile Ser Glu Cys Ser Val Gly Ile Leu His Tyr Glu Lys
            20                  25                  30


Leu Ser Lys Ile Gly Leu Val Lys Gly Val Thr Arg Lys Tyr Lys Ile
        35                  40                  45


Lys Ser Asn Pro Leu Thr Lys Asp Ile Val Ile Lys Met Ile Pro Asn
    50                  55                  60


Val Ser Asn Met Ser Gln Cys Thr Gly Ser Val Met Glu Asn Tyr Lys
65                  70                  75                  80


Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile Lys Gly Ala Leu Glu Ile
                85                  90                  95


Tyr Lys Asn Gln Thr His Asp Leu Val Gly Asp Val Arg Leu Ala Gly
            100                 105                 110


Val Ile Met Ala Gly Val Ala Ile Gly Ile Ala Thr Ala Ala Gln Ile
        115                 120                 125


Thr Ala Gly Val Ala Leu Tyr Glu Ala Met Lys Asn Ala Asp Asn Ile
    130                 135                 140
```

```
Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr Asn Glu Ala Val Val Lys
145                 150                 155                 160

Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr Val Leu Thr Ala Leu Gln
                165                 170                 175

Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr Ile Asp Lys Ile Ser Cys
            180                 185                 190

Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala Leu Ser Lys Tyr Leu Ser
        195                 200                 205

Asp Leu Leu Phe Val Phe Gly Pro Asn Leu Gln Asp Pro Val Ser Asn
    210                 215                 220

Ser Met Thr Ile Gln Ala Ile Ser Gln Ala Phe Gly Gly Asn Tyr Glu
225                 230                 235                 240

Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr Glu Asp Phe Asp Asp Leu
                245                 250                 255

Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile Ile Tyr Val Asp Leu Ser
            260                 265                 270

Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe Pro Ile Leu Thr Glu Ile
        275                 280                 285

Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro Val Ser Phe Asn Asn Asp
    290                 295                 300

Asn Ser Glu Trp Ile Ser Ile Val Pro Asn Phe Ile Leu Val Arg Asn
305                 310                 315                 320

Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe Cys Leu Ile Thr Lys Arg
                325                 330                 335

Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr Pro Met Thr Asn Asn Met
            340                 345                 350

Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys Cys Pro Arg Glu Leu Val
        355                 360                 365
```

```
Val Ser Ser His Val Pro Arg Phe Ala Leu Ser Asn Gly Val Leu Phe
    370                 375                 380

Ala Asn Cys Ile Ser Val Thr Cys Gln Cys Gln Thr Thr Gly Arg Ala
385                 390                 395                 400

Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu Met Ile Asp Asn Thr Thr
                405                 410                 415

Cys Pro Thr Ala Val Leu Gly Asn Val Ile Ile Ser Leu Gly Lys Tyr
            420                 425                 430

Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly Ile Ala Ile Gly Pro Pro
        435                 440                 445

Val Phe Thr Asp Lys Val Asp Ile Ser Ser Gln Ile Ser Ser Met Asn
    450                 455                 460

Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile Lys Glu Ala Gln Arg Leu
465                 470                 475                 480

Leu Asp Thr Val Asn Pro Ser Leu Ile Ser Met Leu Ser Met Ile Ile
                485                 490                 495

Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys Ile Gly Leu Ile Thr Phe
            500                 505                 510

Ile Ser Phe Ile Ile Val Glu Lys Lys Arg Asn Thr Gly Thr
        515                 520                 525
```

<210> 612
<211> 569
<212> PRT
<213> Artificial Sequence

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

<400> 612

```
Met Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala
1               5                   10                  15
```

```
Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met
            20                  25                  30

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala
        35                  40                  45

Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu
    50                  55                  60

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

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
                85                  90                  95

Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys
            100                 105                 110

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
        115                 120                 125

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly
    130                 135                 140

Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr
145                 150                 155                 160

Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val
                165                 170                 175

Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp
            180                 185                 190

Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser
        195                 200                 205

Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
    210                 215                 220
```

```
Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro
225                 230                 235                 240

Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu
                245                 250                 255

Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu
            260                 265                 270

Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val
        275                 280                 285

Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu
    290                 295                 300

Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro
305                 310                 315                 320

Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe
                325                 330                 335

Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr
            340                 345                 350

Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile
        355                 360                 365

Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
    370                 375                 380

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

Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly
                405                 410                 415

Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys
            420                 425                 430

Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn
        435                 440                 445
```

```
Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
    450                 455                 460

Thr Cys Pro Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe Leu
465                 470                 475                 480

Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn
                485                 490                 495

Gln Thr Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile
            500                 505                 510

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

Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu
    530                 535                 540

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

Ala Val Lys Ile Pro Glu Gln Cys Thr
                565
```

<210> 613
<211> 498
<212> PRT
<213> Artificial Sequence

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

<400> 613

```
Ile Leu His Tyr Glu Lys Leu Ser Lys Ile Gly Leu Val Lys Gly Val
1               5                   10                  15

Thr Arg Lys Tyr Lys Ile Lys Ser Asn Pro Leu Thr Lys Asp Ile Val
            20                  25                  30

Ile Lys Met Ile Pro Asn Val Ser Asn Met Ser Gln Cys Thr Gly Ser
        35                  40                  45
```

```
Val Met Glu Asn Tyr Lys Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile
    50                  55                  60

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

Asp Val Arg Leu Ala Gly Val Ile Met Ala Gly Val Ala Ile Gly Ile
                85                  90                  95

Ala Thr Ala Ala Gln Ile Thr Ala Gly Val Ala Leu Tyr Glu Ala Met
            100                 105                 110

Lys Asn Ala Asp Asn Ile Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr
        115                 120                 125

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

Val Leu Thr Ala Leu Gln Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr
145                 150                 155                 160

Ile Asp Lys Ile Ser Cys Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala
                165                 170                 175

Leu Ser Lys Tyr Leu Ser Asp Leu Leu Phe Val Phe Gly Pro Asn Leu
            180                 185                 190

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

Phe Gly Gly Asn Tyr Glu Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr
    210                 215                 220

Glu Asp Phe Asp Asp Leu Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile
225                 230                 235                 240

Ile Tyr Val Asp Leu Ser Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe
                245                 250                 255
```

```
Pro Ile Leu Thr Glu Ile Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro
            260                 265                 270

Val Ser Phe Asn Asn Asp Asn Ser Glu Trp Ile Ser Ile Val Pro Asn
        275                 280                 285

Phe Ile Leu Val Arg Asn Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe
    290                 295                 300

Cys Leu Ile Thr Lys Arg Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr
305                 310                 315                 320

Pro Met Thr Asn Asn Met Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys
                325                 330                 335

Cys Pro Arg Glu Leu Val Val Ser Ser His Val Pro Arg Phe Ala Leu
            340                 345                 350

Ser Asn Gly Val Leu Phe Ala Asn Cys Ile Ser Val Thr Cys Gln Cys
        355                 360                 365

Gln Thr Thr Gly Arg Ala Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu
    370                 375                 380

Met Ile Asp Asn Thr Thr Cys Pro Thr Ala Val Leu Gly Asn Val Ile
385                 390                 395                 400

Ile Ser Leu Gly Lys Tyr Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly
                405                 410                 415

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

Gln Ile Ser Ser Met Asn Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile
        435                 440                 445

Lys Glu Ala Gln Arg Leu Leu Asp Thr Val Asn Pro Ser Leu Ile Ser
    450                 455                 460

Met Leu Ser Met Ile Ile Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys
465                 470                 475                 480
```

Ile Gly Leu Ile Thr Phe Ile Ser Phe Ile Ile Val Glu Lys Lys Arg
485 490 495

Asn Thr

<210> 614
<211> 557
<212> PRT
<213> Cedar henipavirus

<400> 614
Met Ser Asn Lys Arg Thr Thr Val Leu Ile Ile Ile Ser Tyr Thr Leu
1 5 10 15

Phe Tyr Leu Asn Asn Ala Ala Ile Val Gly Phe Asp Phe Asp Lys Leu
20 25 30

Asn Lys Ile Gly Val Val Gln Gly Arg Val Leu Asn Tyr Lys Ile Lys
35 40 45

Gly Asp Pro Met Thr Lys Asp Leu Val Leu Lys Phe Ile Pro Asn Ile
50 55 60

Val Asn Ile Thr Glu Cys Val Arg Glu Pro Leu Ser Arg Tyr Asn Glu
65 70 75 80

Thr Val Arg Arg Leu Leu Leu Pro Ile His Asn Met Leu Gly Leu Tyr
85 90 95

Leu Asn Asn Thr Asn Ala Lys Met Thr Gly Leu Met Ile Ala Gly Val
100 105 110

Ile Met Gly Gly Ile Ala Ile Gly Ile Ala Thr Ala Ala Gln Ile Thr
115 120 125

Ala Gly Phe Ala Leu Tyr Glu Ala Lys Lys Asn Thr Glu Asn Ile Gln
130 135 140

Lys Leu Thr Asp Ser Ile Met Lys Thr Gln Asp Ser Ile Asp Lys Leu
145 150 155 160

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

Tyr Ile Asn Asn Gln Leu Val Pro Asn Leu Glu Leu Leu Ser Cys Arg
            180                 185                 190

Gln Asn Lys Ile Glu Phe Asp Leu Met Leu Thr Lys Tyr Leu Val Asp
        195                 200                 205

Leu Met Thr Val Ile Gly Pro Asn Ile Asn Asn Pro Val Asn Lys Asp
    210                 215                 220

Met Thr Ile Gln Ser Leu Ser Leu Leu Phe Asp Gly Asn Tyr Asp Ile
225                 230                 235                 240

Met Met Ser Glu Leu Gly Tyr Thr Pro Gln Asp Phe Leu Asp Leu Ile
                245                 250                 255

Glu Ser Lys Ser Ile Thr Gly Gln Ile Ile Tyr Val Asp Met Glu Asn
            260                 265                 270

Leu Tyr Val Val Ile Arg Thr Tyr Leu Pro Thr Leu Ile Glu Val Pro
        275                 280                 285

Asp Ala Gln Ile Tyr Glu Phe Asn Lys Ile Thr Met Ser Ser Asn Gly
    290                 295                 300

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

Tyr Met Ser Asn Ile Asp Val Ala Thr Cys Tyr Met Thr Lys Ala Ser
                325                 330                 335

Val Ile Cys Asn Gln Asp Tyr Ser Leu Pro Met Ser Gln Asn Leu Arg
            340                 345                 350

Ser Cys Tyr Gln Gly Glu Thr Glu Tyr Cys Pro Val Glu Ala Val Ile
        355                 360                 365
```

```
Ala Ser His Ser Pro Arg Phe Ala Leu Thr Asn Gly Val Ile Phe Ala
    370                 375                 380

Asn Cys Ile Asn Thr Ile Cys Arg Cys Gln Asp Asn Gly Lys Thr Ile
385                 390                 395                 400

Thr Gln Asn Ile Asn Gln Phe Val Ser Met Ile Asp Asn Ser Thr Cys
                405                 410                 415

Asn Asp Val Met Val Asp Lys Phe Thr Ile Lys Val Gly Lys Tyr Met
            420                 425                 430

Gly Arg Lys Asp Ile Asn Asn Ile Asn Ile Gln Ile Gly Pro Gln Ile
        435                 440                 445

Ile Ile Asp Lys Val Asp Leu Ser Asn Glu Ile Asn Lys Met Asn Gln
    450                 455                 460

Ser Leu Lys Asp Ser Ile Phe Tyr Leu Arg Glu Ala Lys Arg Ile Leu
465                 470                 475                 480

Asp Ser Val Asn Ile Ser Leu Ile Ser Pro Ser Val Gln Leu Phe Leu
                485                 490                 495

Ile Ile Ile Ser Val Leu Ser Phe Ile Ile Leu Leu Ile Ile Ile Val
            500                 505                 510

Tyr Leu Tyr Cys Lys Ser Lys His Ser Tyr Lys Tyr Asn Lys Phe Ile
        515                 520                 525

Asp Asp Pro Asp Tyr Tyr Asn Asp Tyr Lys Arg Glu Arg Ile Asn Gly
    530                 535                 540

Lys Ala Ser Lys Ser Asn Asn Ile Tyr Tyr Val Gly Asp
545                 550                 555
```

<210> 615
<211> 545
<212> PRT
<213> Mojiang henipavirus

<400> 615

```
Met Ala Leu Asn Lys Asn Met Phe Ser Ser Leu Phe Leu Gly Tyr Leu
1               5                  10                  15

Leu Val Tyr Ala Thr Thr Val Gln Ser Ser Ile His Tyr Asp Ser Leu
            20                  25                  30

Ser Lys Val Gly Val Ile Lys Gly Leu Thr Tyr Asn Tyr Lys Ile Lys
        35                  40                  45

Gly Ser Pro Ser Thr Lys Leu Met Val Val Lys Leu Ile Pro Asn Ile
    50                  55                  60

Asp Ser Val Lys Asn Cys Thr Gln Lys Gln Tyr Asp Glu Tyr Lys Asn
65                  70                  75                  80

Leu Val Arg Lys Ala Leu Glu Pro Val Lys Met Ala Ile Asp Thr Met
                85                  90                  95

Leu Asn Asn Val Lys Ser Gly Asn Asn Lys Tyr Arg Phe Ala Gly Ala
            100                 105                 110

Ile Met Ala Gly Val Ala Leu Gly Val Ala Thr Ala Ala Thr Val Thr
        115                 120                 125

Ala Gly Ile Ala Leu His Arg Ser Asn Glu Asn Ala Gln Ala Ile Ala
    130                 135                 140

Asn Met Lys Ser Ala Ile Gln Asn Thr Asn Glu Ala Val Lys Gln Leu
145                 150                 155                 160

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

Glu Ile Asn Asn Asn Ile Ile Pro Val Ile Asn Gln Leu Ser Cys Asp
            180                 185                 190

Thr Ile Gly Leu Ser Val Gly Ile Arg Leu Thr Gln Tyr Tyr Ser Glu
        195                 200                 205

Ile Ile Thr Ala Phe Gly Pro Ala Leu Gln Asn Pro Val Asn Thr Arg
    210                 215                 220
```

```
Ile Thr Ile Gln Ala Ile Ser Ser Val Phe Asn Gly Asn Phe Asp Glu
225                 230                 235                 240

Leu Leu Lys Ile Met Gly Tyr Thr Ser Gly Asp Leu Tyr Glu Ile Leu
                245                 250                 255

His Ser Glu Leu Ile Arg Gly Asn Ile Ile Asp Val Asp Val Asp Ala
            260                 265                 270

Gly Tyr Ile Ala Leu Glu Ile Glu Phe Pro Asn Leu Thr Leu Val Pro
        275                 280                 285

Asn Ala Val Val Gln Glu Leu Met Pro Ile Ser Tyr Asn Ile Asp Gly
    290                 295                 300

Asp Glu Trp Val Thr Leu Val Pro Arg Phe Val Leu Thr Arg Thr Thr
305                 310                 315                 320

Leu Leu Ser Asn Ile Asp Thr Ser Arg Cys Thr Ile Thr Asp Ser Ser
                325                 330                 335

Val Ile Cys Asp Asn Asp Tyr Ala Leu Pro Met Ser His Glu Leu Ile
            340                 345                 350

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

Ser Ser Tyr Val Pro Lys Phe Ala Leu Ser Asp Gly Leu Val Tyr Ala
    370                 375                 380

Asn Cys Leu Asn Thr Ile Cys Arg Cys Met Asp Thr Asp Thr Pro Ile
385                 390                 395                 400

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

Ser Val Tyr Gln Val Gly Asp Val Leu Ile Ser Val Gly Ser Tyr Leu
            420                 425                 430
```

```
Gly Asp Gly Glu Tyr Asn Ala Asp Asn Val Glu Leu Gly Pro Pro Ile
        435                 440                 445


Val Ile Asp Lys Ile Asp Ile Gly Asn Gln Leu Ala Gly Ile Asn Gln
    450                 455                 460


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


Lys Gly Val Asn Pro Ser Ile Ile Thr Leu Gly Ser Met Val Val Leu
                485                 490                 495


Tyr Ile Phe Met Ile Leu Ile Ala Ile Val Ser Val Ile Ala Leu Val
            500                 505                 510


Leu Ser Ile Lys Leu Thr Val Lys Gly Asn Val Val Arg Gln Gln Phe
        515                 520                 525


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


His
545


<210> 616
<211> 662
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown:
      Bat Paramyxovirus Eid_hel/GH-M74a/GHA/2009 sequence

<400> 616
Met Lys Lys Lys Thr Asp Asn Pro Thr Ile Ser Lys Arg Gly His Asn
1               5                   10                  15


His Ser Arg Gly Ile Lys Ser Arg Ala Leu Leu Arg Glu Thr Asp Asn
            20                  25                  30


Tyr Ser Asn Gly Leu Ile Val Glu Asn Leu Val Arg Asn Cys His His
        35                  40                  45
```

```
Pro Ser Lys Asn Asn Leu Asn Tyr Thr Lys Thr Gln Lys Arg Asp Ser
    50                  55                  60

Thr Ile Pro Tyr Arg Val Glu Glu Arg Lys Gly His Tyr Pro Lys Ile
65                  70                  75                  80

Lys His Leu Ile Asp Lys Ser Tyr Lys His Ile Lys Arg Gly Lys Arg
                85                  90                  95

Arg Asn Gly His Asn Gly Asn Ile Ile Thr Ile Ile Leu Leu Leu Ile
            100                 105                 110

Leu Ile Leu Lys Thr Gln Met Ser Glu Gly Ala Ile His Tyr Glu Thr
        115                 120                 125

Leu Ser Lys Ile Gly Leu Ile Lys Gly Ile Thr Arg Glu Tyr Lys Val
    130                 135                 140

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

Val Thr Gly Leu Asn Lys Cys Thr Asn Ile Ser Met Glu Asn Tyr Lys
                165                 170                 175

Glu Gln Leu Asp Lys Ile Leu Ile Pro Ile Asn Asn Ile Ile Glu Leu
            180                 185                 190

Tyr Ala Asn Ser Thr Lys Ser Ala Pro Gly Asn Ala Arg Phe Ala Gly
        195                 200                 205

Val Ile Ile Ala Gly Val Ala Leu Gly Val Ala Ala Ala Ala Gln Ile
    210                 215                 220

Thr Ala Gly Ile Ala Leu His Glu Ala Arg Gln Asn Ala Glu Arg Ile
225                 230                 235                 240

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

Leu Gln Glu Ala Thr Gly Gly Ile Val Asn Val Ile Thr Gly Met Gln
            260                 265                 270
```

```
Asp Tyr Ile Asn Thr Asn Leu Val Pro Gln Ile Asp Lys Leu Gln Cys
        275                 280                 285

Ser Gln Ile Lys Thr Ala Leu Asp Ile Ser Leu Ser Gln Tyr Tyr Ser
    290                 295                 300

Glu Ile Leu Thr Val Phe Gly Pro Asn Leu Gln Asn Pro Val Thr Thr
305                 310                 315                 320

Ser Met Ser Ile Gln Ala Ile Ser Gln Ser Phe Gly Gly Asn Ile Asp
                325                 330                 335

Leu Leu Leu Asn Leu Leu Gly Tyr Thr Ala Asn Asp Leu Leu Asp Leu
            340                 345                 350

Leu Glu Ser Lys Ser Ile Thr Gly Gln Ile Thr Tyr Ile Asn Leu Glu
        355                 360                 365

His Tyr Phe Met Val Ile Arg Val Tyr Tyr Pro Ile Met Thr Thr Ile
    370                 375                 380

Ser Asn Ala Tyr Val Gln Glu Leu Ile Lys Ile Ser Phe Asn Val Asp
385                 390                 395                 400

Gly Ser Glu Trp Val Ser Leu Val Pro Ser Tyr Ile Leu Ile Arg Asn
                405                 410                 415

Ser Tyr Leu Ser Asn Ile Asp Ile Ser Glu Cys Leu Ile Thr Lys Asn
            420                 425                 430

Ser Val Ile Cys Arg His Asp Phe Ala Met Pro Met Ser Tyr Thr Leu
        435                 440                 445

Lys Glu Cys Leu Thr Gly Asp Thr Glu Lys Cys Pro Arg Glu Ala Val
    450                 455                 460

Val Thr Ser Tyr Val Pro Arg Phe Ala Ile Ser Gly Gly Val Ile Tyr
465                 470                 475                 480
```

```
Ala Asn Cys Leu Ser Thr Thr Cys Gln Cys Tyr Gln Thr Gly Lys Val
                485                 490                 495

Ile Ala Gln Asp Gly Ser Gln Thr Leu Met Met Ile Asp Asn Gln Thr
            500                 505                 510

Cys Ser Ile Val Arg Ile Glu Glu Ile Leu Ile Ser Thr Gly Lys Tyr
        515                 520                 525

Leu Gly Ser Gln Glu Tyr Asn Thr Met His Val Ser Val Gly Asn Pro
    530                 535                 540

Val Phe Thr Asp Lys Leu Asp Ile Thr Ser Gln Ile Ser Asn Ile Asn
545                 550                 555                 560

Gln Ser Ile Glu Gln Ser Lys Phe Tyr Leu Asp Lys Ser Lys Ala Ile
                565                 570                 575

Leu Asp Lys Ile Asn Leu Asn Leu Ile Gly Ser Val Pro Ile Ser Ile
            580                 585                 590

Leu Phe Ile Ile Ala Ile Leu Ser Leu Ile Leu Ser Ile Ile Thr Phe
        595                 600                 605

Val Ile Val Met Ile Ile Val Arg Arg Tyr Asn Lys Tyr Thr Pro Leu
    610                 615                 620

Ile Asn Ser Asp Pro Ser Ser Arg Arg Ser Thr Ile Gln Asp Val Tyr
625                 630                 635                 640

Ile Ile Pro Asn Pro Gly Glu His Ser Ile Arg Ser Ala Ala Arg Ser
                645                 650                 655

Ile Asp Arg Asp Arg Asp
            660
```

<210> 617
<211> 5
<212> PRT
<213> Homo sapiens

<400> 617

```
Arg Tyr Ala Ile Ser
1               5


<210> 618
<211> 602
<212> PRT
<213> Nipah henipavirus

<400> 618
Met Pro Ala Glu Asn Lys Lys Val Arg Phe Glu Asn Thr Thr Ser Asp
1               5                   10                  15


Lys Gly Lys Ile Pro Ser Lys Val Ile Lys Ser Tyr Tyr Gly Thr Met
            20                  25                  30


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


Ala Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val
    50                  55                  60


Met Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln
65                  70                  75                  80


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


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


Asp Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly
        115                 120                 125


Ser Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu
    130                 135                 140


Lys Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile
145                 150                 155                 160


Ser Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu
                165                 170                 175
```

```
Gly Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys
            180                 185                 190

Thr Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro
        195                 200                 205

Val Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met
    210                 215                 220

Asp Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys
225                 230                 235                 240

Ser Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu
                245                 250                 255

Asp Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr
            260                 265                 270

Pro Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn
        275                 280                 285

Glu Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile
    290                 295                 300

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

Val Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala
                325                 330                 335

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

Pro Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly
        355                 360                 365

Phe Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile
    370                 375                 380

Thr Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly
385                 390                 395                 400
```

```
Ile Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr
                405                 410                 415

Asn Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser
            420                 425                 430

Asp Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu
        435                 440                 445

Gly Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile
    450                 455                 460

Lys Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg
465                 470                 475                 480

Asn Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe
                485                 490                 495

Asn Thr Cys Pro Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe
            500                 505                 510

Leu Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser
        515                 520                 525

Asn Gln Thr Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu
    530                 535                 540

Ile Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys
545                 550                 555                 560

Thr Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser
                565                 570                 575

Leu Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu
            580                 585                 590

Phe Ala Val Lys Ile Pro Glu Gln Cys Thr
        595                 600
```

<210> 619
<211> 622
<212> PRT
<213> Cedar henipavirus

<400> 619
Met Leu Ser Gln Leu Gln Lys Asn Tyr Leu Asp Asn Ser Asn Gln Gln
1   5   10   15

Gly Asp Lys Met Asn Asn Pro Asp Lys Lys Leu Ser Val Asn Phe Asn
            20   25   30

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

Val Lys Asn Lys Asn Tyr Asn Val Ser Asn Leu Leu Asn Glu Ser Leu
    50   55   60

His Asp Ile Lys Phe Cys Ile Tyr Cys Ile Phe Ser Leu Leu Ile Ile
65   70   75   80

Ile Thr Ile Ile Asn Ile Ile Thr Ile Ser Ile Val Ile Thr Arg Leu
                85   90   95

Lys Val His Glu Glu Asn Asn Gly Met Glu Ser Pro Asn Leu Gln Ser
            100   105   110

Ile Gln Asp Ser Leu Ser Ser Leu Thr Asn Met Ile Asn Thr Glu Ile
        115   120   125

Thr Pro Arg Ile Gly Ile Leu Val Thr Ala Thr Ser Val Thr Leu Ser
    130   135   140

Ser Ser Ile Asn Tyr Val Gly Thr Lys Thr Asn Gln Leu Val Asn Glu
145   150   155   160

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

Lys Leu His Glu Cys Asn Ile Ser Cys Ala Asp Pro Lys Ile Ser Lys
            180   185   190

```
Ser Ala Met Tyr Ser Thr Asn Ala Tyr Ala Glu Leu Ala Gly Pro Pro
        195                 200                 205

Lys Ile Phe Cys Lys Ser Val Ser Lys Asp Pro Asp Phe Arg Leu Lys
    210                 215                 220

Gln Ile Asp Tyr Val Ile Pro Val Gln Gln Asp Arg Ser Ile Cys Met
225                 230                 235                 240

Asn Asn Pro Leu Leu Asp Ile Ser Asp Gly Phe Phe Thr Tyr Ile His
                245                 250                 255

Tyr Glu Gly Ile Asn Ser Cys Lys Lys Ser Asp Ser Phe Lys Val Leu
            260                 265                 270

Leu Ser His Gly Glu Ile Val Asp Arg Gly Asp Tyr Arg Pro Ser Leu
        275                 280                 285

Tyr Leu Leu Ser Ser His Tyr His Pro Tyr Ser Met Gln Val Ile Asn
    290                 295                 300

Cys Val Pro Val Thr Cys Asn Gln Ser Ser Phe Val Phe Cys His Ile
305                 310                 315                 320

Ser Asn Asn Thr Lys Thr Leu Asp Asn Ser Asp Tyr Ser Ser Asp Glu
                325                 330                 335

Tyr Tyr Ile Thr Tyr Phe Asn Gly Ile Asp Arg Pro Lys Thr Lys Lys
            340                 345                 350

Ile Pro Ile Asn Asn Met Thr Ala Asp Asn Arg Tyr Ile His Phe Thr
        355                 360                 365

Phe Ser Gly Gly Gly Gly Val Cys Leu Gly Glu Glu Phe Ile Ile Pro
    370                 375                 380

Val Thr Thr Val Ile Asn Thr Asp Val Phe Thr His Asp Tyr Cys Glu
385                 390                 395                 400

Ser Phe Asn Cys Ser Val Gln Thr Gly Lys Ser Leu Lys Glu Ile Cys
                405                 410                 415
```

```
Ser Glu Ser Leu Arg Ser Pro Thr Asn Ser Ser Arg Tyr Asn Leu Asn
            420                 425                 430

Gly Ile Met Ile Ile Ser Gln Asn Asn Met Thr Asp Phe Lys Ile Gln
        435                 440                 445

Leu Asn Gly Ile Thr Tyr Asn Lys Leu Ser Phe Gly Ser Pro Gly Arg
    450                 455                 460

Leu Ser Lys Thr Leu Gly Gln Val Leu Tyr Tyr Gln Ser Ser Met Ser
465                 470                 475                 480

Trp Asp Thr Tyr Leu Lys Ala Gly Phe Val Glu Lys Trp Lys Pro Phe
                485                 490                 495

Thr Pro Asn Trp Met Asn Asn Thr Val Ile Ser Arg Pro Asn Gln Gly
            500                 505                 510

Asn Cys Pro Arg Tyr His Lys Cys Pro Glu Ile Cys Tyr Gly Gly Thr
        515                 520                 525

Tyr Asn Asp Ile Ala Pro Leu Asp Leu Gly Lys Asp Met Tyr Val Ser
    530                 535                 540

Val Ile Leu Asp Ser Asp Gln Leu Ala Glu Asn Pro Glu Ile Thr Val
545                 550                 555                 560

Phe Asn Ser Thr Thr Ile Leu Tyr Lys Glu Arg Val Ser Lys Asp Glu
                565                 570                 575

Leu Asn Thr Arg Ser Thr Thr Thr Ser Cys Phe Leu Phe Leu Asp Glu
            580                 585                 590

Pro Trp Cys Ile Ser Val Leu Glu Thr Asn Arg Phe Asn Gly Lys Ser
        595                 600                 605

Ile Arg Pro Glu Ile Tyr Ser Tyr Lys Ile Pro Lys Tyr Cys
    610                 615                 620
```

<210> 620
<211> 632
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown:
Bat Paramyxovirus Eid_hel/GH-M74a/GHA/2009 sequence

<400> 620
Met Pro Gln Lys Thr Val Glu Phe Ile Asn Met Asn Ser Pro Leu Glu
1 5 10 15

Arg Gly Val Ser Thr Leu Ser Asp Lys Lys Thr Leu Asn Gln Ser Lys
20 25 30

Ile Thr Lys Gln Gly Tyr Phe Gly Leu Gly Ser His Ser Glu Arg Asn
35 40 45

Trp Lys Lys Gln Lys Asn Gln Asn Asp His Tyr Met Thr Val Ser Thr
50 55 60

Met Ile Leu Glu Ile Leu Val Val Leu Gly Ile Met Phe Asn Leu Ile
65 70 75 80

Val Leu Thr Met Val Tyr Tyr Gln Asn Asp Asn Ile Asn Gln Arg Met
85 90 95

Ala Glu Leu Thr Ser Asn Ile Thr Val Leu Asn Leu Asn Leu Asn Gln
100 105 110

Leu Thr Asn Lys Ile Gln Arg Glu Ile Ile Pro Arg Ile Thr Leu Ile
115 120 125

Asp Thr Ala Thr Thr Ile Thr Ile Pro Ser Ala Ile Thr Tyr Ile Leu
130 135 140

Ala Thr Leu Thr Thr Arg Ile Ser Glu Leu Leu Pro Ser Ile Asn Gln
145 150 155 160

Lys Cys Glu Phe Lys Thr Pro Thr Leu Val Leu Asn Asp Cys Arg Ile
165 170 175

```
Asn Cys Thr Pro Pro Leu Asn Pro Ser Asp Gly Val Lys Met Ser Ser
            180                 185                 190

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

Ser Ser Val Pro Thr Ile Tyr Tyr Tyr Arg Ile Pro Gly Leu Tyr Asn
    210                 215                 220

Arg Thr Ala Leu Asp Glu Arg Cys Ile Leu Asn Pro Arg Leu Thr Ile
225                 230                 235                 240

Ser Ser Thr Lys Phe Ala Tyr Val His Ser Glu Tyr Asp Lys Asn Cys
                245                 250                 255

Thr Arg Gly Phe Lys Tyr Tyr Glu Leu Met Thr Phe Gly Glu Ile Leu
            260                 265                 270

Glu Gly Pro Glu Lys Glu Pro Arg Met Phe Ser Arg Ser Phe Tyr Ser
        275                 280                 285

Pro Thr Asn Ala Val Asn Tyr His Ser Cys Thr Pro Ile Val Thr Val
    290                 295                 300

Asn Glu Gly Tyr Phe Leu Cys Leu Glu Cys Thr Ser Ser Asp Pro Leu
305                 310                 315                 320

Tyr Lys Ala Asn Leu Ser Asn Ser Thr Phe His Leu Val Ile Leu Arg
                325                 330                 335

His Asn Lys Asp Glu Lys Ile Val Ser Met Pro Ser Phe Asn Leu Ser
            340                 345                 350

Thr Asp Gln Glu Tyr Val Gln Ile Ile Pro Ala Glu Gly Gly Gly Thr
        355                 360                 365

Ala Glu Ser Gly Asn Leu Tyr Phe Pro Cys Ile Gly Arg Leu Leu His
    370                 375                 380

Lys Arg Val Thr His Pro Leu Cys Lys Lys Ser Asn Cys Ser Arg Thr
385                 390                 395                 400
```

```
Asp Asp Glu Ser Cys Leu Lys Ser Tyr Tyr Asn Gln Gly Ser Pro Gln
                405                 410                 415

His Gln Val Val Asn Cys Leu Ile Arg Ile Arg Asn Ala Gln Arg Asp
            420                 425                 430

Asn Pro Thr Trp Asp Val Ile Thr Val Asp Leu Thr Asn Thr Tyr Pro
        435                 440                 445

Gly Ser Arg Ser Arg Ile Phe Gly Ser Phe Ser Lys Pro Met Leu Tyr
    450                 455                 460

Gln Ser Ser Val Ser Trp His Thr Leu Leu Gln Val Ala Glu Ile Thr
465                 470                 475                 480

Asp Leu Asp Lys Tyr Gln Leu Asp Trp Leu Asp Thr Pro Tyr Ile Ser
                485                 490                 495

Arg Pro Gly Gly Ser Glu Cys Pro Phe Gly Asn Tyr Cys Pro Thr Val
            500                 505                 510

Cys Trp Glu Gly Thr Tyr Asn Asp Val Tyr Ser Leu Thr Pro Asn Asn
        515                 520                 525

Asp Leu Phe Val Thr Val Tyr Leu Lys Ser Glu Gln Val Ala Glu Asn
    530                 535                 540

Pro Tyr Phe Ala Ile Phe Ser Arg Asp Gln Ile Leu Lys Glu Phe Pro
545                 550                 555                 560

Leu Asp Ala Trp Ile Ser Ser Ala Arg Thr Thr Thr Ile Ser Cys Phe
                565                 570                 575

Met Phe Asn Asn Glu Ile Trp Cys Ile Ala Ala Leu Glu Ile Thr Arg
            580                 585                 590

Leu Asn Asp Asp Ile Ile Arg Pro Ile Tyr Tyr Ser Phe Trp Leu Pro
        595                 600                 605
```

```
Thr Asp Cys Arg Thr Pro Tyr Pro His Thr Gly Lys Met Thr Arg Val
    610                 615                 620

Pro Leu Arg Ser Thr Tyr Asn Tyr
625                 630
```

<210> 621
<211> 625
<212> PRT
<213> Mojiang henipavirus

<400> 621

```
Met Ala Thr Asn Arg Asp Asn Thr Ile Thr Ser Ala Glu Val Ser Gln
1               5                   10                  15

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

Ala Asp Ser Ile Ser Gly Asn Lys Val Phe Ile Leu Met Asn Thr Leu
        35                  40                  45

Leu Ile Leu Thr Gly Ala Ile Ile Thr Ile Thr Leu Asn Ile Thr Asn
    50                  55                  60

Leu Thr Ala Ala Lys Ser Gln Gln Asn Met Leu Lys Ile Ile Gln Asp
65                  70                  75                  80

Asp Val Asn Ala Lys Leu Glu Met Phe Val Asn Leu Asp Gln Leu Val
                85                  90                  95

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

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

Lys Tyr Val Tyr Leu Glu Glu Ser Ile Thr Lys Gln Cys Thr Cys Asn
    130                 135                 140

Pro Leu Ser Gly Ile Phe Pro Thr Ser Gly Pro Thr Tyr Pro Pro Thr
145                 150                 155                 160
```

```
Asp Lys Pro Asp Asp Asp Thr Thr Asp Asp Asp Lys Val Asp Thr Thr
                165                 170                 175

Ile Lys Pro Ile Glu Tyr Pro Lys Pro Asp Gly Cys Asn Arg Thr Gly
            180                 185                 190

Asp His Phe Thr Met Glu Pro Gly Ala Asn Phe Tyr Thr Val Pro Asn
        195                 200                 205

Leu Gly Pro Ala Ser Ser Asn Ser Asp Glu Cys Tyr Thr Asn Pro Ser
    210                 215                 220

Phe Ser Ile Gly Ser Ser Ile Tyr Met Phe Ser Gln Glu Ile Arg Lys
225                 230                 235                 240

Thr Asp Cys Thr Ala Gly Glu Ile Leu Ser Ile Gln Ile Val Leu Gly
                245                 250                 255

Arg Ile Val Asp Lys Gly Gln Gln Gly Pro Gln Ala Ser Pro Leu Leu
            260                 265                 270

Val Trp Ala Val Pro Asn Pro Lys Ile Ile Asn Ser Cys Ala Val Ala
        275                 280                 285

Ala Gly Asp Glu Met Gly Trp Val Leu Cys Ser Val Thr Leu Thr Ala
    290                 295                 300

Ala Ser Gly Glu Pro Ile Pro His Met Phe Asp Gly Phe Trp Leu Tyr
305                 310                 315                 320

Lys Leu Glu Pro Asp Thr Glu Val Val Ser Tyr Arg Ile Thr Gly Tyr
                325                 330                 335

Ala Tyr Leu Leu Asp Lys Gln Tyr Asp Ser Val Phe Ile Gly Lys Gly
            340                 345                 350

Gly Gly Ile Gln Lys Gly Asn Asp Leu Tyr Phe Gln Met Tyr Gly Leu
        355                 360                 365

Ser Arg Asn Arg Gln Ser Phe Lys Ala Leu Cys Glu His Gly Ser Cys
    370                 375                 380
```

```
Leu Gly Thr Gly Gly Gly Gly Tyr Gln Val Leu Cys Asp Arg Ala Val
385                 390                 395                 400

Met Ser Phe Gly Ser Glu Glu Ser Leu Ile Thr Asn Ala Tyr Leu Lys
                405                 410                 415

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

Pro Pro Ser Asp Ser Tyr Lys Gly Ser Asn Gly Arg Met Tyr Thr Ile
        435                 440                 445

Gly Asp Lys Tyr Gly Leu Tyr Leu Ala Pro Ser Ser Trp Asn Arg Tyr
    450                 455                 460

Leu Arg Phe Gly Ile Thr Pro Asp Ile Ser Val Arg Ser Thr Thr Trp
465                 470                 475                 480

Leu Lys Ser Gln Asp Pro Ile Met Lys Ile Leu Ser Thr Cys Thr Asn
                485                 490                 495

Thr Asp Arg Asp Met Cys Pro Glu Ile Cys Asn Thr Arg Gly Tyr Gln
            500                 505                 510

Asp Ile Phe Pro Leu Ser Glu Asp Ser Glu Tyr Tyr Thr Tyr Ile Gly
        515                 520                 525

Ile Thr Pro Asn Asn Gly Gly Thr Lys Asn Phe Val Ala Val Arg Asp
    530                 535                 540

Ser Asp Gly His Ile Ala Ser Ile Asp Ile Leu Gln Asn Tyr Tyr Ser
545                 550                 555                 560

Ile Thr Ser Ala Thr Ile Ser Cys Phe Met Tyr Lys Asp Glu Ile Trp
                565                 570                 575

Cys Ile Ala Ile Thr Glu Gly Lys Lys Gln Lys Asp Asn Pro Gln Arg
            580                 585                 590
```

Ile Tyr Ala His Ser Tyr Lys Ile Arg Gln Met Cys Tyr Asn Met Lys
595 600 605

Ser Ala Thr Val Thr Val Gly Asn Ala Lys Asn Ile Thr Ile Arg Arg
610 615 620

Tyr
625

<210> 622
<211> 552
<212> PRT
<213> Hendra henipavirus

<400> 622
Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met
1 5 10 15

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala
20 25 30

Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu
35 40 45

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

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
65 70 75 80

Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys
85 90 95

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
100 105 110

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly
115 120 125

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

```
Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val
145                 150                 155                 160

Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp
                165                 170                 175

Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser
            180                 185                 190

Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
        195                 200                 205

Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro
    210                 215                 220

Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu
225                 230                 235                 240

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

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

Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu
        275                 280                 285

Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro
    290                 295                 300

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

Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr
                325                 330                 335

Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile
            340                 345                 350

Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
        355                 360                 365
```

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

Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly
385                 390                 395                 400

Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys
                405                 410                 415

Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn
            420                 425                 430

Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
        435                 440                 445

Thr Cys Pro Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe Leu
    450                 455                 460

Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn
465                 470                 475                 480

Gln Thr Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile
                485                 490                 495

Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr
            500                 505                 510

Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu
        515                 520                 525

Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe
    530                 535                 540

Ala Val Lys Ile Pro Glu Gln Cys
545                 550
```

<210> 623
<211> 555
<212> PRT
<213> Hendra henipavirus

<400> 623
Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Ile Ile Ile Val Met
1   5   10   15

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Thr Thr Asp Asn Gln Ala
            20   25   30

Leu Ile Lys Glu Ser Leu Gln Ser Val Gln Gln Gln Ile Lys Ala Leu
        35   40   45

Thr Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp
    50   55   60

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
65   70   75   80

Lys Ile Ser Gln Ser Thr Ser Ser Ile Asn Glu Asn Val Asn Asp Lys
                85   90   95

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
            100   105   110

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Ile Ser Gln Gly
        115   120   125

Val Ser Asp Leu Val Gly Leu Pro Asn Gln Ile Cys Leu Gln Lys Thr
    130   135   140

Thr Ser Thr Ile Leu Lys Pro Arg Leu Ile Ser Tyr Thr Leu Pro Ile
145   150   155   160

Asn Thr Arg Glu Gly Val Cys Ile Thr Asp Pro Leu Leu Ala Val Asp
                165   170   175

Asn Gly Phe Phe Ala Tyr Ser His Leu Glu Lys Ile Gly Ser Cys Thr
            180   185   190

Arg Gly Ile Ala Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
        195   200   205

```
Arg Gly Asp Lys Val Pro Ser Met Phe Met Thr Asn Val Trp Thr Pro
    210                 215                 220

Pro Asn Pro Ser Thr Ile His His Cys Ser Ser Thr Tyr His Glu Asp
225                 230                 235                 240

Phe Tyr Tyr Thr Leu Cys Ala Val Ser His Val Gly Asp Pro Ile Leu
                245                 250                 255

Asn Ser Thr Ser Trp Thr Glu Ser Leu Ser Leu Ile Arg Leu Ala Val
            260                 265                 270

Arg Pro Lys Ser Asp Ser Gly Asp Tyr Asn Gln Lys Tyr Ile Ala Ile
        275                 280                 285

Thr Lys Val Glu Arg Gly Lys Tyr Asp Lys Val Met Pro Tyr Gly Pro
    290                 295                 300

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

Leu Pro Arg Thr Glu Phe Gln Tyr Asn Asp Ser Asn Cys Pro Ile Ile
                325                 330                 335

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

Asn Ser Lys Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
        355                 360                 365

Leu Ser Leu Gly Gly Asp Ile Ile Leu Gln Phe Ile Glu Ile Ala Asp
    370                 375                 380

Asn Arg Leu Thr Ile Gly Ser Pro Ser Lys Ile Tyr Asn Ser Leu Gly
385                 390                 395                 400

Gln Pro Val Phe Tyr Gln Ala Ser Tyr Ser Trp Asp Thr Met Ile Lys
                405                 410                 415

Leu Gly Asp Val Asp Thr Val Asp Pro Leu Arg Val Gln Trp Arg Asn
            420                 425                 430
```

Asn Ser Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
435 440 445

Val Cys Pro Glu Val Cys Trp Glu Gly Thr Tyr Asn Asp Ala Phe Leu
450 455 460

Ile Asp Arg Leu Asn Trp Val Ser Ala Gly Val Tyr Leu Asn Ser Asn
465 470 475 480

Gln Thr Ala Glu Asn Pro Val Phe Ala Val Phe Lys Asp Asn Glu Ile
485 490 495

Leu Tyr Gln Val Pro Leu Ala Glu Asp Asp Thr Asn Ala Gln Lys Thr
500 505 510

Ile Thr Asp Cys Phe Leu Leu Glu Asn Val Ile Trp Cys Ile Ser Leu
515 520 525

Val Glu Ile Tyr Asp Thr Gly Asp Ser Val Ile Arg Pro Lys Leu Phe
530 535 540

Ala Val Lys Ile Pro Ala Gln Cys Ser Glu Ser
545 550 555

<210> 624
<211> 26
<212> PRT
<213> Nipah henipavirus

<400> 624
Met Val Val Ile Leu Asp Lys Arg Cys Tyr Cys Asn Leu Leu Ile Leu
1 5 10 15

Ile Leu Met Ile Ser Glu Cys Ser Val Gly
20 25

<210> 625
<211> 6
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 625
Gly Gly Gly Gly Gly Ser
1 5

<210> 626
<211> 50
<212> PRT
<213> Artificial Sequence

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

<220>
<221> SITE
<222> (1)..(50)
<223> This sequence may encompass 1-10 "Gly Gly Gly Gly Ser"
repeating units

<400> 626
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

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

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
35 40 45

Gly Ser
50

<210> 627
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 627
Gly Gly Gly Gly Ser
1 5

<210> 628
<211> 600
<212> PRT
<213> Nipah henipavirus

<400> 628
Pro Ala Glu Asn Lys Lys Val Arg Phe Glu Asn Thr Thr Ser Asp Lys
1   5   10   15

Gly Lys Ile Pro Ser Lys Val Ile Lys Ser Tyr Tyr Gly Thr Met Asp
            20   25   30

Ile Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala
        35   40   45

Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met
    50   55   60

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala
65   70   75   80

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

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

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
        115   120   125

Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys
    130   135   140

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
145   150   155   160

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly
                165   170   175

Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr
            180   185   190

```
Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val
        195                 200                 205

Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp
    210                 215                 220

Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser
225                 230                 235                 240

Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
                245                 250                 255

Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro
            260                 265                 270

Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu
        275                 280                 285

Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu
    290                 295                 300

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

Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu
                325                 330                 335

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

Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe
        355                 360                 365

Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr
    370                 375                 380

Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile
385                 390                 395                 400

Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
```

405 410 415

Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp
420 425 430

Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly
435 440 445

Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys
450 455 460

Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn
465 470 475 480

Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
485 490 495

Thr Cys Pro Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe Leu
500 505 510

Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn
515 520 525

Gln Thr Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile
530 535 540

Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr
545 550 555 560

Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu
565 570 575

Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe
580 585 590

Ala Val Lys Ile Pro Glu Gln Cys
595 600

<210> 629
<211> 595
<212> PRT

<213> Artificial Sequence

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

<400> 629
Lys Val Arg Phe Glu Asn Thr Thr Ser Asp Lys Gly Lys Ile Pro Ser
1 5 10 15

Lys Val Ile Lys Ser Tyr Tyr Gly Thr Met Asp Ile Lys Lys Ile Asn
20 25 30

Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe Asn Thr Val Ile
35 40 45

Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn Ile Met Ile Ile
50 55 60

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

Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala Asp Lys Ile Gly
85 90 95

Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp Thr Ser Ser Thr Ile
100 105 110

Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys Ile Ser Gln Ser
115 120 125

Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys Lys Phe Thr Leu
130 135 140

Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys Pro Asn Pro Leu
145 150 155 160

Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val Ser Asn Leu Val
165 170 175

Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser Asn Gln Ile Leu
180 185 190

```
Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val Val Gly Gln Ser Gly
        195                 200                 205

Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu Gly Tyr Phe Ala
    210                 215                 220

Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg Gly Val Ser Lys
225                 230                 235                 240

Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg Gly Asp Glu Val
                245                 250                 255

Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro Asn Pro Asn Thr
            260                 265                 270

Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe Tyr Tyr Val Leu
        275                 280                 285

Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn Ser Thr Tyr Trp
    290                 295                 300

Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys Pro Lys Ser Asn
305                 310                 315                 320

Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg Ser Ile Glu Lys
                325                 330                 335

Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser Gly Ile Lys Gln
            340                 345                 350

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

Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys Cys Gln Tyr Ser
    370                 375                 380

Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg Pro Asn Ser His
385                 390                 395                 400

Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu Ser Asp Gly Glu
```

405 410 415

Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln Arg Leu Ser Ile
420 425 430

Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln Pro Val Phe Tyr
435 440 445

Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe Gly Asp Val Leu
450 455 460

Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn Thr Val Ile Ser
465 470 475 480

Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr Cys Pro Glu Ile
485 490 495

Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile Asp Arg Ile Asn
500 505 510

Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Gln Thr Ala Glu Asn
515 520 525

Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu Tyr Arg Ala Gln
530 535 540

Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile Thr Asn Cys Phe
545 550 555 560

Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val Glu Ile Tyr Asp
565 570 575

Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala Val Lys Ile Pro
580 585 590

Glu Gln Cys
595

<210> 630
<211> 590
<212> PRT

<213> Artificial Sequence

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

<400> 630
Asn Thr Thr Ser Asp Lys Gly Lys Ile Pro Ser Lys Val Ile Lys Ser
1 5 10 15

Tyr Tyr Gly Thr Met Asp Ile Lys Lys Ile Asn Glu Gly Leu Leu Asp
20 25 30

Ser Lys Ile Leu Ser Ala Phe Asn Thr Val Ile Ala Leu Leu Gly Ser
35 40 45

Ile Val Ile Ile Val Met Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg
50 55 60

Ser Thr Asp Asn Gln Ala Val Ile Lys Asp Ala Leu Gln Gly Ile Gln
65 70 75 80

Gln Gln Ile Lys Gly Leu Ala Asp Lys Ile Gly Thr Glu Ile Gly Pro
85 90 95

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

Ile Gly Leu Leu Gly Ser Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn
115 120 125

Glu Asn Val Asn Glu Lys Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile
130 135 140

His Glu Cys Asn Ile Ser Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr
145 150 155 160

Arg Pro Gln Thr Glu Gly Val Ser Asn Leu Val Gly Leu Pro Asn Asn
165 170 175

Ile Cys Leu Gln Lys Thr Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile
180 185 190

```
Ser Tyr Thr Leu Pro Val Val Gly Gln Ser Gly Thr Cys Ile Thr Asp
        195                 200                 205

Pro Leu Leu Ala Met Asp Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu
    210                 215                 220

Arg Ile Gly Ser Cys Ser Arg Gly Val Ser Lys Gln Arg Ile Ile Gly
225                 230                 235                 240

Val Gly Glu Val Leu Asp Arg Gly Asp Glu Val Pro Ser Leu Phe Met
                245                 250                 255

Thr Asn Val Trp Thr Pro Pro Asn Pro Asn Thr Val Tyr His Cys Ser
            260                 265                 270

Ala Val Tyr Asn Asn Glu Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr
        275                 280                 285

Val Gly Asp Pro Ile Leu Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met
    290                 295                 300

Met Thr Arg Leu Ala Val Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn
305                 310                 315                 320

Gln His Gln Leu Ala Leu Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys
                325                 330                 335

Val Met Pro Tyr Gly Pro Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr
            340                 345                 350

Phe Pro Ala Val Gly Phe Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp
        355                 360                 365

Ser Asn Cys Pro Ile Thr Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys
    370                 375                 380

Arg Leu Ser Met Gly Ile Arg Pro Asn Ser His Tyr Ile Leu Arg Ser
385                 390                 395                 400

Gly Leu Leu Lys Tyr Asn Leu Ser Asp Gly Glu Asn Pro Lys Val Val
```

405 410 415

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

Ile Tyr Asp Ser Leu Gly Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser
435 440 445

Trp Asp Thr Met Ile Lys Phe Gly Asp Val Leu Thr Val Asn Pro Leu
450 455 460

Val Val Asn Trp Arg Asn Asn Thr Val Ile Ser Arg Pro Gly Gln Ser
465 470 475 480

Gln Cys Pro Arg Phe Asn Thr Cys Pro Glu Ile Cys Trp Glu Gly Val
485 490 495

Tyr Asn Asp Ala Phe Leu Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly
500 505 510

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

Phe Lys Asp Asn Glu Ile Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp
530 535 540

Thr Asn Ala Gln Lys Thr Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys
545 550 555 560

Ile Trp Cys Ile Ser Leu Val Glu Ile Tyr Asp Thr Gly Asp Asn Val
565 570 575

Ile Arg Pro Lys Leu Phe Ala Val Lys Ile Pro Glu Gln Cys
580 585 590

<210> 631
<211> 585
<212> PRT
<213> Artificial Sequence

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

polypeptide

<400> 631

```
Lys Gly Lys Ile Pro Ser Lys Val Ile Lys Ser Tyr Tyr Gly Thr Met
1               5                  10                  15

Asp Ile Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser
            20                  25                  30

Ala Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val
        35                  40                  45

Met Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln
    50                  55                  60

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

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

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

Ser Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu
        115                 120                 125

Lys Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile
    130                 135                 140

Ser Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu
145                 150                 155                 160

Gly Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys
                165                 170                 175

Thr Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro
            180                 185                 190

Val Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met
        195                 200                 205
```

```
Asp Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys
    210                 215                 220

Ser Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu
225                 230                 235                 240

Asp Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr
                245                 250                 255

Pro Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn
            260                 265                 270

Glu Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile
        275                 280                 285

Leu Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala
    290                 295                 300

Val Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala
305                 310                 315                 320

Leu Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly
                325                 330                 335

Pro Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly
            340                 345                 350

Phe Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile
        355                 360                 365

Thr Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly
    370                 375                 380

Ile Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr
385                 390                 395                 400

Asn Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser
                405                 410                 415

Asp Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu
```

```
            420                 425                 430

Gly Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile
        435                 440                 445

Lys Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg
    450                 455                 460

Asn Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe
465                 470                 475                 480

Asn Thr Cys Pro Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe
                485                 490                 495

Leu Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser
            500                 505                 510

Asn Gln Thr Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu
        515                 520                 525

Ile Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys
    530                 535                 540

Thr Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser
545                 550                 555                 560

Leu Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu
                565                 570                 575

Phe Ala Val Lys Ile Pro Glu Gln Cys
            580                 585
```

<210> 632
<211> 580
<212> PRT
<213> Artificial Sequence

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

<400> 632
```
Ser Lys Val Ile Lys Ser Tyr Tyr Gly Thr Met Asp Ile Lys Lys Ile
```

```
1               5                   10                  15

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

Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn Ile Met Ile
        35                  40                  45

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

Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala Asp Lys Ile
65                  70                  75                  80

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

Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys Ile Ser Gln
            100                 105                 110

Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys Lys Phe Thr
        115                 120                 125

Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys Pro Asn Pro
    130                 135                 140

Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val Ser Asn Leu
145                 150                 155                 160

Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser Asn Gln Ile
                165                 170                 175

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

Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu Gly Tyr Phe
        195                 200                 205

Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg Gly Val Ser
    210                 215                 220
```

```
Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg Gly Asp Glu
225                 230                 235                 240

Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro Asn Pro Asn
                245                 250                 255

Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe Tyr Tyr Val
            260                 265                 270

Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn Ser Thr Tyr
        275                 280                 285

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

Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg Ser Ile Glu
305                 310                 315                 320

Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser Gly Ile Lys
                325                 330                 335

Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe Leu Val Arg Thr
            340                 345                 350

Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys Cys Gln Tyr
        355                 360                 365

Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg Pro Asn Ser
    370                 375                 380

His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu Ser Asp Gly
385                 390                 395                 400

Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln Arg Leu Ser
                405                 410                 415

Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln Pro Val Phe
            420                 425                 430

Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe Gly Asp Val
```

```
        435                 440                 445

Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn Thr Val Ile
    450                 455                 460

Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr Cys Pro Glu
465                 470                 475                 480

Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile Asp Arg Ile
                485                 490                 495

Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Gln Thr Ala Glu
            500                 505                 510

Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu Tyr Arg Ala
        515                 520                 525

Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile Thr Asn Cys
    530                 535                 540

Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val Glu Ile Tyr
545                 550                 555                 560

Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala Val Lys Ile
                565                 570                 575

Pro Glu Gln Cys
            580
```

<210> 633
<211> 575
<212> PRT
<213> Artificial Sequence

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

<400> 633

```
Ser Tyr Tyr Gly Thr Met Asp Ile Lys Lys Ile Asn Glu Gly Leu Leu
1               5                   10                  15

Asp Ser Lys Ile Leu Ser Ala Phe Asn Thr Val Ile Ala Leu Leu Gly
```

```
            20                  25                  30

Ser Ile Val Ile Ile Val Met Asn Ile Met Ile Ile Gln Asn Tyr Thr
        35                  40                  45

Arg Ser Thr Asp Asn Gln Ala Val Ile Lys Asp Ala Leu Gln Gly Ile
    50                  55                  60

Gln Gln Gln Ile Lys Gly Leu Ala Asp Lys Ile Gly Thr Glu Ile Gly
65                  70                  75                  80

Pro Lys Val Ser Leu Ile Asp Thr Ser Ser Thr Ile Thr Ile Pro Ala
                85                  90                  95

Asn Ile Gly Leu Leu Gly Ser Lys Ile Ser Gln Ser Thr Ala Ser Ile
            100                 105                 110

Asn Glu Asn Val Asn Glu Lys Cys Lys Phe Thr Leu Pro Pro Leu Lys
        115                 120                 125

Ile His Glu Cys Asn Ile Ser Cys Pro Asn Pro Leu Pro Phe Arg Glu
    130                 135                 140

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

Asn Ile Cys Leu Gln Lys Thr Ser Asn Gln Ile Leu Lys Pro Lys Leu
                165                 170                 175

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

Asp Pro Leu Leu Ala Met Asp Glu Gly Tyr Phe Ala Tyr Ser His Leu
        195                 200                 205

Glu Arg Ile Gly Ser Cys Ser Arg Gly Val Ser Lys Gln Arg Ile Ile
    210                 215                 220

Gly Val Gly Glu Val Leu Asp Arg Gly Asp Glu Val Pro Ser Leu Phe
225                 230                 235                 240
```

```
Met Thr Asn Val Trp Thr Pro Pro Asn Pro Asn Thr Val Tyr His Cys
                245                 250                 255

Ser Ala Val Tyr Asn Asn Glu Phe Tyr Tyr Val Leu Cys Ala Val Ser
            260                 265                 270

Thr Val Gly Asp Pro Ile Leu Asn Ser Thr Tyr Trp Ser Gly Ser Leu
        275                 280                 285

Met Met Thr Arg Leu Ala Val Lys Pro Lys Ser Asn Gly Gly Gly Tyr
    290                 295                 300

Asn Gln His Gln Leu Ala Leu Arg Ser Ile Glu Lys Gly Arg Tyr Asp
305                 310                 315                 320

Lys Val Met Pro Tyr Gly Pro Ser Gly Ile Lys Gln Gly Asp Thr Leu
                325                 330                 335

Tyr Phe Pro Ala Val Gly Phe Leu Val Arg Thr Glu Phe Lys Tyr Asn
            340                 345                 350

Asp Ser Asn Cys Pro Ile Thr Lys Cys Gln Tyr Ser Lys Pro Glu Asn
        355                 360                 365

Cys Arg Leu Ser Met Gly Ile Arg Pro Asn Ser His Tyr Ile Leu Arg
    370                 375                 380

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

Val Phe Ile Glu Ile Ser Asp Gln Arg Leu Ser Ile Gly Ser Pro Ser
                405                 410                 415

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

Ser Trp Asp Thr Met Ile Lys Phe Gly Asp Val Leu Thr Val Asn Pro
        435                 440                 445

Leu Val Val Asn Trp Arg Asn Asn Thr Val Ile Ser Arg Pro Gly Gln
```

```
    450                 455                 460

Ser Gln Cys Pro Arg Phe Asn Thr Cys Pro Glu Ile Cys Trp Glu Gly
465                 470                 475                 480

Val Tyr Asn Asp Ala Phe Leu Ile Asp Arg Ile Asn Trp Ile Ser Ala
                485                 490                 495

Gly Val Phe Leu Asp Ser Asn Gln Thr Ala Glu Asn Pro Val Phe Thr
            500                 505                 510

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

Asp Thr Asn Ala Gln Lys Thr Ile Thr Asn Cys Phe Leu Leu Lys Asn
    530                 535                 540

Lys Ile Trp Cys Ile Ser Leu Val Glu Ile Tyr Asp Thr Gly Asp Asn
545                 550                 555                 560

Val Ile Arg Pro Lys Leu Phe Ala Val Lys Ile Pro Glu Gln Cys
                565                 570                 575
```

<210> 634
<211> 571
<212> PRT
<213> Artificial Sequence

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

<400> 634

```
Thr Met Asp Ile Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile
1               5                   10                  15

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

Ile Val Met Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp
        35                  40                  45

Asn Gln Ala Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile
```

```
    50                  55                  60

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

Leu Ile Asp Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu
                85                  90                  95

Leu Gly Ser Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val
            100                 105                 110

Asn Glu Lys Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys
        115                 120                 125

Asn Ile Ser Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln
    130                 135                 140

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

Gln Lys Thr Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr
                165                 170                 175

Leu Pro Val Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu
            180                 185                 190

Ala Met Asp Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly
        195                 200                 205

Ser Cys Ser Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu
    210                 215                 220

Val Leu Asp Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val
225                 230                 235                 240

Trp Thr Pro Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr
                245                 250                 255

Asn Asn Glu Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp
            260                 265                 270
```

```
Pro Ile Leu Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg
        275                 280                 285

Leu Ala Val Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln
    290                 295                 300

Leu Ala Leu Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro
305                 310                 315                 320

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

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

Pro Ile Thr Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser
        355                 360                 365

Met Gly Ile Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu
    370                 375                 380

Lys Tyr Asn Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu
385                 390                 395                 400

Ile Ser Asp Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp
                405                 410                 415

Ser Leu Gly Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr
            420                 425                 430

Met Ile Lys Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn
        435                 440                 445

Trp Arg Asn Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro
    450                 455                 460

Arg Phe Asn Thr Cys Pro Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp
465                 470                 475                 480

Ala Phe Leu Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu
```

485 490 495

Asp Ser Asn Gln Thr Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp
500 505 510

Asn Glu Ile Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala
515 520 525

Gln Lys Thr Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys
530 535 540

Ile Ser Leu Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro
545 550 555 560

Lys Leu Phe Ala Val Lys Ile Pro Glu Gln Cys
565 570

<210> 635
<211> 568
<212> PRT
<213> Artificial Sequence

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

<400> 635
Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe
1 5 10 15

Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn
20 25 30

Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala Val
35 40 45

Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala
50 55 60

Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp Thr
65 70 75 80

Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys

```
                85                  90                  95

Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys
            100                 105                 110

Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys
        115                 120                 125

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

Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser
145                 150                 155                 160

Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val Val
                165                 170                 175

Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu
            180                 185                 190

Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg
        195                 200                 205

Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg
    210                 215                 220

Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro
225                 230                 235                 240

Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe
                245                 250                 255

Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn
            260                 265                 270

Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys
        275                 280                 285

Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg
    290                 295                 300
```

```
Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser
305                 310                 315                 320

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

Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys
            340                 345                 350

Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg
        355                 360                 365

Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu
    370                 375                 380

Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln
385                 390                 395                 400

Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln
                405                 410                 415

Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe
            420                 425                 430

Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn
        435                 440                 445

Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr
    450                 455                 460

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

Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Ala
                485                 490                 495

Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu
            500                 505                 510

Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile
```

```
        515                 520                 525

Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val
    530                 535                 540

Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala
545                 550                 555                 560

Val Lys Ile Pro Glu Gln Cys Thr
                565
```

<210> 636
<211> 603
<212> PRT
<213> Hendra henipavirus

<400> 636

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

Ile Lys Asp Gln Gly Lys Val Ile Lys Asn Tyr Tyr Gly Thr Met Asp
            20                  25                  30

Ile Lys Lys Ile Asn Asp Gly Leu Leu Asp Ser Lys Ile Leu Gly Ala
        35                  40                  45

Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Ile Ile Ile Val Met
    50                  55                  60

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Thr Thr Asp Asn Gln Ala
65                  70                  75                  80

Leu Ile Lys Glu Ser Leu Gln Ser Val Gln Gln Gln Ile Lys Ala Leu
                85                  90                  95

Thr Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp
            100                 105                 110

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
        115                 120                 125

Lys Ile Ser Gln Ser Thr Ser Ser Ile Asn Glu Asn Val Asn Asp Lys
```

```
    130                 135                 140

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
145                 150                 155                 160

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Ile Ser Gln Gly
                165                 170                 175

Val Ser Asp Leu Val Gly Leu Pro Asn Gln Ile Cys Leu Gln Lys Thr
            180                 185                 190

Thr Ser Thr Ile Leu Lys Pro Arg Leu Ile Ser Tyr Thr Leu Pro Ile
        195                 200                 205

Asn Thr Arg Glu Gly Val Cys Ile Thr Asp Pro Leu Leu Ala Val Asp
    210                 215                 220

Asn Gly Phe Phe Ala Tyr Ser His Leu Glu Lys Ile Gly Ser Cys Thr
225                 230                 235                 240

Arg Gly Ile Ala Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
                245                 250                 255

Arg Gly Asp Lys Val Pro Ser Met Phe Met Thr Asn Val Trp Thr Pro
            260                 265                 270

Pro Asn Pro Ser Thr Ile His His Cys Ser Ser Thr Tyr His Glu Asp
        275                 280                 285

Phe Tyr Tyr Thr Leu Cys Ala Val Ser His Val Gly Asp Pro Ile Leu
    290                 295                 300

Asn Ser Thr Ser Trp Thr Glu Ser Leu Ser Leu Ile Arg Leu Ala Val
305                 310                 315                 320

Arg Pro Lys Ser Asp Ser Gly Asp Tyr Asn Gln Lys Tyr Ile Ala Ile
                325                 330                 335

Thr Lys Val Glu Arg Gly Lys Tyr Asp Lys Val Met Pro Tyr Gly Pro
            340                 345                 350
```

```
Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe
        355                 360                 365

Leu Pro Arg Thr Glu Phe Gln Tyr Asn Asp Ser Asn Cys Pro Ile Ile
    370                 375                 380

His Cys Lys Tyr Ser Lys Ala Glu Asn Cys Arg Leu Ser Met Gly Val
385                 390                 395                 400

Asn Ser Lys Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
                405                 410                 415

Leu Ser Leu Gly Gly Asp Ile Ile Leu Gln Phe Ile Glu Ile Ala Asp
            420                 425                 430

Asn Arg Leu Thr Ile Gly Ser Pro Ser Lys Ile Tyr Asn Ser Leu Gly
        435                 440                 445

Gln Pro Val Phe Tyr Gln Ala Ser Tyr Ser Trp Asp Thr Met Ile Lys
    450                 455                 460

Leu Gly Asp Val Asp Thr Val Asp Pro Leu Arg Val Gln Trp Arg Asn
465                 470                 475                 480

Asn Ser Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
                485                 490                 495

Val Cys Pro Glu Val Cys Trp Glu Gly Thr Tyr Asn Asp Ala Phe Leu
            500                 505                 510

Ile Asp Arg Leu Asn Trp Val Ser Ala Gly Val Tyr Leu Asn Ser Asn
        515                 520                 525

Gln Thr Ala Glu Asn Pro Val Phe Ala Val Phe Lys Asp Asn Glu Ile
    530                 535                 540

Leu Tyr Gln Val Pro Leu Ala Glu Asp Asp Thr Asn Ala Gln Lys Thr
545                 550                 555                 560

Ile Thr Asp Cys Phe Leu Leu Glu Asn Val Ile Trp Cys Ile Ser Leu
```

565 570 575

Val Glu Ile Tyr Asp Thr Gly Asp Ser Val Ile Arg Pro Lys Leu Phe
580 585 590

Ala Val Lys Ile Pro Ala Gln Cys Ser Glu Ser
595 600

<210> 637
<211> 568
<212> PRT
<213> Artificial Sequence

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

<400> 637
Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe
1 5 10 15

Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn
20 25 30

Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala Val
35 40 45

Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala
50 55 60

Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp Thr
65 70 75 80

Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys
85 90 95

Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys
100 105 110

Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys
115 120 125

Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val

```
    130                 135                 140

Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser
145                 150                 155                 160

Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val Val
                165                 170                 175

Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu
            180                 185                 190

Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg
        195                 200                 205

Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg
    210                 215                 220

Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro
225                 230                 235                 240

Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe
                245                 250                 255

Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn
            260                 265                 270

Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys
        275                 280                 285

Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg
    290                 295                 300

Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser
305                 310                 315                 320

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

Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys
            340                 345                 350
```

```
Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg
        355                 360                 365

Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu
    370                 375                 380

Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln
385                 390                 395                 400

Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln
                405                 410                 415

Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe
            420                 425                 430

Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn
        435                 440                 445

Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr
    450                 455                 460

Cys Pro Glu Ile Cys Trp Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile
465                 470                 475                 480

Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Gln
                485                 490                 495

Thr Ala Glu Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu
            500                 505                 510

Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile
        515                 520                 525

Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val
    530                 535                 540

Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala
545                 550                 555                 560

Val Lys Ile Pro Glu Gln Cys Thr
```

565

<210> 638
<211> 621
<212> PRT
<213> Cedar henipavirus

<400> 638
Leu Ser Gln Leu Gln Lys Asn Tyr Leu Asp Asn Ser Asn Gln Gln Gly
1 5 10 15

Asp Lys Met Asn Asn Pro Asp Lys Lys Leu Ser Val Asn Phe Asn Pro
20 25 30

Leu Glu Leu Asp Lys Gly Gln Lys Asp Leu Asn Lys Ser Tyr Tyr Val
35 40 45

Lys Asn Lys Asn Tyr Asn Val Ser Asn Leu Leu Asn Glu Ser Leu His
50 55 60

Asp Ile Lys Phe Cys Ile Tyr Cys Ile Phe Ser Leu Leu Ile Ile Ile
65 70 75 80

Thr Ile Ile Asn Ile Ile Thr Ile Ser Ile Val Ile Thr Arg Leu Lys
85 90 95

Val His Glu Glu Asn Asn Gly Met Glu Ser Pro Asn Leu Gln Ser Ile
100 105 110

Gln Asp Ser Leu Ser Ser Leu Thr Asn Met Ile Asn Thr Glu Ile Thr
115 120 125

Pro Arg Ile Gly Ile Leu Val Thr Ala Thr Ser Val Thr Leu Ser Ser
130 135 140

Ser Ile Asn Tyr Val Gly Thr Lys Thr Asn Gln Leu Val Asn Glu Leu
145 150 155 160

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

Leu His Glu Cys Asn Ile Ser Cys Ala Asp Pro Lys Ile Ser Lys Ser

```
            180                 185                 190

Ala Met Tyr Ser Thr Asn Ala Tyr Ala Glu Leu Ala Gly Pro Pro Lys
        195                 200                 205

Ile Phe Cys Lys Ser Val Ser Lys Asp Pro Asp Phe Arg Leu Lys Gln
    210                 215                 220

Ile Asp Tyr Val Ile Pro Val Gln Gln Asp Arg Ser Ile Cys Met Asn
225                 230                 235                 240

Asn Pro Leu Leu Asp Ile Ser Asp Gly Phe Phe Thr Tyr Ile His Tyr
                245                 250                 255

Glu Gly Ile Asn Ser Cys Lys Lys Ser Asp Ser Phe Lys Val Leu Leu
            260                 265                 270

Ser His Gly Glu Ile Val Asp Arg Gly Asp Tyr Arg Pro Ser Leu Tyr
        275                 280                 285

Leu Leu Ser Ser His Tyr His Pro Tyr Ser Met Gln Val Ile Asn Cys
    290                 295                 300

Val Pro Val Thr Cys Asn Gln Ser Ser Phe Val Phe Cys His Ile Ser
305                 310                 315                 320

Asn Asn Thr Lys Thr Leu Asp Asn Ser Asp Tyr Ser Ser Asp Glu Tyr
                325                 330                 335

Tyr Ile Thr Tyr Phe Asn Gly Ile Asp Arg Pro Lys Thr Lys Lys Ile
            340                 345                 350

Pro Ile Asn Asn Met Thr Ala Asp Asn Arg Tyr Ile His Phe Thr Phe
        355                 360                 365

Ser Gly Gly Gly Gly Val Cys Leu Gly Glu Glu Phe Ile Ile Pro Val
    370                 375                 380

Thr Thr Val Ile Asn Thr Asp Val Phe Thr His Asp Tyr Cys Glu Ser
385                 390                 395                 400
```

```
Phe Asn Cys Ser Val Gln Thr Gly Lys Ser Leu Lys Glu Ile Cys Ser
                405                 410                 415

Glu Ser Leu Arg Ser Pro Thr Asn Ser Ser Arg Tyr Asn Leu Asn Gly
            420                 425                 430

Ile Met Ile Ile Ser Gln Asn Asn Met Thr Asp Phe Lys Ile Gln Leu
        435                 440                 445

Asn Gly Ile Thr Tyr Asn Lys Leu Ser Phe Gly Ser Pro Gly Arg Leu
    450                 455                 460

Ser Lys Thr Leu Gly Gln Val Leu Tyr Tyr Gln Ser Ser Met Ser Trp
465                 470                 475                 480

Asp Thr Tyr Leu Lys Ala Gly Phe Val Glu Lys Trp Lys Pro Phe Thr
                485                 490                 495

Pro Asn Trp Met Asn Asn Thr Val Ile Ser Arg Pro Asn Gln Gly Asn
            500                 505                 510

Cys Pro Arg Tyr His Lys Cys Pro Glu Ile Cys Tyr Gly Gly Thr Tyr
        515                 520                 525

Asn Asp Ile Ala Pro Leu Asp Leu Gly Lys Asp Met Tyr Val Ser Val
    530                 535                 540

Ile Leu Asp Ser Asp Gln Leu Ala Glu Asn Pro Glu Ile Thr Val Phe
545                 550                 555                 560

Asn Ser Thr Thr Ile Leu Tyr Lys Glu Arg Val Ser Lys Asp Glu Leu
                565                 570                 575

Asn Thr Arg Ser Thr Thr Thr Ser Cys Phe Leu Phe Leu Asp Glu Pro
            580                 585                 590

Trp Cys Ile Ser Val Leu Glu Thr Asn Arg Phe Asn Gly Lys Ser Ile
        595                 600                 605

Arg Pro Glu Ile Tyr Ser Tyr Lys Ile Pro Lys Tyr Cys
```

610 615 620

<210> 639
<211> 631
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown:
Bat Paramyxovirus Eid_hel/GH-M74a/GHA/2009 sequence

<400> 639
Pro Gln Lys Thr Val Glu Phe Ile Asn Met Asn Ser Pro Leu Glu Arg
1 5 10 15

Gly Val Ser Thr Leu Ser Asp Lys Lys Thr Leu Asn Gln Ser Lys Ile
20 25 30

Thr Lys Gln Gly Tyr Phe Gly Leu Gly Ser His Ser Glu Arg Asn Trp
35 40 45

Lys Lys Gln Lys Asn Gln Asn Asp His Tyr Met Thr Val Ser Thr Met
50 55 60

Ile Leu Glu Ile Leu Val Val Leu Gly Ile Met Phe Asn Leu Ile Val
65 70 75 80

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

Glu Leu Thr Ser Asn Ile Thr Val Leu Asn Leu Asn Leu Asn Gln Leu
100 105 110

Thr Asn Lys Ile Gln Arg Glu Ile Ile Pro Arg Ile Thr Leu Ile Asp
115 120 125

Thr Ala Thr Thr Ile Thr Ile Pro Ser Ala Ile Thr Tyr Ile Leu Ala
130 135 140

Thr Leu Thr Thr Arg Ile Ser Glu Leu Leu Pro Ser Ile Asn Gln Lys
145 150 155 160

Cys Glu Phe Lys Thr Pro Thr Leu Val Leu Asn Asp Cys Arg Ile Asn

```
                165                 170                 175

Cys Thr Pro Pro Leu Asn Pro Ser Asp Gly Val Lys Met Ser Ser Leu
            180                 185                 190

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

Ser Val Pro Thr Ile Tyr Tyr Tyr Arg Ile Pro Gly Leu Tyr Asn Arg
    210                 215                 220

Thr Ala Leu Asp Glu Arg Cys Ile Leu Asn Pro Arg Leu Thr Ile Ser
225                 230                 235                 240

Ser Thr Lys Phe Ala Tyr Val His Ser Glu Tyr Asp Lys Asn Cys Thr
                245                 250                 255

Arg Gly Phe Lys Tyr Tyr Glu Leu Met Thr Phe Gly Glu Ile Leu Glu
            260                 265                 270

Gly Pro Glu Lys Glu Pro Arg Met Phe Ser Arg Ser Phe Tyr Ser Pro
        275                 280                 285

Thr Asn Ala Val Asn Tyr His Ser Cys Thr Pro Ile Val Thr Val Asn
    290                 295                 300

Glu Gly Tyr Phe Leu Cys Leu Glu Cys Thr Ser Ser Asp Pro Leu Tyr
305                 310                 315                 320

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

Asn Lys Asp Glu Lys Ile Val Ser Met Pro Ser Phe Asn Leu Ser Thr
            340                 345                 350

Asp Gln Glu Tyr Val Gln Ile Ile Pro Ala Glu Gly Gly Gly Thr Ala
        355                 360                 365

Glu Ser Gly Asn Leu Tyr Phe Pro Cys Ile Gly Arg Leu Leu His Lys
    370                 375                 380
```

```
Arg Val Thr His Pro Leu Cys Lys Lys Ser Asn Cys Ser Arg Thr Asp
385                 390                 395                 400

Asp Glu Ser Cys Leu Lys Ser Tyr Tyr Asn Gln Gly Ser Pro Gln His
                405                 410                 415

Gln Val Val Asn Cys Leu Ile Arg Ile Arg Asn Ala Gln Arg Asp Asn
            420                 425                 430

Pro Thr Trp Asp Val Ile Thr Val Asp Leu Thr Asn Thr Tyr Pro Gly
        435                 440                 445

Ser Arg Ser Arg Ile Phe Gly Ser Phe Ser Lys Pro Met Leu Tyr Gln
    450                 455                 460

Ser Ser Val Ser Trp His Thr Leu Leu Gln Val Ala Glu Ile Thr Asp
465                 470                 475                 480

Leu Asp Lys Tyr Gln Leu Asp Trp Leu Asp Thr Pro Tyr Ile Ser Arg
                485                 490                 495

Pro Gly Gly Ser Glu Cys Pro Phe Gly Asn Tyr Cys Pro Thr Val Cys
            500                 505                 510

Trp Glu Gly Thr Tyr Asn Asp Val Tyr Ser Leu Thr Pro Asn Asn Asp
        515                 520                 525

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

Tyr Phe Ala Ile Phe Ser Arg Asp Gln Ile Leu Lys Glu Phe Pro Leu
545                 550                 555                 560

Asp Ala Trp Ile Ser Ser Ala Arg Thr Thr Thr Ile Ser Cys Phe Met
                565                 570                 575

Phe Asn Asn Glu Ile Trp Cys Ile Ala Ala Leu Glu Ile Thr Arg Leu
            580                 585                 590

Asn Asp Asp Ile Ile Arg Pro Ile Tyr Tyr Ser Phe Trp Leu Pro Thr
```

595 600 605

Asp Cys Arg Thr Pro Tyr Pro His Thr Gly Lys Met Thr Arg Val Pro
610 615 620

Leu Arg Ser Thr Tyr Asn Tyr
625 630

<210> 640
<211> 624
<212> PRT
<213> Mojiang henipavirus

<400> 640
Ala Thr Asn Arg Asp Asn Thr Ile Thr Ser Ala Glu Val Ser Gln Glu
1 5 10 15

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

Asp Ser Ile Ser Gly Asn Lys Val Phe Ile Leu Met Asn Thr Leu Leu
35 40 45

Ile Leu Thr Gly Ala Ile Ile Thr Ile Thr Leu Asn Ile Thr Asn Leu
50 55 60

Thr Ala Ala Lys Ser Gln Gln Asn Met Leu Lys Ile Ile Gln Asp Asp
65 70 75 80

Val Asn Ala Lys Leu Glu Met Phe Val Asn Leu Asp Gln Leu Val Lys
85 90 95

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

Ser Ile Pro Gly Gln Ile Ser Asn Leu Gln Thr Lys Phe Leu Gln Lys
115 120 125

Tyr Val Tyr Leu Glu Glu Ser Ile Thr Lys Gln Cys Thr Cys Asn Pro
130 135 140

Leu Ser Gly Ile Phe Pro Thr Ser Gly Pro Thr Tyr Pro Pro Thr Asp

```
145                 150                 155                 160

Lys Pro Asp Asp Asp Thr Thr Asp Asp Asp Lys Val Asp Thr Thr Ile
                165                 170                 175

Lys Pro Ile Glu Tyr Pro Lys Pro Asp Gly Cys Asn Arg Thr Gly Asp
            180                 185                 190

His Phe Thr Met Glu Pro Gly Ala Asn Phe Tyr Thr Val Pro Asn Leu
        195                 200                 205

Gly Pro Ala Ser Ser Asn Ser Asp Glu Cys Tyr Thr Asn Pro Ser Phe
    210                 215                 220

Ser Ile Gly Ser Ser Ile Tyr Met Phe Ser Gln Glu Ile Arg Lys Thr
225                 230                 235                 240

Asp Cys Thr Ala Gly Glu Ile Leu Ser Ile Gln Ile Val Leu Gly Arg
                245                 250                 255

Ile Val Asp Lys Gly Gln Gln Gly Pro Gln Ala Ser Pro Leu Leu Val
            260                 265                 270

Trp Ala Val Pro Asn Pro Lys Ile Ile Asn Ser Cys Ala Val Ala Ala
        275                 280                 285

Gly Asp Glu Met Gly Trp Val Leu Cys Ser Val Thr Leu Thr Ala Ala
    290                 295                 300

Ser Gly Glu Pro Ile Pro His Met Phe Asp Gly Phe Trp Leu Tyr Lys
305                 310                 315                 320

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

Tyr Leu Leu Asp Lys Gln Tyr Asp Ser Val Phe Ile Gly Lys Gly Gly
            340                 345                 350

Gly Ile Gln Lys Gly Asn Asp Leu Tyr Phe Gln Met Tyr Gly Leu Ser
        355                 360                 365
```

```
Arg Asn Arg Gln Ser Phe Lys Ala Leu Cys Glu His Gly Ser Cys Leu
    370                 375                 380

Gly Thr Gly Gly Gly Gly Tyr Gln Val Leu Cys Asp Arg Ala Val Met
385                 390                 395                 400

Ser Phe Gly Ser Glu Glu Ser Leu Ile Thr Asn Ala Tyr Leu Lys Val
                405                 410                 415

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

Pro Ser Asp Ser Tyr Lys Gly Ser Asn Gly Arg Met Tyr Thr Ile Gly
        435                 440                 445

Asp Lys Tyr Gly Leu Tyr Leu Ala Pro Ser Ser Trp Asn Arg Tyr Leu
    450                 455                 460

Arg Phe Gly Ile Thr Pro Asp Ile Ser Val Arg Ser Thr Thr Trp Leu
465                 470                 475                 480

Lys Ser Gln Asp Pro Ile Met Lys Ile Leu Ser Thr Cys Thr Asn Thr
                485                 490                 495

Asp Arg Asp Met Cys Pro Glu Ile Cys Asn Thr Arg Gly Tyr Gln Asp
            500                 505                 510

Ile Phe Pro Leu Ser Glu Asp Ser Glu Tyr Tyr Thr Tyr Ile Gly Ile
        515                 520                 525

Thr Pro Asn Asn Gly Gly Thr Lys Asn Phe Val Ala Val Arg Asp Ser
    530                 535                 540

Asp Gly His Ile Ala Ser Ile Asp Ile Leu Gln Asn Tyr Tyr Ser Ile
545                 550                 555                 560

Thr Ser Ala Thr Ile Ser Cys Phe Met Tyr Lys Asp Glu Ile Trp Cys
                565                 570                 575

Ile Ala Ile Thr Glu Gly Lys Lys Gln Lys Asp Asn Pro Gln Arg Ile
```

```
            580                 585                 590

Tyr Ala His Ser Tyr Lys Ile Arg Gln Met Cys Tyr Asn Met Lys Ser
        595                 600                 605

Ala Thr Val Thr Val Gly Asn Ala Lys Asn Ile Thr Ile Arg Arg Tyr
    610                 615                 620
```

<210> 641
<211> 530
<212> PRT
<213> Cedar henipavirus

<400> 641

```
Asp Phe Asp Lys Leu Asn Lys Ile Gly Val Val Gln Gly Arg Val Leu
1               5                   10                  15

Asn Tyr Lys Ile Lys Gly Asp Pro Met Thr Lys Asp Leu Val Leu Lys
            20                  25                  30

Phe Ile Pro Asn Ile Val Asn Ile Thr Glu Cys Val Arg Glu Pro Leu
        35                  40                  45

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

Met Leu Gly Leu Tyr Leu Asn Asn Thr Asn Ala Lys Met Thr Gly Leu
65                  70                  75                  80

Met Ile Ala Gly Val Ile Met Gly Gly Ile Ala Ile Gly Ile Ala Thr
                85                  90                  95

Ala Ala Gln Ile Thr Ala Gly Phe Ala Leu Tyr Glu Ala Lys Lys Asn
            100                 105                 110

Thr Glu Asn Ile Gln Lys Leu Thr Asp Ser Ile Met Lys Thr Gln Asp
        115                 120                 125

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

Asn Lys Leu Gln Thr Tyr Ile Asn Asn Gln Leu Val Pro Asn Leu Glu
```

```
145                 150                 155                 160

Leu Leu Ser Cys Arg Gln Asn Lys Ile Glu Phe Asp Leu Met Leu Thr
                165                 170                 175

Lys Tyr Leu Val Asp Leu Met Thr Val Ile Gly Pro Asn Ile Asn Asn
            180                 185                 190

Pro Val Asn Lys Asp Met Thr Ile Gln Ser Leu Ser Leu Leu Phe Asp
        195                 200                 205

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

Phe Leu Asp Leu Ile Glu Ser Lys Ser Ile Thr Gly Gln Ile Ile Tyr
225                 230                 235                 240

Val Asp Met Glu Asn Leu Tyr Val Val Ile Arg Thr Tyr Leu Pro Thr
                245                 250                 255

Leu Ile Glu Val Pro Asp Ala Gln Ile Tyr Glu Phe Asn Lys Ile Thr
            260                 265                 270

Met Ser Ser Asn Gly Gly Glu Tyr Leu Ser Thr Ile Pro Asn Phe Ile
        275                 280                 285

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

Met Thr Lys Ala Ser Val Ile Cys Asn Gln Asp Tyr Ser Leu Pro Met
305                 310                 315                 320

Ser Gln Asn Leu Arg Ser Cys Tyr Gln Gly Glu Thr Glu Tyr Cys Pro
                325                 330                 335

Val Glu Ala Val Ile Ala Ser His Ser Pro Arg Phe Ala Leu Thr Asn
            340                 345                 350

Gly Val Ile Phe Ala Asn Cys Ile Asn Thr Ile Cys Arg Cys Gln Asp
        355                 360                 365
```

```
Asn Gly Lys Thr Ile Thr Gln Asn Ile Asn Gln Phe Val Ser Met Ile
    370                 375                 380

Asp Asn Ser Thr Cys Asn Asp Val Met Val Asp Lys Phe Thr Ile Lys
385                 390                 395                 400

Val Gly Lys Tyr Met Gly Arg Lys Asp Ile Asn Asn Ile Asn Ile Gln
                405                 410                 415

Ile Gly Pro Gln Ile Ile Ile Asp Lys Val Asp Leu Ser Asn Glu Ile
            420                 425                 430

Asn Lys Met Asn Gln Ser Leu Lys Asp Ser Ile Phe Tyr Leu Arg Glu
        435                 440                 445

Ala Lys Arg Ile Leu Asp Ser Val Asn Ile Ser Leu Ile Ser Pro Ser
    450                 455                 460

Val Gln Leu Phe Leu Ile Ile Ile Ser Val Leu Ser Phe Ile Ile Leu
465                 470                 475                 480

Leu Ile Ile Ile Val Tyr Leu Tyr Cys Lys Ser Lys His Ser Tyr Lys
                485                 490                 495

Tyr Asn Lys Phe Ile Asp Asp Pro Asp Tyr Tyr Asn Asp Tyr Lys Arg
            500                 505                 510

Glu Arg Ile Asn Gly Lys Ala Ser Lys Ser Asn Asn Ile Tyr Tyr Val
        515                 520                 525

Gly Asp
    530
```

<210> 642
<211> 640
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown:
Bat Paramyxovirus Eid_hel/GH-M74a/GHA/2009 sequence

<400> 642
Ser Arg Ala Leu Leu Arg Glu Thr Asp Asn Tyr Ser Asn Gly Leu Ile
1   5   10   15

Val Glu Asn Leu Val Arg Asn Cys His His Pro Ser Lys Asn Asn Leu
            20   25   30

Asn Tyr Thr Lys Thr Gln Lys Arg Asp Ser Thr Ile Pro Tyr Arg Val
        35   40   45

Glu Glu Arg Lys Gly His Tyr Pro Lys Ile Lys His Leu Ile Asp Lys
    50   55   60

Ser Tyr Lys His Ile Lys Arg Gly Lys Arg Arg Asn Gly His Asn Gly
65   70   75   80

Asn Ile Ile Thr Ile Ile Leu Leu Leu Ile Leu Ile Leu Lys Thr Gln
                85   90   95

Met Ser Glu Gly Ala Ile His Tyr Glu Thr Leu Ser Lys Ile Gly Leu
            100   105   110

Ile Lys Gly Ile Thr Arg Glu Tyr Lys Val Lys Gly Thr Pro Ser Ser
        115   120   125

Lys Asp Ile Val Ile Lys Leu Ile Pro Asn Val Thr Gly Leu Asn Lys
    130   135   140

Cys Thr Asn Ile Ser Met Glu Asn Tyr Lys Glu Gln Leu Asp Lys Ile
145   150   155   160

Leu Ile Pro Ile Asn Asn Ile Ile Glu Leu Tyr Ala Asn Ser Thr Lys
                165   170   175

Ser Ala Pro Gly Asn Ala Arg Phe Ala Gly Val Ile Ile Ala Gly Val
            180   185   190

Ala Leu Gly Val Ala Ala Ala Ala Gln Ile Thr Ala Gly Ile Ala Leu
        195   200   205

His Glu Ala Arg Gln Asn Ala Glu Arg Ile Asn Leu Leu Lys Asp Ser

```
    210                 215                 220

Ile Ser Ala Thr Asn Asn Ala Val Ala Glu Leu Gln Glu Ala Thr Gly
225                 230                 235                 240

Gly Ile Val Asn Val Ile Thr Gly Met Gln Asp Tyr Ile Asn Thr Asn
                245                 250                 255

Leu Val Pro Gln Ile Asp Lys Leu Gln Cys Ser Gln Ile Lys Thr Ala
            260                 265                 270

Leu Asp Ile Ser Leu Ser Gln Tyr Tyr Ser Glu Ile Leu Thr Val Phe
        275                 280                 285

Gly Pro Asn Leu Gln Asn Pro Val Thr Thr Ser Met Ser Ile Gln Ala
    290                 295                 300

Ile Ser Gln Ser Phe Gly Gly Asn Ile Asp Leu Leu Leu Asn Leu Leu
305                 310                 315                 320

Gly Tyr Thr Ala Asn Asp Leu Leu Asp Leu Leu Glu Ser Lys Ser Ile
                325                 330                 335

Thr Gly Gln Ile Thr Tyr Ile Asn Leu Glu His Tyr Phe Met Val Ile
            340                 345                 350

Arg Val Tyr Tyr Pro Ile Met Thr Thr Ile Ser Asn Ala Tyr Val Gln
        355                 360                 365

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

Leu Val Pro Ser Tyr Ile Leu Ile Arg Asn Ser Tyr Leu Ser Asn Ile
385                 390                 395                 400

Asp Ile Ser Glu Cys Leu Ile Thr Lys Asn Ser Val Ile Cys Arg His
                405                 410                 415

Asp Phe Ala Met Pro Met Ser Tyr Thr Leu Lys Glu Cys Leu Thr Gly
            420                 425                 430
```

```
Asp Thr Glu Lys Cys Pro Arg Glu Ala Val Val Thr Ser Tyr Val Pro
        435                 440                 445

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

Thr Cys Gln Cys Tyr Gln Thr Gly Lys Val Ile Ala Gln Asp Gly Ser
465                 470                 475                 480

Gln Thr Leu Met Met Ile Asp Asn Gln Thr Cys Ser Ile Val Arg Ile
                485                 490                 495

Glu Glu Ile Leu Ile Ser Thr Gly Lys Tyr Leu Gly Ser Gln Glu Tyr
            500                 505                 510

Asn Thr Met His Val Ser Val Gly Asn Pro Val Phe Thr Asp Lys Leu
        515                 520                 525

Asp Ile Thr Ser Gln Ile Ser Asn Ile Asn Gln Ser Ile Glu Gln Ser
    530                 535                 540

Lys Phe Tyr Leu Asp Lys Ser Lys Ala Ile Leu Asp Lys Ile Asn Leu
545                 550                 555                 560

Asn Leu Ile Gly Ser Val Pro Ile Ser Ile Leu Phe Ile Ile Ala Ile
                565                 570                 575

Leu Ser Leu Ile Leu Ser Ile Ile Thr Phe Val Ile Val Met Ile Ile
            580                 585                 590

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

Ser Arg Arg Ser Thr Ile Gln Asp Val Tyr Ile Ile Pro Asn Pro Gly
    610                 615                 620

Glu His Ser Ile Arg Ser Ala Ala Arg Ser Ile Asp Arg Asp Arg Asp
625                 630                 635                 640
```

<210> 643

<211> 520
<212> PRT
<213> Hendra henipavirus

<400> 643
Ile Leu His Tyr Glu Lys Leu Ser Lys Ile Gly Leu Val Lys Gly Ile
1   5   10   15

Thr Arg Lys Tyr Lys Ile Lys Ser Asn Pro Leu Thr Lys Asp Ile Val
            20   25   30

Ile Lys Met Ile Pro Asn Val Ser Asn Val Ser Lys Cys Thr Gly Thr
        35   40   45

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

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

Asp Val Lys Leu Ala Gly Val Val Met Ala Gly Ile Ala Ile Gly Ile
                85   90   95

Ala Thr Ala Ala Gln Ile Thr Ala Gly Val Ala Leu Tyr Glu Ala Met
            100   105   110

Lys Asn Ala Asp Asn Ile Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr
        115   120   125

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

Val Leu Thr Ala Leu Gln Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr
145   150   155   160

Ile Asp Gln Ile Ser Cys Lys Gln Thr Glu Leu Ala Leu Asp Leu Ala
                165   170   175

Leu Ser Lys Tyr Leu Ser Asp Leu Leu Phe Val Phe Gly Pro Asn Leu
            180   185   190

Gln Asp Pro Val Ser Asn Ser Met Thr Ile Gln Ala Ile Ser Gln Ala

```
        195                 200                 205

Phe Gly Gly Asn Tyr Glu Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr
    210                 215                 220

Glu Asp Phe Asp Asp Leu Leu Glu Ser Asp Ser Ile Ala Gly Gln Ile
225                 230                 235                 240

Val Tyr Val Asp Leu Ser Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe
                245                 250                 255

Pro Ile Leu Thr Glu Ile Gln Gln Ala Tyr Val Gln Glu Leu Leu Pro
            260                 265                 270

Val Ser Phe Asn Asn Asp Asn Ser Glu Trp Ile Ser Ile Val Pro Asn
        275                 280                 285

Phe Val Leu Ile Arg Asn Thr Leu Ile Ser Asn Ile Glu Val Lys Tyr
    290                 295                 300

Cys Leu Ile Thr Lys Lys Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr
305                 310                 315                 320

Pro Met Thr Ala Ser Val Arg Glu Cys Leu Thr Gly Ser Thr Asp Lys
                325                 330                 335

Cys Pro Arg Glu Leu Val Val Ser Ser His Val Pro Arg Phe Ala Leu
            340                 345                 350

Ser Gly Gly Val Leu Phe Ala Asn Cys Ile Ser Val Thr Cys Gln Cys
        355                 360                 365

Gln Thr Thr Gly Arg Ala Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu
    370                 375                 380

Met Ile Asp Asn Thr Thr Cys Thr Thr Val Val Leu Gly Asn Ile Ile
385                 390                 395                 400

Ile Ser Leu Gly Lys Tyr Leu Gly Ser Ile Asn Tyr Asn Ser Glu Ser
                405                 410                 415
```

```
Ile Ala Val Gly Pro Pro Val Tyr Thr Asp Lys Val Asp Ile Ser Ser
            420                 425                 430

Gln Ile Ser Ser Met Asn Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile
        435                 440                 445

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

Met Leu Ser Met Ile Ile Leu Tyr Val Leu Ser Ile Ala Ala Leu Cys
465                 470                 475                 480

Ile Gly Leu Ile Thr Phe Ile Ser Phe Val Ile Val Glu Lys Lys Arg
                485                 490                 495

Gly Asn Tyr Ser Arg Leu Asp Asp Arg Gln Val Arg Pro Val Ser Asn
            500                 505                 510

Gly Asp Leu Tyr Tyr Ile Gly Thr
        515                 520
```

<210> 644
<211> 519
<212> PRT
<213> Mojiang henipavirus

<400> 644

```
Ile His Tyr Asp Ser Leu Ser Lys Val Gly Val Ile Lys Gly Leu Thr
1               5                   10                  15

Tyr Asn Tyr Lys Ile Lys Gly Ser Pro Ser Thr Lys Leu Met Val Val
            20                  25                  30

Lys Leu Ile Pro Asn Ile Asp Ser Val Lys Asn Cys Thr Gln Lys Gln
        35                  40                  45

Tyr Asp Glu Tyr Lys Asn Leu Val Arg Lys Ala Leu Glu Pro Val Lys
    50                  55                  60

Met Ala Ile Asp Thr Met Leu Asn Asn Val Lys Ser Gly Asn Asn Lys
65                  70                  75                  80
```

```
Tyr Arg Phe Ala Gly Ala Ile Met Ala Gly Val Ala Leu Gly Val Ala
                85                  90                  95

Thr Ala Ala Thr Val Thr Ala Gly Ile Ala Leu His Arg Ser Asn Glu
            100                 105                 110

Asn Ala Gln Ala Ile Ala Asn Met Lys Ser Ala Ile Gln Asn Thr Asn
        115                 120                 125

Glu Ala Val Lys Gln Leu Gln Leu Ala Asn Lys Gln Thr Leu Ala Val
    130                 135                 140

Ile Asp Thr Ile Arg Gly Glu Ile Asn Asn Asn Ile Ile Pro Val Ile
145                 150                 155                 160

Asn Gln Leu Ser Cys Asp Thr Ile Gly Leu Ser Val Gly Ile Arg Leu
                165                 170                 175

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

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

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

Asp Leu Tyr Glu Ile Leu His Ser Glu Leu Ile Arg Gly Asn Ile Ile
225                 230                 235                 240

Asp Val Asp Val Asp Ala Gly Tyr Ile Ala Leu Glu Ile Glu Phe Pro
                245                 250                 255

Asn Leu Thr Leu Val Pro Asn Ala Val Val Gln Glu Leu Met Pro Ile
            260                 265                 270

Ser Tyr Asn Ile Asp Gly Asp Glu Trp Val Thr Leu Val Pro Arg Phe
        275                 280                 285

Val Leu Thr Arg Thr Thr Leu Leu Ser Asn Ile Asp Thr Ser Arg Cys
```

```
    290                 295                 300

Thr Ile Thr Asp Ser Ser Val Ile Cys Asp Asn Asp Tyr Ala Leu Pro
305                 310                 315                 320

Met Ser His Glu Leu Ile Gly Cys Leu Gln Gly Asp Thr Ser Lys Cys
                325                 330                 335

Ala Arg Glu Lys Val Val Ser Ser Tyr Val Pro Lys Phe Ala Leu Ser
            340                 345                 350

Asp Gly Leu Val Tyr Ala Asn Cys Leu Asn Thr Ile Cys Arg Cys Met
        355                 360                 365

Asp Thr Asp Thr Pro Ile Ser Gln Ser Leu Gly Ala Thr Val Ser Leu
    370                 375                 380

Leu Asp Asn Lys Arg Cys Ser Val Tyr Gln Val Gly Asp Val Leu Ile
385                 390                 395                 400

Ser Val Gly Ser Tyr Leu Gly Asp Gly Glu Tyr Asn Ala Asp Asn Val
                405                 410                 415

Glu Leu Gly Pro Pro Ile Val Ile Asp Lys Ile Asp Ile Gly Asn Gln
            420                 425                 430

Leu Ala Gly Ile Asn Gln Thr Leu Gln Glu Ala Glu Asp Tyr Ile Glu
        435                 440                 445

Lys Ser Glu Glu Phe Leu Lys Gly Val Asn Pro Ser Ile Ile Thr Leu
    450                 455                 460

Gly Ser Met Val Val Leu Tyr Ile Phe Met Ile Leu Ile Ala Ile Val
465                 470                 475                 480

Ser Val Ile Ala Leu Val Leu Ser Ile Lys Leu Thr Val Lys Gly Asn
                485                 490                 495

Val Val Arg Gln Gln Phe Thr Tyr Thr Gln His Val Pro Ser Met Glu
            500                 505                 510
```

Asn Ile Asn Tyr Val Ser His
        515

<210> 645
<211> 40
<212> PRT
<213> Artificial Sequence

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

<220>
<221> SITE
<222> (1)..(40)
<223> This sequence may encompass 1-10 "Gly Gly Gly Ser"
      repeating units

<400> 645
Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
1   5   10   15

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

Gly Gly Gly Ser Gly Gly Gly Ser
        35   40

<210> 646
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 646
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1   5   10   15

<210> 647
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 647
Thr Thr Ala Ala Ser Gly Ser Ser Gly Gly Ser Ser Ser Gly Ala
1 5 10 15

<210> 648
<211> 18
<212> PRT
<213> Artificial Sequence

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

<400> 648
Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr
1 5 10 15

Lys Gly

<210> 649
<211> 10
<212> PRT
<213> Homo sapiens

<400> 649
Glu Gly Tyr Tyr Tyr Tyr Gly Met Asp Val
1 5 10

<210> 650
<211> 9
<212> PRT
<213> Homo sapiens

<400> 650
Gly Ile Ala Val Ala Gly Thr Asp Tyr
1 5

<210> 651
<211> 119
<212> PRT
<213> Homo sapiens

<400> 651
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 Gly Tyr
            20                  25                  30

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

Gly His Ile Asn Pro Asn Asn Gly Asp Thr Asn Tyr Ala Gln Asn Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Glu Gly Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly
            100                 105                 110

Thr Thr Val Thr Val Ser Ser
        115
```

<210> 652
<211> 118
<212> PRT
<213> Homo sapiens

<400> 652

```
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

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

Gly Trp Ile Ser Ala His Asn Gly Val Thr Gln Tyr Ala Gln Lys Phe
    50                  55                  60

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

Leu Val Thr Val Ser Ser
115

<210> 653
<211> 7
<212> PRT
<213> Homo sapiens

<400> 653
Gly Gly Thr Phe Ser Ser Tyr
1 5

<210> 654
<211> 7
<212> PRT
<213> Homo sapiens

<400> 654
Gly Gly Thr Phe Asn Thr Tyr
1 5

<210> 655
<211> 7
<212> PRT
<213> Homo sapiens

<400> 655
Gly Tyr Thr Phe Thr Gly Tyr
1 5

<210> 656
<211> 7
<212> PRT
<213> Homo sapiens

<400> 656
Gly Tyr Thr Phe Thr Asp Tyr
1 5

<210> 657
<211> 7
<212> PRT
<213> Homo sapiens

<400> 657
Gly Tyr Thr Phe Thr Arg Tyr
1   5

<210> 658
<211> 7
<212> PRT
<213> Homo sapiens

<400> 658
Gly Tyr Thr Phe Thr Ser Tyr
1   5

<210> 659
<211> 7
<212> PRT
<213> Homo sapiens

<400> 659
Gly His Thr Phe Ser Arg His
1   5

<210> 660
<211> 7
<212> PRT
<213> Homo sapiens

<400> 660
Gly Gly Thr Phe Ser Asn Thr
1   5

<210> 661
<211> 7
<212> PRT
<213> Homo sapiens

<400> 661
Gly Tyr Thr Phe Thr Arg Ser
1   5

<210> 662
<211> 7
<212> PRT
<213> Homo sapiens

<400> 662
Gly Asp Thr Phe Thr Gly Tyr
1   5

<210> 663
<211> 7
<212> PRT
<213> Homo sapiens

<400> 663
Gly Tyr Thr Phe Thr Asn Tyr
1   5

<210> 664
<211> 7
<212> PRT
<213> Homo sapiens

<400> 664
Gly Tyr Gly Phe Thr Arg Tyr
1   5

<210> 665
<211> 7
<212> PRT
<213> Homo sapiens

<400> 665
Gly Tyr Thr Phe Thr Ser Arg
1   5

<210> 666
<211> 7
<212> PRT
<213> Homo sapiens

<400> 666
Gly Phe Thr Phe Ser Asn Ser
1   5

<210> 667
<211> 7
<212> PRT
<213> Homo sapiens

<400> 667
Gly Tyr Thr Phe Thr Thr Tyr
1   5

<210> 668
<211> 7
<212> PRT
<213> Homo sapiens

<400> 668
Gly Phe Thr Phe Ser Ser Tyr
1   5

<210> 669
<211> 7
<212> PRT
<213> Homo sapiens

<400> 669
Gly Gly Thr Phe Ser Arg Tyr
1   5

<210> 670
<211> 7
<212> PRT
<213> Homo sapiens

<400> 670
Gly Asn Thr Phe Thr Ser Tyr
1   5

<210> 671
<211> 7
<212> PRT
<213> Homo sapiens

<400> 671
Gly Gly Thr Phe Ser Asn Tyr
1   5

<210> 672
<211> 7
<212> PRT
<213> Homo sapiens

<400> 672
Gly Gly Thr Phe Thr Arg Tyr
1   5

<210> 673
<211> 7

<212> PRT
<213> Homo sapiens

<400> 673
Gly Gly Thr Phe Ser Arg Phe
1   5

<210> 674
<211> 7
<212> PRT
<213> Homo sapiens

<400> 674
Gly Gly Thr Phe Ser Ser His
1   5

<210> 675
<211> 7
<212> PRT
<213> Homo sapiens

<400> 675
Gly Gly Thr Phe Gly Ser Tyr
1   5

<210> 676
<211> 7
<212> PRT
<213> Homo sapiens

<400> 676
Gly Tyr Ile Phe Thr Asp Tyr
1   5

<210> 677
<211> 7
<212> PRT
<213> Homo sapiens

<400> 677
Gly Phe Thr Phe Ser Ser Phe
1   5

<210> 678
<211> 7
<212> PRT
<213> Homo sapiens

<400> 678

Gly Phe Thr Phe Asp Asp Tyr
1   5

<210> 679
<211> 7
<212> PRT
<213> Homo sapiens

<400> 679
Gly Tyr Thr Phe Thr Asp Ser
1   5

<210> 680
<211> 7
<212> PRT
<213> Homo sapiens

<400> 680
Gly Tyr Thr Phe Met Asn Tyr
1   5

<210> 681
<211> 7
<212> PRT
<213> Homo sapiens

<400> 681
Gly Tyr Thr Leu Asn Asp Tyr
1   5

<210> 682
<211> 7
<212> PRT
<213> Homo sapiens

<400> 682
Gly Tyr Thr Phe Thr Asn His
1   5

<210> 683
<211> 7
<212> PRT
<213> Homo sapiens

<400> 683
Gly Tyr Thr Phe Thr Glu Asn
1   5

<210> 684
<211> 7
<212> PRT
<213> Homo sapiens

<400> 684
Gly Tyr Thr Phe Ala Ser Tyr
1   5

<210> 685
<211> 7
<212> PRT
<213> Homo sapiens

<400> 685
Gly Tyr Thr Phe Thr Ala Tyr
1   5

<210> 686
<211> 7
<212> PRT
<213> Homo sapiens

<400> 686
Gly Tyr Pro Phe Thr Asp Tyr
1   5

<210> 687
<211> 7
<212> PRT
<213> Homo sapiens

<400> 687
Gly Tyr Thr Phe Ser Asp Tyr
1   5

<210> 688
<211> 7
<212> PRT
<213> Homo sapiens

<400> 688
Gly Asp Thr Phe Thr Thr His
1   5

<210> 689
<211> 7
<212> PRT
<213> Homo sapiens

<400> 689
Gly Asp Thr Phe Thr Asn Tyr
1   5

<210> 690
<211> 7
<212> PRT
<213> Homo sapiens

<400> 690
Gly Tyr Thr Phe Thr Asp Asn
1   5

<210> 691
<211> 7
<212> PRT
<213> Homo sapiens

<400> 691
Gly Gly Thr Ser Ser Ser Tyr
1   5

<210> 692
<211> 7
<212> PRT
<213> Homo sapiens

<400> 692
Gly Gly Thr Phe Thr Ser Tyr
1   5

<210> 693
<211> 7
<212> PRT
<213> Homo sapiens

<400> 693
Gly Asn Thr Phe Thr Ser His
1   5

<210> 694
<211> 7
<212> PRT
<213> Homo sapiens

<400> 694
Gly Phe Thr Phe Ser Asp Tyr
1   5

<210> 695
<211> 7
<212> PRT
<213> Homo sapiens

<400> 695
Gly Tyr Met Phe Thr Gly His
1   5

<210> 696
<211> 7
<212> PRT
<213> Homo sapiens

<400> 696
Gly Tyr Ile Phe Ser Asn Tyr
1   5

<210> 697
<211> 7
<212> PRT
<213> Homo sapiens

<400> 697
Gly Ser Thr Phe Thr Asn Tyr
1   5

<210> 698
<211> 7
<212> PRT
<213> Homo sapiens

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Gly Gly Thr Leu Ser Ser Tyr
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<213> Homo sapiens

<400> 994
Gln Asp Ile Gly Ala Tyr
1   5

<210> 995
<211> 6
<212> PRT
<213> Homo sapiens

<400> 995
Gln Gly Ile Arg Ser Tyr
1   5

<210> 996
<211> 6
<212> PRT
<213> Homo sapiens

<400> 996
Gln Asn Ile Gly Thr Trp
1   5

<210> 997
<211> 6
<212> PRT
<213> Homo sapiens

<400> 997
Gln Thr Ile Ser Tyr Tyr
1   5

<210> 998
<211> 6
<212> PRT
<213> Homo sapiens

<400> 998
Gln Asn Ile Asn Asn Tyr
1   5

<210> 999
<211> 6
<212> PRT
<213> Homo sapiens

<400> 999
Gln Thr Ile Ser Thr Tyr
1   5

<210> 1000
<211> 6

<212> PRT
<213> Homo sapiens

<400> 1000
Arg Gly Ile Gly Asn Asp
1   5

<210> 1001
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1001
Gln Thr Ile Gly Asn Tyr
1   5

<210> 1002
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1002
Gln Phe Ile Gly Ser Trp
1   5

<210> 1003
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1003
Gln Ser Ile Ser Ser Trp
1   5

<210> 1004
<211> 12
<212> PRT
<213> Homo sapiens

<400> 1004
Gln Ser Val Leu Tyr Ser Ser Asn Asn Lys Asn Tyr
1   5   10

<210> 1005
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1005

Gln Gly Ile Ser Ser Tyr
1 5

<210> 1006
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1006
Gln Gly Ile Ser Asn Tyr
1 5

<210> 1007
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1007
Gln Ser Ile Arg Asn Tyr
1 5

<210> 1008
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1008
Gln Asn Ile Arg Leu Tyr
1 5

<210> 1009
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1009
Gln Asp Ile Arg Lys Phe
1 5

<210> 1010
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1010
Gln Asn Val Arg Ser Trp
1 5

<210> 1011
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1011
Gln Gly Ile Gly Asn Asp
1   5

<210> 1012
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1012
Gln Ser Ile Ser Asn Trp
1   5

<210> 1013
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1013
Glu Ser Ile Gly Ser Trp
1   5

<210> 1014
<211> 7
<212> PRT
<213> Homo sapiens

<400> 1014
Gln Ser Val Thr Ser Asn Tyr
1   5

<210> 1015
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1015
Gln Gly Ile Ser Asn Gly
1   5

<210> 1016
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1016
Gln Asn Ile Arg Asn Tyr
1   5

<210> 1017
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1017
Leu Asp Ile Asn Asn Tyr
1   5

<210> 1018
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1018
Gln Asn Ile Gly Asn Tyr
1   5

<210> 1019
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1019
Gln Gly Ile Asn Thr Trp
1   5

<210> 1020
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1020
Gln Asp Ile Arg Tyr Phe
1   5

<210> 1021
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1021
Ala Ala Ser
1

<210> 1022
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1022
Leu Gly Ser
1

<210> 1023
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1023
Lys Ala Ser
1

<210> 1024
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1024
Gly Ala Ser
1

<210> 1025
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1025
Asp Ala Ser
1

<210> 1026
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1026
Ser Ala Ser
1

<210> 1027
<211> 3

<212> PRT
<213> Homo sapiens

<400> 1027
Ser Ala Phe
1

<210> 1028
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1028
Glu Ala Ser
1

<210> 1029
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1029
Met Gly Ser
1

<210> 1030
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1030
Trp Ala Ser
1

<210> 1031
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1031
Lys Thr Ser
1

<210> 1032
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1032

Thr Ala Ser
1

<210> 1033
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1033
Leu Ala Ser
1

<210> 1034
<211> 3
<212> PRT
<213> Homo sapiens

<400> 1034
Ser Thr Ser
1

<210> 1035
<211> 245
<212> PRT
<213> Artificial Sequence

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

<400> 1035
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 Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Glu Arg Ala Ala Ala Gly Tyr Tyr Tyr Tyr Met Asp Val Trp
            100                 105                 110

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
    130                 135                 140

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

Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys
                165                 170                 175

Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln
            180                 185                 190

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

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

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

Val Glu Ile Lys Arg
                245
```

<210> 1036
<211> 245
<212> PRT
<213> Artificial Sequence

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

<400> 1036

```
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 Ser Ile Ser Ser Tyr
            20                  25                  30

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

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

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

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

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

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
        115                 120                 125

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

Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val
145                 150                 155                 160

Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Ile Ile Asp Pro
                165                 170                 175

Ser Asp Gly Asn Thr Asn Tyr Ala Gln Asn Phe Gln Gly Arg Val Thr
            180                 185                 190

Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
        195                 200                 205

Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Lys Glu Arg Ala
    210                 215                 220
```

Ala Ala Gly Tyr Tyr Tyr Tyr Met Asp Val Trp Gly Gln Gly Thr Thr
225 230 235 240

Val Thr Val Ser Ser
245

<210> 1037
<211> 245
<212> PRT
<213> Artificial Sequence

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

<400> 1037
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 Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Glu Arg Ala Ala Ala Gly Tyr Tyr Tyr Tyr Met Asp Val Trp
100 105 110

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
130 135 140

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


Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys
                165                 170                 175


Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln
            180                 185                 190


Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
        195                 200                 205


Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr
    210                 215                 220


Cys Gln Gln Ser Tyr Ser Thr Pro Leu Thr Phe Gly Cys Gly Thr Lys
225                 230                 235                 240


Val Glu Ile Lys Arg
                245


<210> 1038
<211> 245
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 1038
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 Ser Ile Ser Ser Tyr
            20                  25                  30


Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
```

```
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Leu
                85                  90                  95


Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys Arg Gly Gly Gly Gly
            100                 105                 110


Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
        115                 120                 125


Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
    130                 135                 140


Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val
145                 150                 155                 160


Arg Gln Ala Pro Gly Gln Cys Leu Glu Trp Met Gly Ile Ile Asp Pro
                165                 170                 175


Ser Asp Gly Asn Thr Asn Tyr Ala Gln Asn Phe Gln Gly Arg Val Thr
            180                 185                 190


Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
        195                 200                 205


Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Lys Glu Arg Ala
    210                 215                 220


Ala Ala Gly Tyr Tyr Tyr Tyr Met Asp Val Trp Gly Gln Gly Thr Thr
225                 230                 235                 240


Val Thr Val Ser Ser
                245
```

<210> 1039
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1039
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Gly
85 90 95

Leu Gln Thr Pro His Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
130 135 140

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
145 150 155 160

Tyr Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
165 170 175

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Ser Tyr Ala Gln Lys Phe
180 185 190

```
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
        195                 200                 205

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
    210                 215                 220

Ala Lys Glu Gly Asp Tyr Tyr Tyr Gly Met Asp Ala Trp Gly Gln Gly
225                 230                 235                 240

Thr Met Val Thr Val Ser Ser
                245
```

<210> 1040
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1040

```
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 Asp Tyr
            20                  25                  30

Tyr Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Ser Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Glu Gly Asp Tyr Tyr Tyr Gly Met Asp Ala Trp Gly Gln Gly
            100                 105                 110
```

```
Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125


Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Leu Ser
    130                 135                 140


Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser
145                 150                 155                 160


Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu
                165                 170                 175


Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn
            180                 185                 190


Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205


Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val
    210                 215                 220


Tyr Tyr Cys Met Gln Gly Leu Gln Thr Pro His Thr Phe Gly Gln Gly
225                 230                 235                 240


Thr Lys Val Glu Ile Lys Arg
                245


<210> 1041
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 1041
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 Asp Tyr
            20                  25                  30
```

```
Tyr Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Cys Leu Glu Trp Met
        35                  40                  45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Ser Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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 Lys Glu Gly Asp Tyr Tyr Tyr Gly Met Asp Ala Trp Gly Gln Gly
            100                 105                 110

Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125

Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Leu Ser
    130                 135                 140

Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser
145                 150                 155                 160

Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu
                165                 170                 175

Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn
            180                 185                 190

Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
        195                 200                 205

Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val
    210                 215                 220

Tyr Tyr Cys Met Gln Gly Leu Gln Thr Pro His Thr Phe Gly Cys Gly
225                 230                 235                 240

Thr Lys Val Glu Ile Lys Arg
                245
```

<210> 1042
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1042
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Gly
85 90 95

Leu Gln Thr Pro His Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
130 135 140

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
145 150 155 160

Tyr Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Cys Leu Glu Trp Met
165 170 175

```
Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Ser Tyr Ala Gln Lys Phe
            180                 185                 190


Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
        195                 200                 205


Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
    210                 215                 220


Ala Lys Glu Gly Asp Tyr Tyr Tyr Gly Met Asp Ala Trp Gly Gln Gly
225                 230                 235                 240


Thr Met Val Thr Val Ser Ser
                245
```

<210> 1043
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1043

```
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 Cys Leu Glu Trp Met
        35                  40                  45


Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe
    50                  55                  60


Gln Gly Arg Val Thr Met Thr Arg 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 Asp Gln Gly Trp Gly Met Asp Val Trp Gly Gln Gly Thr Thr
            100                 105                 110


Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125


Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
    130                 135                 140


Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser
145                 150                 155                 160


Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
                165                 170                 175


Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
            180                 185                 190


Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
        195                 200                 205


Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr
    210                 215                 220


Ser Thr Pro Tyr Thr Phe Gly Cys Gly Thr Lys Leu Glu Ile Lys Arg
225                 230                 235                 240


<210> 1044
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 1044
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 Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe
    50                  55                  60

Gln Gly Arg Val Thr Met Thr Arg 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 Asp Gln Gly Trp Gly Met Asp Val Trp Gly Gln Gly Thr Thr
            100                 105                 110

Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
        115                 120                 125

Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
    130                 135                 140

Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser
145                 150                 155                 160

Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
                165                 170                 175

Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
            180                 185                 190

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
        195                 200                 205

Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr
    210                 215                 220

Ser Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
225                 230                 235                 240
```

<210> 1045
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1045
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 Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Thr Pro Tyr
85 90 95

Thr Phe Gly Cys Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly Gly
100 105 110

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
115 120 125

Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
130 135 140

Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Tyr Met His Trp Val
145 150 155 160

Arg Gln Ala Pro Gly Gln Cys Leu Glu Trp Met Gly Gly Phe Asp Pro
165 170 175

```
Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr
            180                 185                 190


Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
        195                 200                 205


Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp Gln Gly
    210                 215                 220


Trp Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
225                 230                 235                 240


<210> 1046
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 1046
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 Ser Ile Ser Ser Tyr
            20                  25                  30


Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45


Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Thr Pro Tyr
                85                  90                  95


Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly Gly
            100                 105                 110
```

```
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
        115                 120                 125


Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
    130                 135                 140


Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Tyr Met His Trp Val
145                 150                 155                 160


Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Gly Phe Asp Pro
                165                 170                 175


Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr
            180                 185                 190


Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
        195                 200                 205


Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp Gln Gly
    210                 215                 220


Trp Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
225                 230                 235                 240


<210> 1047
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 1047
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 Thr Ile Gly Asn Tyr
            20                  25                  30


Val Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45
```

```
Tyr Gly Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Ala Pro Leu
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Gly Gly Gly Gly
            100                 105                 110

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
        115                 120                 125

Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
    130                 135                 140

Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn His Tyr Met His Trp Val
145                 150                 155                 160

Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Trp Met Asn Pro
                165                 170                 175

Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr
            180                 185                 190

Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
        195                 200                 205

Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ser Ser Glu Ser
    210                 215                 220

Gly Ser Asp Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
225                 230                 235                 240

Ser
```

<210> 1048
<211> 241

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1048
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 Asn His
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Met Asn Pro Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg 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 Ser Ser Glu Ser Gly Ser Asp Leu Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu
130 135 140

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln
145 150 155 160

Thr Ile Gly Asn Tyr Val Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala
165 170 175

Pro Lys Leu Leu Ile Tyr Gly Ala Ser Asn Leu His Thr Gly Val Pro
180 185 190

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
195 200 205

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr
210 215 220

Tyr Ser Ala Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
225 230 235 240

Arg

<210> 1049
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1049
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 Asn His
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Cys Leu Glu Trp Met
35 40 45

Gly Trp Met Asn Pro Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg 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 Ser Ser Glu Ser Gly Ser Asp Leu Asp Tyr Trp Gly Gln Gly Thr
100 105 110

```
Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu
    130                 135                 140

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln
145                 150                 155                 160

Thr Ile Gly Asn Tyr Val Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala
                165                 170                 175

Pro Lys Leu Leu Ile Tyr Gly Ala Ser Asn Leu His Thr Gly Val Pro
            180                 185                 190

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
        195                 200                 205

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr
    210                 215                 220

Tyr Ser Ala Pro Leu Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys
225                 230                 235                 240

Arg
```

<210> 1050
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1050

```
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 Thr Ile Gly Asn Tyr
            20                  25                  30
```

```
Val Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Gly Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Ala Pro Leu
                85                  90                  95

Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys Arg Gly Gly Gly Gly
            100                 105                 110

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
        115                 120                 125

Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
    130                 135                 140

Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn His Tyr Met His Trp Val
145                 150                 155                 160

Arg Gln Ala Pro Gly Gln Cys Leu Glu Trp Met Gly Trp Met Asn Pro
                165                 170                 175

Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr
            180                 185                 190

Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
        195                 200                 205

Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ser Ser Glu Ser
    210                 215                 220

Gly Ser Asp Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
225                 230                 235                 240
```

Ser

<210> 1051
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1051
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 Asn His
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 Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg 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 Ser Ser Glu Ser Gly Ser Asp Leu Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu
130 135 140

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln
145 150 155 160

```
Thr Ile Gly Asn Tyr Val Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala
                165                 170                 175

Pro Lys Leu Leu Ile Tyr Gly Ala Ser Asn Leu His Thr Gly Val Pro
            180                 185                 190

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
        195                 200                 205

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr
    210                 215                 220

Tyr Ser Ala Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
225                 230                 235                 240

Arg
```

<210> 1052
<211> 241
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1052

```
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 Thr Ile Gly Asn Tyr
            20                  25                  30

Val Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Gly Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
```

```
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Ala Pro Leu
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Gly Gly Gly Gly
            100                 105                 110

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val
        115                 120                 125

Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser
    130                 135                 140

Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn His Tyr Met His Trp Val
145                 150                 155                 160

Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Ile Ile Asn Pro
                165                 170                 175

Asn Ser Gly Asn Thr Gly Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr
            180                 185                 190

Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser
        195                 200                 205

Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ser Ser Glu Ser
    210                 215                 220

Gly Ser Asp Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
225                 230                 235                 240

Ser
```

<210> 1053
<211> 829
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1053

```
Met Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala
1               5                  10                  15

Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met
            20                  25                  30

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala
        35                  40                  45

Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu
    50                  55                  60

Ala Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp
65                  70                  75                  80

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
                85                  90                  95

Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys
            100                 105                 110

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
        115                 120                 125

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly
    130                 135                 140

Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr
145                 150                 155                 160

Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val
                165                 170                 175

Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp
            180                 185                 190

Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser
        195                 200                 205

Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
    210                 215                 220
```

```
Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro
225                 230                 235                 240

Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu
                245                 250                 255

Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu
            260                 265                 270

Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val
        275                 280                 285

Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu
    290                 295                 300

Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro
305                 310                 315                 320

Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe
                325                 330                 335

Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr
            340                 345                 350

Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile
        355                 360                 365

Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
    370                 375                 380

Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp
385                 390                 395                 400

Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly
                405                 410                 415

Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys
            420                 425                 430
```

```
Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn
        435                 440                 445

Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
    450                 455                 460

Thr Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu
465                 470                 475                 480

Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn
                485                 490                 495

Ala Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile
            500                 505                 510

Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr
        515                 520                 525

Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu
    530                 535                 540

Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe
545                 550                 555                 560

Ala Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly
                565                 570                 575

Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly
            580                 585                 590

Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
        595                 600                 605

Ser Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln Ala
    610                 615                 620

Pro Gly Gln Gly Leu Glu Trp Met Gly Ile Ile Asp Pro Ser Asp Gly
625                 630                 635                 640

Asn Thr Asn Tyr Ala Gln Asn Phe Gln Gly Arg Val Thr Met Thr Arg
                645                 650                 655
```

```
Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser
            660                 665                 670

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Lys Glu Arg Ala Ala Ala Gly
        675                 680                 685

Tyr Tyr Tyr Tyr Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
    690                 695                 700

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
705                 710                 715                 720

Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
                725                 730                 735

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser
            740                 745                 750

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        755                 760                 765

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
    770                 775                 780

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
785                 790                 795                 800

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro
                805                 810                 815

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            820                 825
```

<210> 1054
<211> 831
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1054
Met Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala
1   5   10   15

Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met
            20   25   30

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala
        35   40   45

Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu
    50   55   60

Ala Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp
65   70   75   80

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
                85   90   95

Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys
            100   105   110

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
        115   120   125

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly
    130   135   140

Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr
145   150   155   160

Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val
                165   170   175

Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp
            180   185   190

Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser
        195   200   205

```
Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
    210                 215                 220

Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro
225                 230                 235                 240

Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu
                245                 250                 255

Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu
            260                 265                 270

Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val
        275                 280                 285

Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu
    290                 295                 300

Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro
305                 310                 315                 320

Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe
                325                 330                 335

Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr
            340                 345                 350

Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile
        355                 360                 365

Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
    370                 375                 380

Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp
385                 390                 395                 400

Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly
                405                 410                 415

Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys
            420                 425                 430
```

```
Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn
        435                 440                 445

Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
    450                 455                 460

Thr Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu
465                 470                 475                 480

Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn
                485                 490                 495

Ala Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile
            500                 505                 510

Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr
        515                 520                 525

Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu
    530                 535                 540

Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe
545                 550                 555                 560

Ala Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly
                565                 570                 575

Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly
            580                 585                 590

Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
        595                 600                 605

Ser Gly Tyr Thr Phe Thr Asp Tyr Tyr Ile Gln Trp Val Arg Gln Ala
    610                 615                 620

Pro Gly Gln Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly
625                 630                 635                 640
```

```
Gly Thr Ser Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg
                645                 650                 655

Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser
            660                 665                 670

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Lys Glu Gly Asp Tyr Tyr Tyr
        675                 680                 685

Gly Met Asp Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly
    690                 695                 700

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
705                 710                 715                 720

Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro
                725                 730                 735

Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly
            740                 745                 750

Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln
        755                 760                 765

Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg
    770                 775                 780

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg
785                 790                 795                 800

Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Gly Leu Gln
                805                 810                 815

Thr Pro His Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            820                 825                 830
```

<210> 1055
<211> 824
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1055

```
Met Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala
1               5                  10                  15

Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met
            20                  25                  30

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala
        35                  40                  45

Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu
    50                  55                  60

Ala Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp
65                  70                  75                  80

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
                85                  90                  95

Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys
            100                 105                 110

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
        115                 120                 125

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly
    130                 135                 140

Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr
145                 150                 155                 160

Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val
                165                 170                 175

Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp
            180                 185                 190

Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser
        195                 200                 205
```

```
Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
    210                 215                 220

Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro
225                 230                 235                 240

Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu
                245                 250                 255

Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu
            260                 265                 270

Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val
        275                 280                 285

Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu
    290                 295                 300

Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro
305                 310                 315                 320

Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe
                325                 330                 335

Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr
            340                 345                 350

Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile
        355                 360                 365

Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
    370                 375                 380

Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp
385                 390                 395                 400

Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly
                405                 410                 415
```

```
Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys
            420                 425                 430

Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn
        435                 440                 445

Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
    450                 455                 460

Thr Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu
465                 470                 475                 480

Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn
                485                 490                 495

Ala Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile
            500                 505                 510

Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr
        515                 520                 525

Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu
    530                 535                 540

Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe
545                 550                 555                 560

Ala Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly
                565                 570                 575

Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly
            580                 585                 590

Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
        595                 600                 605

Ser Gly Tyr Thr Phe Thr Ser Tyr Tyr Met His Trp Val Arg Gln Ala
    610                 615                 620

Pro Gly Gln Gly Leu Glu Trp Met Gly Gly Phe Asp Pro Glu Asp Gly
625                 630                 635                 640
```

```
Glu Thr Ile Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg
                645                 650                 655

Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser
            660                 665                 670

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp Gln Gly Trp Gly Met
        675                 680                 685

Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly
    690                 695                 700

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
705                 710                 715                 720

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                725                 730                 735

Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr
            740                 745                 750

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser
        755                 760                 765

Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    770                 775                 780

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
785                 790                 795                 800

Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Thr Pro Tyr Thr Phe Gly Gln
                805                 810                 815

Gly Thr Lys Leu Glu Ile Lys Arg
            820
```

<210> 1056
<211> 825
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1056
Met Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala
1 5 10 15

Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met
20 25 30

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala
35 40 45

Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu
50 55 60

Ala Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp
65 70 75 80

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
85 90 95

Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys
100 105 110

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
115 120 125

Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly
130 135 140

Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr
145 150 155 160

Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val
165 170 175

Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp
180 185 190

```
Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser
        195                 200                 205

Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
    210                 215                 220

Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro
225                 230                 235                 240

Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu
                245                 250                 255

Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu
            260                 265                 270

Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val
        275                 280                 285

Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu
    290                 295                 300

Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro
305                 310                 315                 320

Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe
                325                 330                 335

Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr
            340                 345                 350

Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile
        355                 360                 365

Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
    370                 375                 380

Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp
385                 390                 395                 400

Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly
                405                 410                 415
```

```
Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys
            420                 425                 430

Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn
        435                 440                 445

Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
    450                 455                 460

Thr Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu
465                 470                 475                 480

Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn
                485                 490                 495

Ala Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile
            500                 505                 510

Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr
        515                 520                 525

Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu
    530                 535                 540

Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe
545                 550                 555                 560

Ala Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly
                565                 570                 575

Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly
            580                 585                 590

Ala Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
        595                 600                 605

Ser Gly Tyr Thr Phe Thr Asn His Tyr Met His Trp Val Arg Gln Ala
    610                 615                 620
```

```
Pro Gly Gln Gly Leu Glu Trp Met Gly Trp Met Asn Pro Asn Ser Gly
625                 630                 635                 640

Asn Thr Gly Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg
                645                 650                 655

Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser
            660                 665                 670

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ser Ser Glu Ser Gly Ser Asp
        675                 680                 685

Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
    690                 695                 700

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
705                 710                 715                 720

Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val
                725                 730                 735

Thr Ile Thr Cys Arg Ala Ser Gln Thr Ile Gly Asn Tyr Val Asn Trp
            740                 745                 750

Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Gly Ala
        755                 760                 765

Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
    770                 775                 780

Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
785                 790                 795                 800

Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Ala Pro Leu Thr Phe Gly
                805                 810                 815

Gly Gly Thr Lys Val Glu Ile Lys Arg
            820                 825
```

<210> 1057
<211> 17

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1057
Arg Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Glu Asn Phe Gln
1 5 10 15

Gly

<210> 1058
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1058
Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Thr Phe Gln
1 5 10 15

Gly

<210> 1059
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1059
Ile Ile Asn Pro Ser Asp Gly Ser Thr Asp Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 1060
<211> 125

<212> PRT
<213> Homo sapiens

<400> 1060
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1   5   10   15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Phe Ser Gly Tyr
            20   25   30

Val Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Gln Arg Lys Phe Val
        35   40   45

Ala Ala Ile Ser Arg Gly Gly Leu Ser Thr Ser Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Val Phe
65   70   75   80

Leu Gln Met Asn Thr Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Ala Asp Arg Ser Asp Leu Tyr Glu Ile Thr Ala Ala Ser Asn Ile
            100   105   110

Asp Ser Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120   125

<210> 1061
<211> 5
<212> PRT
<213> Homo sapiens

<400> 1061
Gly Tyr Val Met Gly
1   5

<210> 1062
<211> 17
<212> PRT
<213> Homo sapiens

<400> 1062
Ala Ile Ser Arg Gly Gly Leu Ser Thr Ser Tyr Ala Asp Ser Val Lys
1   5   10   15

Gly

<210> 1063
<211> 16
<212> PRT
<213> Homo sapiens

<400> 1063
Asp Arg Ser Asp Leu Tyr Glu Ile Thr Ala Ala Ser Asn Ile Asp Ser
1   5   10   15

<210> 1064
<211> 7
<212> PRT
<213> Homo sapiens

<400> 1064
Gly Arg Thr Phe Ser Gly Tyr
1   5

<210> 1065
<211> 6
<212> PRT
<213> Homo sapiens

<400> 1065
Ser Arg Gly Gly Leu Ser
1   5

<210> 1066
<211> 8
<212> PRT
<213> Homo sapiens

<400> 1066
Gly Arg Thr Phe Ser Gly Tyr Val
1   5

<210> 1067
<211> 8
<212> PRT
<213> Homo sapiens

<400> 1067
Ile Ser Arg Gly Gly Leu Ser Thr
1   5

<210> 1068
<211> 18
<212> PRT
<213> Homo sapiens

<400> 1068
Ala Ala Asp Arg Ser Asp Leu Tyr Glu Ile Thr Ala Ala Ser Asn Ile
1   5   10   15

Asp Ser

<210> 1069
<211> 709
<212> PRT
<213> Homo sapiens

<400> 1069
Met Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala
1   5   10   15

Phe Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met
            20   25   30

Asn Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala
        35   40   45

Val Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu
    50   55   60

Ala Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp
65   70   75   80

Thr Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser
                85   90   95

Lys Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys
            100   105   110

Cys Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser
        115   120   125

```
Cys Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly
    130                 135                 140

Val Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr
145                 150                 155                 160

Ser Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val
                165                 170                 175

Val Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp
            180                 185                 190

Glu Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser
        195                 200                 205

Arg Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp
    210                 215                 220

Arg Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro
225                 230                 235                 240

Pro Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu
                245                 250                 255

Phe Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu
            260                 265                 270

Asn Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val
        275                 280                 285

Lys Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu
    290                 295                 300

Arg Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro
305                 310                 315                 320

Ser Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe
                325                 330                 335

Leu Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr
            340                 345                 350
```

```
Lys Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile
        355                 360                 365

Arg Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn
    370                 375                 380

Leu Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp
385                 390                 395                 400

Gln Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly
                405                 410                 415

Gln Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys
            420                 425                 430

Phe Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn
        435                 440                 445

Asn Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn
    450                 455                 460

Thr Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu
465                 470                 475                 480

Ile Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn
                485                 490                 495

Ala Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile
            500                 505                 510

Leu Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr
        515                 520                 525

Ile Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu
    530                 535                 540

Val Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe
545                 550                 555                 560
```

```
Ala Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly
                565                 570                 575


Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Glu Ser Gly
            580                 585                 590


Gly Gly Leu Val Gln Ala Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala
        595                 600                 605


Ser Gly Arg Thr Phe Ser Gly Tyr Val Met Gly Trp Phe Arg Gln Ala
    610                 615                 620


Pro Gly Lys Gln Arg Lys Phe Val Ala Ala Ile Ser Arg Gly Gly Leu
625                 630                 635                 640


Ser Thr Ser Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg
                645                 650                 655


Asp Asn Ala Lys Asn Thr Val Phe Leu Gln Met Asn Thr Leu Lys Pro
            660                 665                 670


Glu Asp Thr Ala Val Tyr Tyr Cys Ala Ala Asp Arg Ser Asp Leu Tyr
        675                 680                 685


Glu Ile Thr Ala Ala Ser Asn Ile Asp Ser Trp Gly Gln Gly Thr Leu
    690                 695                 700


Val Thr Val Ser Ser
705


<210> 1070
<211> 828
<212> PRT
<213> Homo sapiens

<400> 1070
Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe
1               5                   10                  15


Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn
            20                  25                  30
```

```
Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala Val
        35                  40                  45

Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala
    50                  55                  60

Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp Thr
65                  70                  75                  80

Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys
                85                  90                  95

Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys
            100                 105                 110

Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys
        115                 120                 125

Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val
    130                 135                 140

Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser
145                 150                 155                 160

Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val Val
                165                 170                 175

Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu
            180                 185                 190

Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg
        195                 200                 205

Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg
    210                 215                 220

Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro
225                 230                 235                 240

Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe
                245                 250                 255
```

```
Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn
            260                 265                 270

Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys
        275                 280                 285

Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg
    290                 295                 300

Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser
305                 310                 315                 320

Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe Leu
                325                 330                 335

Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys
            340                 345                 350

Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg
        355                 360                 365

Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu
    370                 375                 380

Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln
385                 390                 395                 400

Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln
                405                 410                 415

Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe
            420                 425                 430

Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn
        435                 440                 445

Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr
    450                 455                 460
```

```
Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile
465                 470                 475                 480

Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Ala
                485                 490                 495

Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu
            500                 505                 510

Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile
        515                 520                 525

Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val
    530                 535                 540

Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala
545                 550                 555                 560

Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly Gly
                565                 570                 575

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala
            580                 585                 590

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser
        595                 600                 605

Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln Ala Pro
    610                 615                 620

Gly Gln Gly Leu Glu Trp Met Gly Ile Ile Asp Pro Ser Asp Gly Asn
625                 630                 635                 640

Thr Asn Tyr Ala Gln Asn Phe Gln Gly Arg Val Thr Met Thr Arg Asp
                645                 650                 655

Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu
            660                 665                 670

Asp Thr Ala Val Tyr Tyr Cys Ala Lys Glu Arg Ala Ala Ala Gly Tyr
        675                 680                 685
```

```
Tyr Tyr Tyr Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
    690                 695                 700

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
705                 710                 715                 720

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
                725                 730                 735

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
            740                 745                 750

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        755                 760                 765

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    770                 775                 780

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
785                 790                 795                 800

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Leu
                805                 810                 815

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            820                 825
```

<210> 1071
<211> 830
<212> PRT
<213> Homo sapiens

<400> 1071

```
Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe
1               5                   10                  15

Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn
            20                  25                  30

Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala Val
        35                  40                  45
```

```
Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Ile Lys Gly Leu Ala
    50                  55                  60

Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp Thr
65                  70                  75                  80

Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys
                85                  90                  95

Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys
            100                 105                 110

Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys
        115                 120                 125

Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val
    130                 135                 140

Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser
145                 150                 155                 160

Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val Val
                165                 170                 175

Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu
            180                 185                 190

Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg
        195                 200                 205

Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg
    210                 215                 220

Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro
225                 230                 235                 240

Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe
                245                 250                 255
```

```
Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn
            260                 265                 270

Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys
        275                 280                 285

Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg
    290                 295                 300

Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser
305                 310                 315                 320

Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe Leu
                325                 330                 335

Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys
            340                 345                 350

Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg
        355                 360                 365

Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu
    370                 375                 380

Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln
385                 390                 395                 400

Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln
                405                 410                 415

Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe
            420                 425                 430

Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn
        435                 440                 445

Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr
    450                 455                 460

Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile
465                 470                 475                 480
```

```
Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Ala
                485                 490                 495

Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu
            500                 505                 510

Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile
        515                 520                 525

Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val
    530                 535                 540

Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala
545                 550                 555                 560

Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly Gly
                565                 570                 575

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala
            580                 585                 590

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser
        595                 600                 605

Gly Tyr Thr Phe Thr Asp Tyr Tyr Ile Gln Trp Val Arg Gln Ala Pro
    610                 615                 620

Gly Gln Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly
625                 630                 635                 640

Thr Ser Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp
                645                 650                 655

Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu
            660                 665                 670

Asp Thr Ala Val Tyr Tyr Cys Ala Lys Glu Gly Asp Tyr Tyr Tyr Gly
        675                 680                 685
```

```
Met Asp Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly
    690                 695                 700

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
705                 710                 715                 720

Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala
                725                 730                 735

Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr
            740                 745                 750

Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu
        755                 760                 765

Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe
    770                 775                 780

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val
785                 790                 795                 800

Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Gly Leu Gln Thr
                805                 810                 815

Pro His Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            820                 825                 830
```

<210> 1072
<211> 823
<212> PRT
<213> Homo sapiens

<400> 1072

```
Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe
1               5                   10                  15

Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn
            20                  25                  30

Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala Val
        35                  40                  45
```

```
Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Ile Lys Gly Leu Ala
    50                  55                  60

Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp Thr
65                  70                  75                  80

Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys
                85                  90                  95

Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys
            100                 105                 110

Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys
        115                 120                 125

Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val
    130                 135                 140

Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser
145                 150                 155                 160

Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val Val
                165                 170                 175

Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu
            180                 185                 190

Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg
        195                 200                 205

Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg
    210                 215                 220

Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro
225                 230                 235                 240

Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe
                245                 250                 255

Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn
            260                 265                 270
```

```
Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys
        275                 280                 285

Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg
    290                 295                 300

Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser
305                 310                 315                 320

Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe Leu
                325                 330                 335

Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys
            340                 345                 350

Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg
        355                 360                 365

Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu
    370                 375                 380

Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln
385                 390                 395                 400

Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln
                405                 410                 415

Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe
            420                 425                 430

Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn
        435                 440                 445

Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr
    450                 455                 460

Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile
465                 470                 475                 480
```

```
Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Ala
                485                 490                 495

Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu
            500                 505                 510

Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile
        515                 520                 525

Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val
    530                 535                 540

Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala
545                 550                 555                 560

Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly Gly
                565                 570                 575

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala
            580                 585                 590

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser
        595                 600                 605

Gly Tyr Thr Phe Thr Ser Tyr Tyr Met His Trp Val Arg Gln Ala Pro
    610                 615                 620

Gly Gln Gly Leu Glu Trp Met Gly Gly Phe Asp Pro Glu Asp Gly Glu
625                 630                 635                 640

Thr Ile Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp
                645                 650                 655

Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu
            660                 665                 670

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp Gln Gly Trp Gly Met Asp
        675                 680                 685

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly
    690                 695                 700
```

```
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr
705                 710                 715                 720


Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile
                725                 730                 735


Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln
            740                 745                 750


Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser
        755                 760                 765


Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr
    770                 775                 780


Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr
785                 790                 795                 800


Tyr Tyr Cys Gln Gln Thr Tyr Ser Thr Pro Tyr Thr Phe Gly Gln Gly
                805                 810                 815


Thr Lys Leu Glu Ile Lys Arg
            820


<210> 1073
<211> 824
<212> PRT
<213> Homo sapiens

<400> 1073
Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe
1               5                   10                  15


Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn
            20                  25                  30


Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala Val
        35                  40                  45


Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala
    50                  55                  60
```

```
Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp Thr
65                  70                  75                  80

Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys
                85                  90                  95

Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys
            100                 105                 110

Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys
        115                 120                 125

Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val
    130                 135                 140

Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser
145                 150                 155                 160

Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val Val
                165                 170                 175

Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu
            180                 185                 190

Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg
        195                 200                 205

Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg
    210                 215                 220

Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro
225                 230                 235                 240

Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe
                245                 250                 255

Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn
            260                 265                 270
```

```
Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys
        275                 280                 285

Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg
    290                 295                 300

Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser
305                 310                 315                 320

Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe Leu
                325                 330                 335

Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys
            340                 345                 350

Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg
        355                 360                 365

Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu
    370                 375                 380

Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln
385                 390                 395                 400

Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln
                405                 410                 415

Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe
            420                 425                 430

Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn
        435                 440                 445

Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr
    450                 455                 460

Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile
465                 470                 475                 480

Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Ala
                485                 490                 495
```

```
Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu
            500                 505                 510

Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile
        515                 520                 525

Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val
    530                 535                 540

Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala
545                 550                 555                 560

Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly Gly
                565                 570                 575

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala
            580                 585                 590

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser
        595                 600                 605

Gly Tyr Thr Phe Thr Asn His Tyr Met His Trp Val Arg Gln Ala Pro
    610                 615                 620

Gly Gln Gly Leu Glu Trp Met Gly Trp Met Asn Pro Asn Ser Gly Asn
625                 630                 635                 640

Thr Gly Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp
                645                 650                 655

Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu
            660                 665                 670

Asp Thr Ala Val Tyr Tyr Cys Ala Ser Ser Glu Ser Gly Ser Asp Leu
        675                 680                 685

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
    690                 695                 700
```

```
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met
705                 710                 715                 720


Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
                725                 730                 735


Ile Thr Cys Arg Ala Ser Gln Thr Ile Gly Asn Tyr Val Asn Trp Tyr
            740                 745                 750


Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Gly Ala Ser
        755                 760                 765


Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
    770                 775                 780


Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
785                 790                 795                 800


Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Ala Pro Leu Thr Phe Gly Gly
                805                 810                 815


Gly Thr Lys Val Glu Ile Lys Arg
            820


<210> 1074
<211> 708
<212> PRT
<213> Homo sapiens

<400> 1074
Lys Lys Ile Asn Glu Gly Leu Leu Asp Ser Lys Ile Leu Ser Ala Phe
1               5                   10                  15


Asn Thr Val Ile Ala Leu Leu Gly Ser Ile Val Ile Ile Val Met Asn
            20                  25                  30


Ile Met Ile Ile Gln Asn Tyr Thr Arg Ser Thr Asp Asn Gln Ala Val
        35                  40                  45


Ile Lys Asp Ala Leu Gln Gly Ile Gln Gln Gln Ile Lys Gly Leu Ala
    50                  55                  60
```

```
Asp Lys Ile Gly Thr Glu Ile Gly Pro Lys Val Ser Leu Ile Asp Thr
65                  70                  75                  80

Ser Ser Thr Ile Thr Ile Pro Ala Asn Ile Gly Leu Leu Gly Ser Lys
                85                  90                  95

Ile Ser Gln Ser Thr Ala Ser Ile Asn Glu Asn Val Asn Glu Lys Cys
            100                 105                 110

Lys Phe Thr Leu Pro Pro Leu Lys Ile His Glu Cys Asn Ile Ser Cys
        115                 120                 125

Pro Asn Pro Leu Pro Phe Arg Glu Tyr Arg Pro Gln Thr Glu Gly Val
    130                 135                 140

Ser Asn Leu Val Gly Leu Pro Asn Asn Ile Cys Leu Gln Lys Thr Ser
145                 150                 155                 160

Asn Gln Ile Leu Lys Pro Lys Leu Ile Ser Tyr Thr Leu Pro Val Val
                165                 170                 175

Gly Gln Ser Gly Thr Cys Ile Thr Asp Pro Leu Leu Ala Met Asp Glu
            180                 185                 190

Gly Tyr Phe Ala Tyr Ser His Leu Glu Arg Ile Gly Ser Cys Ser Arg
        195                 200                 205

Gly Val Ser Lys Gln Arg Ile Ile Gly Val Gly Glu Val Leu Asp Arg
    210                 215                 220

Gly Asp Glu Val Pro Ser Leu Phe Met Thr Asn Val Trp Thr Pro Pro
225                 230                 235                 240

Asn Pro Asn Thr Val Tyr His Cys Ser Ala Val Tyr Asn Asn Glu Phe
                245                 250                 255

Tyr Tyr Val Leu Cys Ala Val Ser Thr Val Gly Asp Pro Ile Leu Asn
            260                 265                 270

Ser Thr Tyr Trp Ser Gly Ser Leu Met Met Thr Arg Leu Ala Val Lys
        275                 280                 285
```

```
Pro Lys Ser Asn Gly Gly Gly Tyr Asn Gln His Gln Leu Ala Leu Arg
    290                 295                 300

Ser Ile Glu Lys Gly Arg Tyr Asp Lys Val Met Pro Tyr Gly Pro Ser
305                 310                 315                 320

Gly Ile Lys Gln Gly Asp Thr Leu Tyr Phe Pro Ala Val Gly Phe Leu
                325                 330                 335

Val Arg Thr Glu Phe Lys Tyr Asn Asp Ser Asn Cys Pro Ile Thr Lys
            340                 345                 350

Cys Gln Tyr Ser Lys Pro Glu Asn Cys Arg Leu Ser Met Gly Ile Arg
        355                 360                 365

Pro Asn Ser His Tyr Ile Leu Arg Ser Gly Leu Leu Lys Tyr Asn Leu
    370                 375                 380

Ser Asp Gly Glu Asn Pro Lys Val Val Phe Ile Glu Ile Ser Asp Gln
385                 390                 395                 400

Arg Leu Ser Ile Gly Ser Pro Ser Lys Ile Tyr Asp Ser Leu Gly Gln
                405                 410                 415

Pro Val Phe Tyr Gln Ala Ser Phe Ser Trp Asp Thr Met Ile Lys Phe
            420                 425                 430

Gly Asp Val Leu Thr Val Asn Pro Leu Val Val Asn Trp Arg Asn Asn
        435                 440                 445

Thr Val Ile Ser Arg Pro Gly Gln Ser Gln Cys Pro Arg Phe Asn Thr
    450                 455                 460

Cys Pro Ala Ile Cys Ala Glu Gly Val Tyr Asn Asp Ala Phe Leu Ile
465                 470                 475                 480

Asp Arg Ile Asn Trp Ile Ser Ala Gly Val Phe Leu Asp Ser Asn Ala
                485                 490                 495
```

```
Thr Ala Ala Asn Pro Val Phe Thr Val Phe Lys Asp Asn Glu Ile Leu
            500                 505                 510

Tyr Arg Ala Gln Leu Ala Ser Glu Asp Thr Asn Ala Gln Lys Thr Ile
        515                 520                 525

Thr Asn Cys Phe Leu Leu Lys Asn Lys Ile Trp Cys Ile Ser Leu Val
    530                 535                 540

Glu Ile Tyr Asp Thr Gly Asp Asn Val Ile Arg Pro Lys Leu Phe Ala
545                 550                 555                 560

Val Lys Ile Pro Glu Gln Cys Thr Gly Gly Gly Gly Ser Gly Gly Gly
                565                 570                 575

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Glu Ser Gly Gly
            580                 585                 590

Gly Leu Val Gln Ala Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
        595                 600                 605

Gly Arg Thr Phe Ser Gly Tyr Val Met Gly Trp Phe Arg Gln Ala Pro
    610                 615                 620

Gly Lys Gln Arg Lys Phe Val Ala Ala Ile Ser Arg Gly Gly Leu Ser
625                 630                 635                 640

Thr Ser Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
                645                 650                 655

Asn Ala Lys Asn Thr Val Phe Leu Gln Met Asn Thr Leu Lys Pro Glu
            660                 665                 670

Asp Thr Ala Val Tyr Tyr Cys Ala Ala Asp Arg Ser Asp Leu Tyr Glu
        675                 680                 685

Ile Thr Ala Ala Ser Asn Ile Asp Ser Trp Gly Gln Gly Thr Leu Val
    690                 695                 700

Thr Val Ser Ser
705
```

<210> 1075
<211> 245
<212> PRT
<213> Homo sapiens

<400> 1075
Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1   5   10   15

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20   25   30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
        35   40   45

Tyr His Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65   70   75   80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85   90   95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr Gly Ser Thr Ser Gly
            100   105   110

Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys Gly Glu Val Lys
        115   120   125

Leu Gln Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser Leu Ser
    130   135   140

Val Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser
145   150   155   160

Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly Val Ile
                165   170   175

Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser Arg Leu
            180   185   190

```
Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys Met Asn
        195                 200                 205


Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys His Tyr
    210                 215                 220


Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
225                 230                 235                 240


Val Thr Val Ser Ser
                245


<210> 1076
<211> 242
<212> PRT
<213> Homo sapiens

<400> 1076
Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1               5                   10                  15


Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20                  25                  30


Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
        35                  40                  45


Tyr His Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65                  70                  75                  80


Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85                  90                  95


Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr Gly Gly Gly Gly Ser
            100                 105                 110


Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Lys Leu Gln Glu
        115                 120                 125
```

```
Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser Leu Ser Val Thr Cys
    130                 135                 140

Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145                 150                 155                 160

Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly Val Ile Trp Gly Ser
                165                 170                 175

Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser Arg Leu Thr Ile Ile
            180                 185                 190

Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys Met Asn Ser Leu Gln
        195                 200                 205

Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
    210                 215                 220

Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr Val
225                 230                 235                 240

Ser Ser
```

<210> 1077
<211> 118
<212> PRT
<213> Homo sapiens

<400> 1077

```
Gln 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 Thr Asn His
            20                  25                  30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Leu Val
        35                  40                  45

Ser Ser Ile Ser Gly Asn Gly Arg Thr Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60
```

```
Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Lys Asn Thr Leu Asp
65                  70                  75                  80


Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Lys Asp Gly Gly Glu Thr Leu Val Asp Ser Arg Gly Gln Gly Thr
            100                 105                 110


Leu Val Thr Val Ser Ser
        115


<210> 1078
<211> 119
<212> PRT
<213> Homo sapiens

<400> 1078
Gln 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 Ser Ser His
            20                  25                  30


Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45


Ala Ala Ile Ser Gly Ser Gly Asp Phe Thr His Tyr Ala Asp Ser Val
    50                  55                  60


Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Ser
65                  70                  75                  80


Leu Gln Met Asn Asn Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Lys Asp Glu Asp Gly Gly Ser Leu Leu Gly Tyr Arg Gly Gln Gly
            100                 105                 110


Thr Leu Val Thr Val Ser Ser
        115
```

<210> 1079
<211> 121
<212> PRT
<213> Homo sapiens

<400> 1079
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1   5   10   15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ser Ser Ile Ser Gly Ser Gly Asp Tyr Ile Tyr Tyr Ala Asp Ser Val
    50   55   60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Lys Asn Thr Leu Tyr
65   70   75   80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95

Ala Lys Glu Gly Thr Gly Ala Asn Ser Ser Leu Ala Asp Tyr Arg Gly
            100   105   110

Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 1080
<211> 119
<212> PRT
<213> Homo sapiens

<400> 1080
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Ile Gln Pro Gly Gly
1   5   10   15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser His
            20   25   30

```
Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45


Ser Ala Ile Ser Gly Ser Gly Asp Tyr Thr His Tyr Ala Asp Ser Val
    50                  55                  60


Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
65                  70                  75                  80


Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Lys Asp Glu Asp Gly Gly Ser Leu Leu Gly His Arg Gly Gln Gly
            100                 105                 110


Thr Leu Val Thr Val Ser Ser
        115


<210> 1081
<211> 12
<212> PRT
<213> Homo sapiens

<400> 1081
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro
1               5                   10


<210> 1082
<211> 25
<212> PRT
<213> Homo sapiens

<400> 1082
Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
1               5                   10                  15


Ser Gln Pro Leu Ser Leu Arg Pro Glu
            20                  25


<210> 1083
<211> 39
<212> PRT
<213> Homo sapiens

<400> 1083
```

```
Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Lys Ser Asn
1               5                   10                  15


Gly Thr Ile Ile His Val Lys Gly Lys His Leu Cys Pro Ser Pro Leu
            20                  25                  30


Phe Pro Gly Pro Ser Lys Pro
        35
```

<210> 1084
<211> 44
<212> PRT
<213> Homo sapiens

<400> 1084

```
Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
1               5                   10                  15


Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
            20                  25                  30


Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys
        35                  40
```

<210> 1085
<211> 27
<212> PRT
<213> Homo sapiens

<400> 1085

```
Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser Leu
1               5                   10                  15


Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val
            20                  25
```

<210> 1086
<211> 41
<212> PRT
<213> Homo sapiens

<400> 1086

```
Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr
1               5                   10                  15
```

```
Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro
            20                  25                  30

Pro Arg Asp Phe Ala Ala Tyr Arg Ser
        35                  40
```

<210> 1087
<211> 42
<212> PRT
<213> Homo sapiens

<400> 1087

```
Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
1               5                   10                  15

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
            20                  25                  30

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
        35                  40
```

<210> 1088
<211> 112
<212> PRT
<213> Homo sapiens

<400> 1088

```
Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
1               5                   10                  15

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
            20                  25                  30

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
        35                  40                  45

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
    50                  55                  60

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
65                  70                  75                  80

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
                85                  90                  95
```

```
Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
            100                 105                 110


<210> 1089
<211> 112
<212> PRT
<213> Homo sapiens

<400> 1089
Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly
1               5                   10                  15


Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
            20                  25                  30


Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
        35                  40                  45


Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
    50                  55                  60


Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
65                  70                  75                  80


Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
                85                  90                  95


Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
            100                 105                 110


<210> 1090
<211> 21
<212> PRT
<213> Homo sapiens

<400> 1090
Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
1               5                   10                  15


Val Gln Cys Ser Arg
            20
```

<210> 1091
<211> 41
<212> PRT
<213> Homo sapiens

<400> 1091
Arg Ser Lys Arg Ser Arg Gly Gly His Ser Asp Tyr Met Asn Met Thr
1   5   10   15

Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro
            20   25   30

Pro Arg Asp Phe Ala Ala Tyr Arg Ser
        35   40

<210> 1092
<211> 498
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 1092
Ile Leu His Tyr Glu Lys Leu Ser Lys Ile Gly Leu Val Lys Gly Val
1   5   10   15

Thr Arg Lys Tyr Lys Ile Lys Ser Asn Pro Leu Thr Lys Asp Ile Val
            20   25   30

Ile Lys Met Ile Pro Asn Val Ser Asn Met Ser Gln Cys Thr Gly Ser
        35   40   45

Val Met Glu Asn Tyr Lys Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile
    50   55   60

Lys Gly Ala Leu Glu Ile Tyr Lys Asn Asn Thr His Asp Leu Val Gly
65   70   75   80

Asp Val Arg Leu Ala Gly Val Ile Met Ala Gly Val Ala Ile Gly Ile
                85   90   95

Ala Thr Ala Ala Gln Ile Thr Ala Gly Val Ala Leu Tyr Glu Ala Met
            100   105   110

```
Lys Asn Ala Asp Asn Ile Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr
        115                 120                 125

Asn Glu Ala Val Val Lys Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr
    130                 135                 140

Val Leu Thr Ala Leu Gln Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr
145                 150                 155                 160

Ile Asp Lys Ile Ser Cys Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala
                165                 170                 175

Leu Ser Lys Tyr Leu Ser Asp Leu Leu Phe Val Phe Gly Pro Asn Leu
            180                 185                 190

Gln Asp Pro Val Ser Asn Ser Met Thr Ile Gln Ala Ile Ser Gln Ala
        195                 200                 205

Phe Gly Gly Asn Tyr Glu Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr
    210                 215                 220

Glu Asp Phe Asp Asp Leu Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile
225                 230                 235                 240

Ile Tyr Val Asp Leu Ser Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe
                245                 250                 255

Pro Ile Leu Thr Glu Ile Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro
            260                 265                 270

Val Ser Phe Asn Asn Asp Asn Ser Glu Trp Ile Ser Ile Val Pro Asn
        275                 280                 285

Phe Ile Leu Val Arg Asn Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe
    290                 295                 300

Cys Leu Ile Thr Lys Arg Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr
305                 310                 315                 320
```

```
Pro Met Thr Asn Asn Met Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys
                325                 330                 335

Cys Pro Arg Glu Leu Val Val Ser Ser His Val Pro Arg Phe Ala Leu
            340                 345                 350

Ser Asn Gly Val Leu Phe Ala Asn Cys Ile Ser Val Thr Cys Gln Cys
        355                 360                 365

Gln Thr Thr Gly Arg Ala Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu
    370                 375                 380

Met Ile Asp Asn Thr Thr Cys Pro Thr Ala Val Leu Gly Asn Val Ile
385                 390                 395                 400

Ile Ser Leu Gly Lys Tyr Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly
                405                 410                 415

Ile Ala Ile Gly Pro Pro Val Phe Thr Asp Lys Val Asp Ile Ser Ser
            420                 425                 430

Gln Ile Ser Ser Met Asn Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile
        435                 440                 445

Lys Glu Ala Gln Arg Leu Leu Asp Thr Val Asn Pro Ser Leu Ile Ser
    450                 455                 460

Met Leu Ser Met Ile Ile Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys
465                 470                 475                 480

Ile Gly Leu Ile Thr Phe Ile Ser Phe Ile Ile Val Glu Lys Lys Arg
                485                 490                 495

Asn Thr
```

<210> 1093
<211> 415
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1093

```
Leu Ala Gly Val Ile Met Ala Gly Val Ala Ile Gly Ile Ala Thr Ala
1               5                  10                  15

Ala Gln Ile Thr Ala Gly Val Ala Leu Tyr Glu Ala Met Lys Asn Ala
            20                  25                  30

Asp Asn Ile Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr Asn Glu Ala
        35                  40                  45

Val Val Lys Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr Val Leu Thr
    50                  55                  60

Ala Leu Gln Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr Ile Asp Lys
65                  70                  75                  80

Ile Ser Cys Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala Leu Ser Lys
                85                  90                  95

Tyr Leu Ser Asp Leu Leu Phe Val Phe Gly Pro Asn Leu Gln Asp Pro
            100                 105                 110

Val Ser Asn Ser Met Thr Ile Gln Ala Ile Ser Gln Ala Phe Gly Gly
        115                 120                 125

Asn Tyr Glu Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr Glu Asp Phe
    130                 135                 140

Asp Asp Leu Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile Ile Tyr Val
145                 150                 155                 160

Asp Leu Ser Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe Pro Ile Leu
                165                 170                 175

Thr Glu Ile Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro Val Ser Phe
            180                 185                 190

Asn Asn Asp Asn Ser Glu Trp Ile Ser Ile Val Pro Asn Phe Ile Leu
        195                 200                 205
```

```
Val Arg Asn Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe Cys Leu Ile
    210                 215                 220

Thr Lys Arg Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr Pro Met Thr
225                 230                 235                 240

Asn Asn Met Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys Cys Pro Arg
                245                 250                 255

Glu Leu Val Val Ser Ser His Val Pro Arg Phe Ala Leu Ser Asn Gly
            260                 265                 270

Val Leu Phe Ala Asn Cys Ile Ser Val Thr Cys Gln Cys Gln Thr Thr
        275                 280                 285

Gly Arg Ala Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu Met Ile Asp
    290                 295                 300

Asn Thr Thr Cys Pro Thr Ala Val Leu Gly Asn Val Ile Ile Ser Leu
305                 310                 315                 320

Gly Lys Tyr Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly Ile Ala Ile
                325                 330                 335

Gly Pro Pro Val Phe Thr Asp Lys Val Asp Ile Ser Ser Gln Ile Ser
            340                 345                 350

Ser Met Asn Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile Lys Glu Ala
        355                 360                 365

Gln Arg Leu Leu Asp Thr Val Asn Pro Ser Leu Ile Ser Met Leu Ser
    370                 375                 380

Met Ile Ile Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys Ile Gly Leu
385                 390                 395                 400

Ile Thr Phe Ile Ser Phe Ile Ile Val Glu Lys Lys Arg Asn Thr
                405                 410                 415
```

<210> 1094

<400> 1094
000

<210> 1095

<400> 1095
000

<210> 1096

<400> 1096
000

<210> 1097

<400> 1097
000

<210> 1098

<400> 1098
000

<210> 1099

<400> 1099
000

<210> 1100

<400> 1100
000

<210> 1101

<400> 1101
000

<210> 1102

<400> 1102
000

<210> 1103

<400> 1103
000

<210> 1104

<400> 1104
000

<210> 1105

<400> 1105
000

<210> 1106
<211> 21
<212> PRT
<213> Homo sapiens

<400> 1106
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro
            20

<210> 1107
<211> 20
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown:
      IgK signal peptide sequence

<400> 1107
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1   5   10   15

Gly Ser Thr Gly
            20

<210> 1108
<211> 22
<212> PRT
<213> Homo sapiens

<400> 1108
Met Leu Leu Leu Val Thr Ser Leu Leu Leu Cys Glu Leu Pro His Pro
1   5   10   15

Ala Phe Leu Leu Ile Pro
            20

<210> 1109
<211> 45
<212> PRT
<213> Homo sapiens

<400> 1109
Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
1   5   10   15

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
            20   25   30

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp
        35   40   45

<210> 1110
<211> 39
<212> PRT
<213> Homo sapiens

<400> 1110
Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Lys Ser Asn
1   5   10   15

Gly Thr Ile Ile His Val Lys Gly Lys His Leu Cys Pro Ser Pro Leu
            20   25   30

Phe Pro Gly Pro Ser Lys Pro
        35

<210> 1111
<211> 12
<212> PRT
<213> Homo sapiens

<400> 1111
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro
1   5   10

<210> 1112
<211> 12
<212> PRT
<213> Homo sapiens

<400> 1112
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro
1   5   10

<210> 1113
<211> 229
<212> PRT
<213> Homo sapiens

<400> 1113
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe
1   5   10   15

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            20   25   30

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        35   40   45

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    50   55   60

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
65   70   75   80

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                85   90   95

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            100   105   110

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        115   120   125

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    130   135   140

```
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
145                 150                 155                 160


Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                165                 170                 175


Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            180                 185                 190


Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        195                 200                 205


Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    210                 215                 220


Leu Ser Leu Gly Lys
225


<210> 1114
<211> 24
<212> PRT
<213> Homo sapiens

<400> 1114
Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu
1               5                   10                  15


Ser Leu Val Ile Thr Leu Tyr Cys
            20


<210> 1115
<211> 27
<212> PRT
<213> Homo sapiens

<400> 1115
Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser Leu
1               5                   10                  15


Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val
            20                  25


<210> 1116
<211> 42
```

<212> PRT
<213> Homo sapiens

<400> 1116
Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
1   5   10   15

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
            20   25   30

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
        35   40

<210> 1117
<211> 41
<212> PRT
<213> Homo sapiens

<400> 1117
Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr
1   5   10   15

Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro
            20   25   30

Pro Arg Asp Phe Ala Ala Tyr Arg Ser
        35   40

<210> 1118
<211> 112
<212> PRT
<213> Homo sapiens

<400> 1118
Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly
1   5   10   15

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
            20   25   30

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
        35   40   45

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
    50   55   60

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
65 70 75 80

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
85 90 95

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
100 105 110

<210> 1119
<211> 245
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1119
Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr Gly Ser Thr Ser Gly
100 105 110

Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys Gly Glu Val Lys
115 120 125

```
Leu Gln Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser Leu Ser
    130                 135                 140


Val Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser
145                 150                 155                 160


Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly Val Ile
                165                 170                 175


Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser Arg Leu
            180                 185                 190


Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys Met Asn
        195                 200                 205


Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys His Tyr
    210                 215                 220


Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
225                 230                 235                 240


Val Thr Val Ser Ser
                245


<210> 1120
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 1120
Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1               5                   10                  15


Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20                  25                  30


Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
        35                  40                  45
```

Tyr His Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr
100 105

<210> 1121
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1121
Gln Asp Ile Ser Lys Tyr
1 5

<210> 1122
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1122
His Thr Ser
1

<210> 1123
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1123
Gln Gln Gly Asn Thr Leu Pro Tyr Thr
1 5

<210> 1124
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1124
Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr
1 5 10 15

Lys Gly

<210> 1125
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1125
Glu Val Lys Leu Gln Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln
1 5 10 15

Ser Leu Ser Val Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr
20 25 30

Gly Val Ser Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu
35 40 45

Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys
50 55 60

Ser Arg Leu Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln Val Phe Leu
65 70 75 80

```
Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala
                85                  90                  95


Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110


Gly Thr Ser Val Thr Val Ser Ser
        115                 120


<210> 1126
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 1126
Gly Val Ser Leu Pro Asp Tyr Gly
1               5


<210> 1127
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 1127
Ile Trp Gly Ser Glu Thr Thr
1               5


<210> 1128
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 1128
Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr
1               5                   10
```

<210> 1129
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1129
Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Lys Leu Gln Glu
115 120 125

Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser Leu Ser Val Thr Cys
130 135 140

Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser Trp Ile Arg
145 150 155 160

Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly Val Ile Trp Gly Ser
165 170 175

```
Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser Arg Leu Thr Ile Ile
            180                 185                 190


Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys Met Asn Ser Leu Gln
        195                 200                 205


Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys His Tyr Tyr Tyr Gly
    210                 215                 220


Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr Val
225                 230                 235                 240


Ser Ser
```

<210> 1130
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1130
```
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1               5                   10                  15
```

<210> 1131
<211> 1458
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 1131
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atggccttac cagtgaccgc cttgctcctg ccgctggcct tgctgctcca cgccgccagg       60

ccggacatcc agatgacaca gactacatcc tccctgtctg cctctctggg agacagagtc      120

accatcagtt gcagggcaag tcaggacatt agtaaatatt taaattggta tcagcagaaa      180

ccagatggaa ctgttaaact cctgatctac catacatcaa gattacactc aggagtccca      240

tcaaggttca gtggcagtgg gtctggaaca gattattctc tcaccattag caacctggag      300
```

caagaagata ttgccactta cttttgccaa cagggtaata cgcttccgta cacgttcgga 360

gggggacca agctggagat cacaggtggc ggtggctcgg gcggtggtgg gtcgggtggc 420

ggcggatctg aggtgaaact gcaggagtca ggacctggcc tggtggcgcc ctcacagagc 480

ctgtccgtca catgcactgt ctcaggggtc tcattacccg actatggtgt aagctggatt 540

cgccagcctc cacgaaaggg tctggagtgg ctgggagtaa tatggggtag tgaaaccaca 600

tactataatt cagctctcaa atccagactg accatcatca aggacaactc caagagccaa 660

gttttcttaa aaatgaacag tctgcaaact gatgacacag ccatttacta ctgtgccaaa 720

cattattact acggtggtag ctatgctatg gactactggg gccaaggaac ctcagtcacc 780

gtctcctcaa ccacgacgcc agcgccgcga ccaccaacac cggcgcccac catcgcgtcg 840

cagcccctgt ccctgcgccc agaggcgtgc cggccagcgg cgggggcgc agtgcacacg 900

agggggctgg acttcgcctg tgatatctac atctgggcgc ccttggccgg gacttgtggg 960

gtccttctcc tgtcactggt tatcaccctt tactgcaaac ggggcagaaa gaaactcctg 1020

tatatattca aacaaccatt tatgagacca gtacaaacta ctcaagagga agatggctgt 1080

agctgccgat ttccagaaga agaagaagga ggatgtgaac tgagagtgaa gttcagcagg 1140

agcgcagacg cccccgcgta caagcagggc cagaaccagc tctataacga gctcaatcta 1200

ggacgaagag aggagtacga tgttttggac aagagacgtg gccgggaccc tgagatgggg 1260

ggaaagccga gaaggaagaa ccctcaggaa ggcctgtaca atgaactgca gaaagataag 1320

atggcggagg cctacagtga gattgggatg aaaggcgagc gccggagggg caaggggcac 1380

gatggccttt accagggtct cagtacagcc accaaggaca cctacgacgc ccttcacatg 1440

caggccctgc cccctcgc 1458

<210> 1132
<211> 486
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1132
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

```
His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu
            20                  25                  30

Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln
        35                  40                  45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr
    50                  55                  60

Val Lys Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Val Pro
65                  70                  75                  80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile
                85                  90                  95

Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly
            100                 105                 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr
        115                 120                 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
    130                 135                 140

Val Lys Leu Gln Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser
145                 150                 155                 160

Leu Ser Val Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly
                165                 170                 175

Val Ser Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly
            180                 185                 190

Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser
        195                 200                 205

Arg Leu Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys
    210                 215                 220

Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys
```

```
225                 230                 235                 240

His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
                245                 250                 255

Thr Ser Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro
            260                 265                 270

Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu
        275                 280                 285

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
    290                 295                 300

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
305                 310                 315                 320

Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg
                325                 330                 335

Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln
            340                 345                 350

Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu
        355                 360                 365

Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
    370                 375                 380

Pro Ala Tyr Lys Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385                 390                 395                 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
                405                 410                 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
            420                 425                 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
        435                 440                 445
```

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
450 455 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 1133
<211> 1383
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 1133
atgctgctgc tggtgaccag cctgctgctg tgcgagctgc cccaccccgc ctttctgctg 60

atccccgaca tccagatgac ccagaccacc tccagcctga gcgccagcct gggcgaccgg 120

gtgaccatca gctgccgggc cagccaggac atcagcaagt acctgaactg gtatcagcag 180

aagcccgacg gcaccgtcaa gctgctgatc taccacacca gccggctgca cagcggcgtg 240

cccagccggt ttagcggcag cggctccggc accgactaca gcctgaccat ctccaacctg 300

gaacaggaag atatcgccac ctacttttgc cagcagggca acacactgcc ctacaccttt 360

ggcggcggaa caaagctgga aatcaccggc agcacctccg gcagcggcaa gcctggcagc 420

ggcgagggca gcaccaaggg cgaggtgaag ctgcaggaaa gcggccctgg cctggtggcc 480

cccagccaga gcctgagcgt gacctgcacc gtgagcggcg tgagcctgcc cgactacggc 540

gtgagctgga tccggcagcc ccccaggaag ggcctggaat ggctgggcgt gatctggggc 600

agcgagacca cctactacaa cagcgccctg aagagccggc tgaccatcat caaggacaac 660

agcaagagcc aggtgttcct gaagatgaac agcctgcaga ccgacgacac cgccatctac 720

tactgcgcca agcactacta ctacggcggc agctacgcca tggactactg gggccagggc 780

accagcgtga ccgtgagcag cgaatctaag tacggaccgc cctgcccccc ttgccctatg 840

ttctgggtgc tggtggtggt cggaggcgtg ctggcctgct acagcctgct ggtcaccgtg 900

gccttcatca tcttttgggt gaaacggggc agaaagaaac tcctgtatat attcaaacaa 960

ccatttatga gaccagtaca aactactcaa gaggaagatg gctgtagctg ccgatttcca 1020

gaagaagaag aaggaggatg tgaactgcgg gtgaagttca gcagaagcgc cgacgcccct 1080

gcctaccagc agggccagaa tcagctgtac aacgagctga acctgggcag aagggaagag 1140

tacgacgtcc tggataagcg gagaggccgg gaccctgaga tgggcggcaa gcctcggcgg 1200

aagaaccccc aggaaggcct gtataacgaa ctgcagaaag acaagatggc cgaggcctac 1260

agcgagatcg gcatgaaggg cgagcggagg cggggcaagg gccacgacgg cctgtatcag 1320

ggcctgtcca ccgccaccaa ggatacctac gacgccctgc acatgcaggc cctgccccca 1380

agg 1383

<210> 1134
<211> 461
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1134
Met Leu Leu Leu Val Thr Ser Leu Leu Leu Cys Glu Leu Pro His Pro
1 5 10 15

Ala Phe Leu Leu Ile Pro Asp Ile Gln Met Thr Gln Thr Thr Ser Ser
20 25 30

Leu Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser
35 40 45

Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly
50 55 60

Thr Val Lys Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Val
65 70 75 80

Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr
85 90 95

Ile Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln
100 105 110

```
Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile
        115                 120                 125

Thr Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser
    130                 135                 140

Thr Lys Gly Glu Val Lys Leu Gln Glu Ser Gly Pro Gly Leu Val Ala
145                 150                 155                 160

Pro Ser Gln Ser Leu Ser Val Thr Cys Thr Val Ser Gly Val Ser Leu
                165                 170                 175

Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu
            180                 185                 190

Glu Trp Leu Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser
        195                 200                 205

Ala Leu Lys Ser Arg Leu Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln
    210                 215                 220

Val Phe Leu Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr
225                 230                 235                 240

Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr
                245                 250                 255

Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Glu Ser Lys Tyr Gly
            260                 265                 270

Pro Pro Cys Pro Pro Cys Pro Met Phe Trp Val Leu Val Val Val Gly
        275                 280                 285

Gly Val Leu Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile
    290                 295                 300

Phe Trp Val Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln
305                 310                 315                 320
```

```
Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser
                325                 330                 335

Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys
            340                 345                 350

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
        355                 360                 365

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
    370                 375                 380

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
385                 390                 395                 400

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
                405                 410                 415

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
            420                 425                 430

Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp
        435                 440                 445

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
    450                 455                 460
```

<210> 1135
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 1135
atgcttctcc tggtgacaag ccttctgctc tgtgagttac cacacccagc attcctcctg 60

atcccagaca tccagatgac acagactaca tcctccctgt ctgcctctct gggagacaga 120

gtcaccatca gttgcagggc aagtcaggac attagtaaat atttaaattg gtatcagcag 180

aaaccagatg gaactgttaa actcctgatc taccatacat caagattaca ctcaggagtc 240

ccatcaaggt tcagtggcag tgggtctgga acagattatt ctctcaccat tagcaacctg 300

gagcaagaag atattgccac ttacttttgc caacagggta atacgcttcc gtacacgttc 360

ggaggggga ctaagttgga aataacaggc tccacctctg gatccggcaa gcccggatct 420

ggcgagggat ccaccaaggg cgaggtgaaa ctgcaggagt caggacctgg cctggtggcg 480

ccctcacaga gcctgtccgt cacatgcact gtctcagggg tctcattacc cgactatggt 540

gtaagctgga ttcgccagcc tccacgaaag ggtctggagt ggctgggagt aatatggggt 600

agtgaaacca catactataa ttcagctctc aaatccagac tgaccatcat caaggacaac 660

tccaagagcc aagttttctt aaaaatgaac agtctgcaaa ctgatgacac agccatttac 720

tactgtgcca aacattatta ctacggtggt agctatgcta tggactactg gggtcaagga 780

acctcagtca ccgtctcctc agcggccgca attgaagtta tgtatcctcc tccttaccta 840

gacaatgaga agagcaatgg aaccattatc catgtgaaag ggaaacacct ttgtccaagt 900

cccctatttc ccggaccttc taagcccttt tgggtgctgg tggtggttgg gggagtcctg 960

gcttgctata gcttgctagt aacagtggcc tttattattt tctgggtgag gagtaagagg 1020

agcaggctcc tgcacagtga ctacatgaac atgactcccc gccgccccgg gcccacccgc 1080

aagcattacc agccctatgc cccaccacgc gacttcgcag cctatcgctc cagagtgaag 1140

ttcagcagga gcgcagacgc ccccgcgtac cagcagggcc agaaccagct ctataacgag 1200

ctcaatctag gacgaagaga ggagtacgat gttttggaca agagacgtgg ccgggaccct 1260

gagatggggg gaaagccgag aaggaagaac cctcaggaag gcctgtacaa tgaactgcag 1320

aaagataaga tggcggaggc ctacagtgag attgggatga aaggcgagcg ccggaggggc 1380

aaggggcacg atggccttta ccagggtctc agtacagcca ccaaggacac ctacgacgcc 1440

cttcacatgc aggccctgcc ccctcgc 1467

<210> 1136
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1136
Met Leu Leu Leu Val Thr Ser Leu Leu Leu Cys Glu Leu Pro His Pro

```
1               5                   10                  15

Ala Phe Leu Leu Ile Pro Asp Ile Gln Met Thr Gln Thr Thr Ser Ser
            20                  25                  30

Leu Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser
        35                  40                  45

Gln Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly
    50                  55                  60

Thr Val Lys Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Val
65                  70                  75                  80

Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr
                85                  90                  95

Ile Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln
            100                 105                 110

Gly Asn Thr Leu Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile
        115                 120                 125

Thr Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser
    130                 135                 140

Thr Lys Gly Glu Val Lys Leu Gln Glu Ser Gly Pro Gly Leu Val Ala
145                 150                 155                 160

Pro Ser Gln Ser Leu Ser Val Thr Cys Thr Val Ser Gly Val Ser Leu
                165                 170                 175

Pro Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu
            180                 185                 190

Glu Trp Leu Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser
        195                 200                 205

Ala Leu Lys Ser Arg Leu Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln
    210                 215                 220
```

```
Val Phe Leu Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr
225                 230                 235                 240

Tyr Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr
                245                 250                 255

Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ala Ala Ile Glu
            260                 265                 270

Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Lys Ser Asn Gly Thr
        275                 280                 285

Ile Ile His Val Lys Gly Lys His Leu Cys Pro Ser Pro Leu Phe Pro
    290                 295                 300

Gly Pro Ser Lys Pro Phe Trp Val Leu Val Val Val Gly Gly Val Leu
305                 310                 315                 320

Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val
                325                 330                 335

Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr
            340                 345                 350

Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro
        355                 360                 365

Pro Arg Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
```

```
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 1137
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1137

```
Asp Ile Val Leu Thr Gln Ser Pro Ala Ile Leu Ser Ala Ser Pro Gly
1               5                   10                  15

Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Asn Tyr Met
            20                  25                  30

Asp Trp Tyr Gln Lys Lys Pro Gly Ser Ser Pro Lys Pro Trp Ile Tyr
        35                  40                  45

Ala Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
    50                  55                  60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Glu Ala Glu
65                  70                  75                  80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Phe Asn Pro Pro Thr
                85                  90                  95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly Ser Thr Ser Gly Ser
            100                 105                 110

Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys Gly Glu Val Gln Leu
```

```
        115                 120                 125

Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala Ser Val Lys Met
    130                 135                 140

Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Asn Met His Trp
145                 150                 155                 160

Val Lys Gln Thr Pro Gly Gln Gly Leu Glu Trp Ile Gly Ala Ile Tyr
                165                 170                 175

Pro Gly Asn Gly Asp Thr Ser Tyr Asn Gln Lys Phe Lys Gly Lys Ala
            180                 185                 190

Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser
        195                 200                 205

Ser Leu Thr Ser Glu Asp Ser Ala Asp Tyr Tyr Cys Ala Arg Ser Asn
    210                 215                 220

Tyr Tyr Gly Ser Ser Tyr Trp Phe Phe Asp Val Trp Gly Ala Gly Thr
225                 230                 235                 240

Thr Val Thr Val Ser Ser
                245
```

<210> 1138
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1138

```
Asp Ile Val Leu Thr Gln Ser Pro Ala Ile Leu Ser Ala Ser Pro Gly
1               5                   10                  15

Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Asn Tyr Met
            20                  25                  30

Asp Trp Tyr Gln Lys Lys Pro Gly Ser Ser Pro Lys Pro Trp Ile Tyr
```

```
        35                  40                  45

Ala Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
    50                  55                  60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Glu Ala Glu
65                  70                  75                  80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Phe Asn Pro Pro Thr
                85                  90                  95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100                 105
```

<210> 1139
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1139
Arg Ala Ser Ser Ser Val Asn Tyr Met Asp
1   5   10

<210> 1140
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1140
Ala Thr Ser Asn Leu Ala Ser
1   5

<210> 1141
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

peptide

<400> 1141
Gln Gln Trp Ser Phe Asn Pro Pro Thr
1 5

<210> 1142
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1142
Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Asn Met His Trp Val Lys Gln Thr Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Ala Ile Tyr Pro Gly Asn Gly Asp Thr Ser Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Asp Tyr Tyr Cys
85 90 95

Ala Arg Ser Asn Tyr Tyr Gly Ser Ser Tyr Trp Phe Phe Asp Val Trp
100 105 110

Gly Ala Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 1143
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1143
Ser Tyr Asn Met His
1 5

<210> 1144
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1144
Ala Ile Tyr Pro Gly Asn Gly Asp Thr Ser Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 1145
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1145
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
20 25 30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
50 55 60

Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn

65 70 75 80

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

Tyr Tyr Cys Ala Arg Glu Val Thr Gly Asp Leu Glu Asp Ala Phe Asp
100 105 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr
130 135 140

Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile
145 150 155 160

Thr Cys Arg Ala Ser Gln Thr Ile Trp Ser Tyr Leu Asn Trp Tyr Gln
165 170 175

Gln Arg Pro Gly Lys Ala Pro Asn Leu Leu Ile Tyr Ala Ala Ser Ser
180 185 190

Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Arg Gly Ser Gly Thr
195 200 205

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Phe Ala Thr
210 215 220

Tyr Tyr Cys Gln Gln Ser Tyr Ser Ile Pro Gln Thr Phe Gly Gln Gly
225 230 235 240

Thr Lys Leu Glu Ile Lys
245

<210> 1146
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

polypeptide

<400> 1146
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
20 25 30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
50 55 60

Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn
65 70 75 80

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

Tyr Tyr Cys Ala Arg Glu Val Thr Gly Asp Leu Glu Asp Ala Phe Asp
100 105 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 1147
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1147
Gly Asp Ser Val Ser Ser Asn Ser Ala Ala
1 5 10

<210> 1148
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1148
Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn
1 5

<210> 1149
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1149
Ala Arg Glu Val Thr Gly Asp Leu Glu Asp Ala Phe Asp Ile
1 5 10

<210> 1150
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1150
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 Thr Ile Trp Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Arg Pro Gly Lys Ala Pro Asn Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Arg Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Ile Pro Gln

85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 1151
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1151
Gln Thr Ile Trp Ser Tyr
1 5

<210> 1152
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1152
Ala Ala Ser
1

<210> 1153
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1153
Gln Gln Ser Tyr Ser Ile Pro Gln Thr
1 5

<210> 1154
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1154
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Met Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
20 25 30

Ser Val Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Thr Trp Tyr Asn Asp Tyr Ala
50 55 60

Val Ser Met Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Asn Lys Asn
65 70 75 80

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

Tyr Tyr Cys Ala Arg Glu Val Thr Gly Asp Leu Glu Asp Ala Phe Asp
100 105 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Ile
130 135 140

Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile
145 150 155 160

Thr Cys Arg Ala Ser Gln Thr Ile Trp Ser Tyr Leu Asn Trp Tyr Arg
165 170 175

Gln Arg Pro Gly Glu Ala Pro Asn Leu Leu Ile Tyr Ala Ala Ser Ser
180 185 190

Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Arg Gly Ser Gly Thr

195 200 205

Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Phe Ala Thr
210 215 220

Tyr Tyr Cys Gln Gln Ser Tyr Ser Ile Pro Gln Thr Phe Gly Gln Gly
225 230 235 240

Thr Lys Leu Glu Ile Lys
245

<210> 1155
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1155
Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Met Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
20 25 30

Ser Val Ala Trp Asn Trp Ile Arg Gln Ser Pro Ser Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Thr Trp Tyr Asn Asp Tyr Ala
50 55 60

Val Ser Met Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Asn Lys Asn
65 70 75 80

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

Tyr Tyr Cys Ala Arg Glu Val Thr Gly Asp Leu Glu Asp Ala Phe Asp
100 105 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser

115 120

<210> 1156
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1156
Gly Asp Ser Val Ser Ser Asn Ser Val Ala
1 5 10

<210> 1157
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1157
Thr Tyr Tyr Arg Ser Thr Trp Tyr Asn
1 5

<210> 1158
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1158
Ala Arg Glu Val Thr Gly Asp Leu Glu Asp Ala Phe Asp Ile
1 5 10

<210> 1159
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1159
Asp Ile Gln Met Ile 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 Thr Ile Trp Ser Tyr
            20   25   30

Leu Asn Trp Tyr Arg Gln Arg Pro Gly Glu Ala Pro Asn Leu Leu Ile
        35   40   45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Arg Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala
65   70   75   80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Ile Pro Gln
                85   90   95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 1160
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 1160
Gln Thr Ile Trp Ser Tyr
1   5

<210> 1161
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 1161
Ala Ala Ser

1

<210> 1162
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1162
Gln Gln Ser Tyr Ser Ile Pro Gln Thr
1 5

<210> 1163
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1163
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Met Ser Leu Gly
1 5 10 15

Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Ser Val Ile
20 25 30

Gly Ala His Leu Ile His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Glu Thr Gly Val Pro Ala
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asp
65 70 75 80

Pro Val Glu Glu Asp Asp Val Ala Ile Tyr Ser Cys Leu Gln Ser Arg
85 90 95

Ile Phe Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly
100 105 110

```
Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys
        115                 120                 125


Gly Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly
    130                 135                 140


Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp
145                 150                 155                 160


Tyr Ser Ile Asn Trp Val Lys Arg Ala Pro Gly Lys Gly Leu Lys Trp
                165                 170                 175


Met Gly Trp Ile Asn Thr Glu Thr Arg Glu Pro Ala Tyr Ala Tyr Asp
            180                 185                 190


Phe Arg Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala
        195                 200                 205


Tyr Leu Gln Ile Asn Asn Leu Lys Tyr Glu Asp Thr Ala Thr Tyr Phe
    210                 215                 220


Cys Ala Leu Asp Tyr Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr
225                 230                 235                 240


Ser Val Thr Val Ser Ser
                245


<210> 1164
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 1164
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Met Ser Leu Gly
1               5                   10                  15


Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Ser Val Ile
            20                  25                  30
```

Gly Ala His Leu Ile His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Glu Thr Gly Val Pro Ala
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asp
65 70 75 80

Pro Val Glu Glu Asp Asp Val Ala Ile Tyr Ser Cys Leu Gln Ser Arg
85 90 95

Ile Phe Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 1165
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1165
Arg Ala Ser Glu Ser Val Ser Val Ile Gly Ala His Leu Ile His
1 5 10 15

<210> 1166
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1166
Leu Ala Ser Asn Leu Glu Thr
1 5

<210> 1167
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1167
Leu Gln Ser Arg Ile Phe Pro Arg Thr
1 5

<210> 1168
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1168
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Ser Ile Asn Trp Val Lys Arg Ala Pro Gly Lys Gly Leu Lys Trp Met
35 40 45

Gly Trp Ile Asn Thr Glu Thr Arg Glu Pro Ala Tyr Ala Tyr Asp Phe
50 55 60

Arg 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 Tyr Glu Asp Thr Ala Thr Tyr Phe Cys
85 90 95

Ala Leu Asp Tyr Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
100 105 110

Val Thr Val Ser Ser
115

<210> 1169
<211> 5
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1169
Asp Tyr Ser Ile Asn
1 5

<210> 1170
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1170
Trp Ile Asn Thr Glu Thr Arg Glu Pro Ala Tyr Ala Tyr Asp Phe Arg
1 5 10 15

Gly

<210> 1171
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1171
Asp Tyr Ser Tyr Ala Met Asp Tyr
1 5

<210> 1172
<211> 246
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1172
Asp Ile Val Leu Thr Gln Ser Pro Pro Ser Leu Ala Met Ser Leu Gly

```
1               5                   10                  15

Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Thr Ile Leu
            20                  25                  30

Gly Ser His Leu Ile Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
        35                  40                  45

Thr Leu Leu Ile Gln Leu Ala Ser Asn Val Gln Thr Gly Val Pro Ala
    50                  55                  60

Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Asp
65                  70                  75                  80

Pro Val Glu Glu Asp Asp Val Ala Val Tyr Tyr Cys Leu Gln Ser Arg
                85                  90                  95

Thr Ile Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly
            100                 105                 110

Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys
        115                 120                 125

Gly Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly
    130                 135                 140

Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Arg His
145                 150                 155                 160

Tyr Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp
                165                 170                 175

Met Gly Arg Ile Asn Thr Glu Ser Gly Val Pro Ile Tyr Ala Asp Asp
            180                 185                 190

Phe Lys Gly Arg Phe Ala Phe Ser Val Glu Thr Ser Ala Ser Thr Ala
        195                 200                 205

Tyr Leu Val Ile Asn Asn Leu Lys Asp Glu Asp Thr Ala Ser Tyr Phe
    210                 215                 220
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Cys Ser Asn Asp Tyr Leu Tyr Ser Leu Asp Phe Trp Gly Gln Gly Thr
225 230 235 240

Ala Leu Thr Val Ser Ser
245

<210> 1173
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1173
Asp Ile Val Leu Thr Gln Ser Pro Pro Ser Leu Ala Met Ser Leu Gly
1 5 10 15

Lys Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Thr Ile Leu
20 25 30

Gly Ser His Leu Ile Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Thr Leu Leu Ile Gln Leu Ala Ser Asn Val Gln Thr Gly Val Pro Ala
50 55 60

Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Asp
65 70 75 80

Pro Val Glu Glu Asp Asp Val Ala Val Tyr Tyr Cys Leu Gln Ser Arg
85 90 95

Thr Ile Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 1174
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

peptide

<400> 1174
Arg Ala Ser Glu Ser Val Thr Ile Leu Gly Ser His Leu Ile Tyr
1 5 10 15

<210> 1175
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1175
Leu Ala Ser Asn Val Gln Thr
1 5

<210> 1176
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1176
Leu Gln Ser Arg Thr Ile Pro Arg Thr
1 5

<210> 1177
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1177
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Arg His Tyr
20 25 30

Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met

35 40 45

Gly Arg Ile Asn Thr Glu Ser Gly Val Pro Ile Tyr Ala Asp Asp Phe
50 55 60

Lys Gly Arg Phe Ala Phe Ser Val Glu Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Leu Val Ile Asn Asn Leu Lys Asp Glu Asp Thr Ala Ser Tyr Phe Cys
85 90 95

Ser Asn Asp Tyr Leu Tyr Ser Leu Asp Phe Trp Gly Gln Gly Thr Ala
100 105 110

Leu Thr Val Ser Ser
115

<210> 1178
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1178
His Tyr Ser Met Asn
1 5

<210> 1179
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1179
Arg Ile Asn Thr Glu Ser Gly Val Pro Ile Tyr Ala Asp Asp Phe Lys
1 5 10 15

Gly

<210> 1180
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1180
Asp Tyr Leu Tyr Ser Leu Asp Phe
1 5

<210> 1181
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1181
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ser Ile Ser Gly Ser Gly Asp Tyr Ile Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Ile Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Glu Gly Thr Gly Ala Asn Ser Ser Leu Ala Asp Tyr Arg Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser

115 120

<210> 1182
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1182
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 1183
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1183
Ile Ser Gly Ser Gly Asp Tyr Ile
1 5

<210> 1184
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 1184
Ala Lys Glu Gly Thr Gly Ala Asn Ser Ser Leu Ala Asp Tyr
1 5 10

<210> 1185

<400> 1185
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<210> 1186

<400> 1186

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<210> 1187

<400> 1187
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<210> 1188

<400> 1188
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<210> 1189

<400> 1189
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<210> 1190

<400> 1190
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<210> 1191

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<210> 1192

<400> 1192
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<210> 1195

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<210> 1196

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<210> 1197

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<210> 1198

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<210> 1199

<400> 1199
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<210> 1200

<400> 1200
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<210> 1201

<400> 1201
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<210> 1202

<400> 1202
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<210> 1203

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<210> 1204

<400> 1204

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<210> 1205

<400> 1205
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<210> 1206

<400> 1206
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<210> 1207

<400> 1207
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<210> 1208

<400> 1208
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<210> 1209

<400> 1209
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<210> 1210

<400> 1210
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<210> 1211

<400> 1211
000

<210> 1212

<400> 1212
000

<210> 1213
<211> 42
<212> PRT

<213> Homo sapiens

<400> 1213
Ala Ala Ala Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu
1   5   10   15

Lys Ser Asn Gly Thr Ile Ile His Val Lys Gly Lys His Leu Cys Pro
            20   25   30

Ser Pro Leu Phe Pro Gly Pro Ser Lys Pro
        35   40

<210> 1214
<211> 28
<212> PRT
<213> Homo sapiens

<400> 1214
Met Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser
1   5   10   15

Leu Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val
            20   25

<210> 1215
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polypeptide

<400> 1215
Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Lys Gln Gly
1   5   10   15

Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr
            20   25   30

Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
        35   40   45

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
    50   55   60

Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
65 70 75 80

Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala
85 90 95

Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
100 105 110

<210> 1216
<211> 1467
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 1216
atggccttac cagtgaccgc cttgctcctg ccgctggcct tgctgctcca cgccgccagg 60

ccggacatcc agatgacaca gactacatcc tccctgtctg cctctctggg agacagagtc 120

accatcagtt gcagggcaag tcaggacatt agtaaatatt taaattggta tcagcagaaa 180

ccagatggaa ctgttaaact cctgatctac catacatcaa gattacactc aggagtccca 240

tcaaggttca gtggcagtgg gtctggaaca gattattctc tcaccattag caacctggag 300

caagaagata ttgccactta cttttgccaa cagggtaata cgcttccgta cacgttcgga 360

gggggggacca agctggagat cacaggctcc acctctggat ccggcaagcc cggatctggc 420

gagggatcca ccaagggcga ggtgaaactg caggagtcag gacctggcct ggtggcgccc 480

tcacagagcc tgtccgtcac atgcactgtc tcaggggtct cattacccga ctatggtgta 540

agctggattc gccagcctcc acgaaagggt ctggagtggc tgggagtaat atggggtagt 600

gaaaccacat actataattc agctctcaaa tccagactga ccatcatcaa ggacaactcc 660

aagagccaag ttttcttaaa aatgaacagt ctgcaaactg atgacacagc catttactac 720

tgtgccaaac attattacta cggtggtagc tatgctatgg actactgggg ccaaggaacc 780

tcagtcaccg tctcctcaac cacgacgcca gcgccgcgac caccaacacc ggcgcccacc 840

atcgcgtcgc agcccctgtc cctgcgccca gaggcgtgcc ggccagcggc gggggcgca 900

gtgcacacga gggggctgga cttcgcctgt gatatctaca tctgggcgcc cttggccggg 960

acttgtgggg tccttctcct gtcactggtt atcacccttt actgcaaacg gggcagaaag 1020

aaactcctgt atatattcaa acaaccattt atgagaccag tacaaactac tcaagaggaa 1080

gatggctgta gctgccgatt tccagaagaa gaagaaggag gatgtgaact gagagtgaag 1140

ttcagcagga gcgcagacgc ccccgcgtac cagcagggcc agaaccagct ctataacgag 1200

ctcaatctag gacgaagaga ggagtacgat gttttggaca agagacgtgg ccgggaccct 1260

gagatggggg gaaagccgag aaggaagaac cctcaggaag gcctgtacaa tgaactgcag 1320

aaagataaga tggcggaggc ctacagtgag attgggatga aaggcgagcg ccggaggggc 1380

aaggggcacg atggccttta ccagggtctc agtacagcca ccaaggacac ctacgacgcc 1440

cttcacatgc aggccctgcc ccctcgc 1467

<210> 1217
<211> 489
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1217
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu
20 25 30

Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln
35 40 45

Asp Ile Ser Lys Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr
50 55 60

Val Lys Leu Leu Ile Tyr His Thr Ser Arg Leu His Ser Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile
85 90 95

```
Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly
            100                 105                 110

Asn Thr Leu Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr
        115                 120                 125

Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr
    130                 135                 140

Lys Gly Glu Val Lys Leu Gln Glu Ser Gly Pro Gly Leu Val Ala Pro
145                 150                 155                 160

Ser Gln Ser Leu Ser Val Thr Cys Thr Val Ser Gly Val Ser Leu Pro
                165                 170                 175

Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu Glu
            180                 185                 190

Trp Leu Gly Val Ile Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ala
        195                 200                 205

Leu Lys Ser Arg Leu Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln Val
    210                 215                 220

Phe Leu Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr
225                 230                 235                 240

Cys Ala Lys His Tyr Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp
                245                 250                 255

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro
            260                 265                 270

Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu
        275                 280                 285

Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg
    290                 295                 300

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
305                 310                 315                 320
```

```
Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys
                325                 330                 335

Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg
            340                 345                 350

Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro
        355                 360                 365

Glu Glu Glu Glu Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser
    370                 375                 380

Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu
385                 390                 395                 400

Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg
                405                 410                 415

Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln
            420                 425                 430

Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr
        435                 440                 445

Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp
    450                 455                 460

Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala
465                 470                 475                 480

Leu His Met Gln Ala Leu Pro Pro Arg
                485
```

<210> 1218
<211> 243
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1218
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 Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Lys Tyr Asp Leu Leu Thr
85 90 95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly Ser Thr Ser Gly Ser
100 105 110

Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys Gly Gln Leu Gln Leu
115 120 125

Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu
130 135 140

Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser Ser Tyr Tyr Trp
145 150 155 160

Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Ser
165 170 175

Ile Ser Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser Arg
180 185 190

Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys Leu
195 200 205

```
Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp
    210                 215                 220

Arg Gly Asp Thr Ile Leu Asp Val Trp Gly Gln Gly Thr Met Val Thr
225                 230                 235                 240

Val Ser Ser
```

<210> 1219
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 1219

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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 Ser Ile Ser Ser Tyr
            20                  25                  30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35                  40                  45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Lys Tyr Asp Leu Leu Thr
                85                  90                  95

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 1220
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1220
Gln Ser Ile Ser Ser Tyr
1 5

<210> 1221
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1221
Ala Ala Ser
1

<210> 1222
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1222
Gln Gln Lys Tyr Asp Leu Leu Thr
1 5

<210> 1223
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1223
Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

```
Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
        35                  40                  45


Trp Ile Gly Ser Ile Ser Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
    50                  55                  60


Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65                  70                  75                  80


Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85                  90                  95


Cys Ala Arg Asp Arg Gly Asp Thr Ile Leu Asp Val Trp Gly Gln Gly
            100                 105                 110


Thr Met Val Thr Val Ser Ser
        115


<210> 1224
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 1224
Gly Gly Ser Ile Ser Ser Ser Ser Tyr Tyr
1               5                   10


<210> 1225
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 1225
Ile Ser Tyr Ser Gly Ser Thr
1               5
```

<210> 1226
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 1226
Ala Arg Asp Arg Gly Asp Thr Ile Leu Asp Val
1 5 10

<210> 1227
<211> 1503
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 1227
atggccttac cagtgaccgc cttgctcctg ccgctggcct tgctgctcca cgccgccagg 60

ccggacatcc agatgaccca gtctccatcc tccctgtctg catctgtagg agacagagtc 120

accatcactt gccgggcaag tcagagcatt agcagctatt taaattggta tcagcagaaa 180

ccagggaaag cccctaagct cctgatctat gctgcatcca gtttgcaaag tggggtccca 240

tcaaggttca gtggcagtgg atctgggaca gatttcactc tcaccatcag cagtctgcaa 300

cctgaagatt ttgcaactta ctactgtcag caaaaatacg acctcctcac ttttggcgga 360

gggaccaagg ttgagatcaa aggcagcacc agcggctccg gcaagcctgg ctctggcgag 420

ggcagcacaa agggacagct gcagctgcag gagtcgggcc caggactggt gaagccttcg 480

gagaccctgt ccctcacctg cactgtctct ggtggctcca tcagcagtag tagttactac 540

tggggctgga tccgccagcc cccagggaag gggctggagt ggattgggag tatctcctat 600

agtgggagca cctactacaa cccgtccctc aagagtcgag tcaccatatc cgtagacacg 660

tccaagaacc agttctccct gaagctgagt tctgtgaccg ccgcagacac ggcggtgtac 720

tactgcgcca gagatcgtgg agacaccata ctagacgtat ggggtcaggg tacaatggtc 780

accgtcagct cattcgtgcc cgtgttcctg cccgccaaac ctaccaccac ccctgcccct 840

agacctccca ccccagcccc aacaatcgcc agccagcctc tgtctctgcg gcccgaagcc 900

tgtagacctg ctgccggcgg agccgtgcac accagaggcc tggacttcgc ctgcgacatc 960

tacatctggg cccctctggc cggcacctgt ggcgtgctgc tgctgagcct ggtgatcacc 1020

ctgtactgca accaccggaa caaacggggc agaaagaaac tcctgtatat attcaaacaa 1080

ccatttatga gaccagtaca aactactcaa gaggaagatg gctgtagctg ccgatttcca 1140

gaagaagaag aaggaggatg tgaactgaga gtgaagttca gcagatccgc cgacgcccct 1200

gcctaccagc agggacagaa ccagctgtac aacgagctga acctgggcag acgggaagag 1260

tacgacgtgc tggacaagcg gagaggccgg gaccccgaga tgggcggaaa gcccagacgg 1320

aagaaccccc aggaaggcct gtataacgaa ctgcagaaag acaagatggc cgaggcctac 1380

agcgagatcg gcatgaaggg cgagcggagg cgcggcaagg gccacgatgg cctgtaccag 1440

ggcctgagca ccgccaccaa ggacacctac gacgccctgc acatgcaggc cctgcccccc 1500

aga 1503

<210> 1228
<211> 501
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 1228
Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1 5 10 15

His Ala Ala Arg Pro Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu
20 25 30

Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln
35 40 45

Ser Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala
50 55 60

Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro
65 70 75 80

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile

```
                85                  90                  95

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Lys
            100                 105                 110

Tyr Asp Leu Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Gly
        115                 120                 125

Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys
    130                 135                 140

Gly Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser
145                 150                 155                 160

Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser
                165                 170                 175

Ser Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu
            180                 185                 190

Glu Trp Ile Gly Ser Ile Ser Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro
        195                 200                 205

Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln
    210                 215                 220

Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr
225                 230                 235                 240

Tyr Cys Ala Arg Asp Arg Gly Asp Thr Ile Leu Asp Val Trp Gly Gln
                245                 250                 255

Gly Thr Met Val Thr Val Ser Ser Phe Val Pro Val Phe Leu Pro Ala
            260                 265                 270

Lys Pro Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr
        275                 280                 285

Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala
    290                 295                 300
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Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile
305                 310                 315                 320

Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser
                325                 330                 335

Leu Val Ile Thr Leu Tyr Cys Asn His Arg Asn Lys Arg Gly Arg Lys
            340                 345                 350

Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr
        355                 360                 365

Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu
    370                 375                 380

Gly Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro
385                 390                 395                 400

Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly
                405                 410                 415

Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro
            420                 425                 430

Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr
        435                 440                 445

Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly
    450                 455                 460

Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln
465                 470                 475                 480

Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln
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Ala Leu Pro Pro Arg
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<210> 1230

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<213> Artificial Sequence

<220>
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Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Lys Tyr
            20   25   30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
        35   40   45

Tyr His Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65   70   75   80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Tyr
                85   90   95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr Gly Ser Thr Ser Gly
            100   105   110

Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys Gly Glu Val Lys
        115   120   125

Leu Gln Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser Leu Ser

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    130                 135                 140

Val Thr Cys Thr Val Ser Gly Val Ser Leu Pro Asp Tyr Gly Val Ser
145                 150                 155                 160

Trp Ile Arg Gln Pro Pro Arg Lys Gly Leu Glu Trp Leu Gly Val Ile
                165                 170                 175

Trp Gly Ser Glu Thr Thr Tyr Tyr Asn Ser Ala Leu Lys Ser Arg Leu
            180                 185                 190

Thr Ile Ile Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys Met Asn
        195                 200                 205

Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Ala Lys His Tyr
    210                 215                 220

Tyr Tyr Gly Gly Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
225                 230                 235                 240

Val Thr Val Ser Ser Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro
                245                 250                 255

Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys
            260                 265                 270

Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala
        275                 280                 285

Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu
    290                 295                 300

Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Lys Arg Gly Arg Lys Lys
305                 310                 315                 320

Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr
                325                 330                 335

Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly
            340                 345                 350
```

```
Gly Cys Glu Leu Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
        355                 360                 365

Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
    370                 375                 380

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
385                 390                 395                 400

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
                405                 410                 415

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
            420                 425                 430

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
        435                 440                 445

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
    450                 455                 460

Leu Pro Pro Arg
465
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