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<151> 2013-04-24

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                85                  90                  95

Thr Trp Leu Gly Val Phe Tyr Cys Ala Lys Val Ala Ser Val Arg His
            100                 105                 110

Pro Leu Phe Ile Trp Leu Lys Met Arg Ile Ser Lys Leu Val Pro Trp
        115                 120                 125

Met Ile Leu Gly Ser Leu Leu Tyr Val Ser Met Ile Cys Val Phe His
    130                 135                 140

Ser Lys Tyr Ala Gly Phe Met Val Pro Tyr Phe Leu Arg Lys Phe Phe
145                 150                 155                 160

Ser Gln Asn Ala Thr Ile Gln Lys Glu Asp Thr Leu Ala Ile Gln Ile
                165                 170                 175

Phe Ser Phe Val Ala Glu Phe Ser Val Pro Leu Leu Ile Phe Leu Phe
            180                 185                 190

Ala Val Leu Leu Leu Ile Phe Ser Leu Gly Arg His Thr Arg Gln Met
        195                 200                 205

Arg Asn Thr Val Ala Gly Ser Arg Val Pro Gly Arg Gly Ala Pro Ile
    210                 215                 220

Ser Ala Leu Leu Ser Ile Leu Ser Phe Leu Ile Leu Tyr Phe Ser His
225                 230                 235                 240

Cys Met Ile Lys Val Phe Leu Ser Ser Leu Lys Phe His Ile Arg Arg
                245                 250                 255

Phe Ile Phe Leu Phe Phe Ile Leu Val Ile Gly Ile Tyr Pro Ser Gly
            260                 265                 270

His Ser Leu Ile Leu Ile Leu Gly Asn Pro Lys Leu Lys Gln Asn Ala
        275                 280                 285

Lys Lys Phe Leu Leu His Ser Lys Cys Cys Gln
    290                 295
```

<210> 29
<211> 316
<212> PRT
<213> Homo sapiens

<400> 29

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

Phe Thr Leu Gly Ile Leu Val Asn Cys Phe Ile Glu Leu Val Asn Gly
            20                  25                  30
```

Ser Ser Trp Phe Lys Thr Lys Arg Met Ser Leu Ser Asp Phe Ile Ile
35 40 45

Thr Thr Leu Ala Leu Leu Arg Ile Ile Leu Leu Cys Ile Ile Leu Thr
50 55 60

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

Ile Met Gln Ile Ile Asp Val Ser Trp Thr Phe Thr Asn His Leu Ser
85 90 95

Ile Trp Leu Ala Thr Cys Leu Gly Val Leu Tyr Cys Leu Lys Ile Ala
100 105 110

Ser Phe Ser His Pro Thr Phe Leu Trp Leu Lys Trp Arg Val Ser Arg
115 120 125

Val Met Val Trp Met Leu Leu Gly Ala Leu Leu Leu Ser Cys Gly Ser
130 135 140

Thr Ala Ser Leu Ile Asn Glu Phe Lys Leu Tyr Ser Val Phe Arg Gly
145 150 155 160

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

Glu Tyr Tyr Leu Ile His Val Leu Gly Thr Leu Trp Tyr Leu Pro Pro
180 185 190

Leu Ile Val Ser Leu Ala Ser Tyr Ser Leu Leu Ile Phe Ser Leu Gly
195 200 205

Arg His Thr Arg Gln Met Leu Gln Asn Gly Thr Ser Ser Arg Asp Pro
210 215 220

Thr Thr Glu Ala His Lys Arg Ala Ile Arg Ile Ile Leu Ser Phe Phe
225 230 235 240

Phe Leu Phe Leu Leu Tyr Phe Leu Ala Phe Leu Ile Ala Ser Phe Gly
245 250 255

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

Thr Met Phe Tyr Pro Ala Gly His Ser Phe Ile Leu Ile Leu Gly Asn
275 280 285

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

His Leu Lys Pro Gly Ser Lys Gly Pro Ile Phe Ser
305 310 315

<210> 30
<211> 299
<212> PRT
<213> Homo sapiens

<400> 30
Met Leu Arg Leu Phe Tyr Phe Ser Ala Ile Ile Ala Ser Val Ile Leu
1 5 10 15

Asn Phe Val Gly Ile Ile Met Asn Leu Phe Ile Thr Val Val Asn Cys
20 25 30

Lys Thr Trp Val Lys Ser His Arg Ile Ser Ser Ser Asp Arg Ile Leu
35 40 45

Phe Ser Leu Gly Ile Thr Arg Phe Leu Met Leu Gly Leu Phe Leu Val
50 55 60

Asn Thr Ile Tyr Phe Val Ser Ser Asn Thr Glu Arg Ser Val Tyr Leu
65 70 75 80

Ser Ala Phe Phe Val Leu Cys Phe Met Phe Leu Asp Ser Ser Ser Val
85 90 95

Trp Phe Val Thr Leu Leu Asn Ile Leu Tyr Cys Val Lys Ile Thr Asn
100 105 110

Phe Gln His Ser Val Phe Leu Leu Leu Lys Arg Asn Ile Ser Pro Lys
115 120 125

Ile Pro Arg Leu Leu Leu Ala Cys Val Leu Ile Ser Ala Phe Thr Thr
130 135 140

Cys Leu Tyr Ile Thr Leu Ser Gln Ala Ser Pro Phe Pro Glu Leu Val
145 150 155 160

Thr Thr Arg Asn Asn Thr Ser Phe Asn Ile Ser Glu Gly Ile Leu Ser
165 170 175

Leu Val Val Ser Leu Val Leu Ser Ser Ser Leu Gln Phe Ile Ile Asn
180 185 190

Val Thr Ser Ala Ser Leu Leu Ile His Ser Leu Arg Arg His Ile Gln
195 200 205

Lys Met Gln Lys Asn Ala Thr Gly Phe Trp Asn Pro Gln Thr Glu Ala
210 215 220

```
His Val Gly Ala Met Lys Leu Met Val Tyr Phe Leu Ile Leu Tyr Ile
225                 230                 235                 240

Pro Tyr Ser Val Ala Thr Leu Val Gln Tyr Leu Pro Phe Tyr Ala Gly
                245                 250                 255

Met Asp Met Gly Thr Lys Ser Ile Cys Leu Ile Phe Ala Thr Leu Tyr
            260                 265                 270

Ser Pro Gly His Ser Val Leu Ile Ile Ile Thr His Pro Lys Leu Lys
        275                 280                 285

Thr Thr Ala Lys Lys Ile Leu Cys Phe Lys Lys
    290                 295
```

<210> 31
<211> 299
<212> PRT
<213> Homo sapiens

<400> 31

```
Met Leu Ser Ala Gly Leu Gly Leu Leu Met Leu Val Ala Val Val Glu
1               5                   10                  15

Phe Leu Ile Gly Leu Ile Gly Asn Gly Ser Leu Val Val Trp Ser Phe
            20                  25                  30

Arg Glu Trp Ile Arg Lys Phe Asn Trp Ser Ser Tyr Asn Leu Ile Ile
        35                  40                  45

Leu Gly Leu Ala Gly Cys Arg Phe Leu Leu Gln Trp Leu Ile Ile Leu
    50                  55                  60

Asp Leu Ser Leu Phe Pro Leu Phe Gln Ser Ser Arg Trp Leu Arg Tyr
65                  70                  75                  80

Leu Ser Ile Phe Trp Val Leu Val Ser Gln Ala Ser Leu Trp Phe Ala
                85                  90                  95

Thr Phe Leu Ser Val Phe Tyr Cys Lys Lys Ile Thr Thr Phe Asp Arg
            100                 105                 110

Pro Ala Tyr Leu Trp Leu Lys Gln Arg Ala Tyr Asn Leu Ser Leu Trp
        115                 120                 125

Cys Leu Leu Gly Tyr Phe Ile Ile Asn Leu Leu Leu Thr Val Gln Ile
    130                 135                 140

Gly Leu Thr Phe Tyr His Pro Pro Gln Gly Asn Ser Ser Ile Arg Tyr
145                 150                 155                 160

Pro Phe Glu Ser Trp Gln Tyr Leu Tyr Ala Phe Gln Leu Asn Ser Gly
                165                 170                 175
```

Ser Tyr Leu Pro Leu Val Val Phe Leu Val Ser Ser Gly Met Leu Ile
180 185 190

Val Ser Leu Tyr Thr His His Lys Lys Met Lys Val His Ser Ala Gly
195 200 205

Arg Arg Asp Val Arg Ala Lys Ala His Ile Thr Ala Leu Lys Ser Leu
210 215 220

Gly Cys Phe Leu Leu Leu His Leu Val Tyr Ile Met Ala Ser Pro Phe
225 230 235 240

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

Trp Glu Thr Leu Met Ala Ala Tyr Pro Ser Leu His Ser Leu Ile Leu
260 265 270

Ile Met Gly Ile Pro Arg Val Lys Gln Thr Cys Gln Lys Ile Leu Trp
275 280 285

Lys Thr Val Cys Ala Arg Arg Cys Trp Gly Pro
290 295

<210> 32
<211> 318
<212> PRT
<213> Homo sapiens

<400> 32
Met Ala Asp Lys Val Gln Thr Thr Leu Leu Phe Leu Ala Val Gly Glu
1 5 10 15

Phe Ser Val Gly Ile Leu Gly Asn Ala Phe Ile Gly Leu Val Asn Cys
20 25 30

Met Asp Trp Val Lys Lys Arg Lys Ile Ala Ser Ile Asp Leu Ile Leu
35 40 45

Thr Ser Leu Ala Ile Ser Arg Ile Cys Leu Leu Cys Val Ile Leu Leu
50 55 60

Asp Cys Phe Ile Leu Val Leu Tyr Pro Asp Val Tyr Ala Thr Gly Lys
65 70 75 80

Glu Met Arg Ile Ile Asp Phe Phe Trp Thr Leu Thr Asn His Leu Ser
85 90 95

Ile Trp Phe Ala Thr Cys Leu Ser Ile Tyr Tyr Phe Phe Lys Ile Gly
100 105 110

```
Asn Phe Phe His Pro Leu Phe Leu Trp Met Lys Trp Arg Ile Asp Arg
        115                 120                 125

Val Ile Ser Trp Ile Leu Leu Gly Cys Val Val Leu Ser Val Phe Ile
    130                 135                 140

Ser Leu Pro Ala Thr Glu Asn Leu Asn Ala Asp Phe Arg Phe Cys Val
145                 150                 155                 160

Lys Ala Lys Arg Lys Thr Asn Leu Thr Trp Ser Cys Arg Val Asn Lys
                165                 170                 175

Thr Gln His Ala Ser Thr Lys Leu Phe Leu Asn Leu Ala Thr Leu Leu
            180                 185                 190

Pro Phe Cys Val Cys Leu Met Ser Phe Phe Leu Leu Ile Leu Ser Leu
        195                 200                 205

Arg Arg His Ile Arg Arg Met Gln Leu Ser Ala Thr Gly Cys Arg Asp
    210                 215                 220

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

Leu Leu Leu Phe Ile Ala Tyr Tyr Leu Ser Phe Leu Ile Ala Thr Ser
                245                 250                 255

Ser Tyr Phe Met Pro Glu Thr Glu Leu Ala Val Ile Phe Gly Glu Ser
            260                 265                 270

Ile Ala Leu Ile Tyr Pro Ser Ser His Ser Phe Ile Leu Ile Leu Gly
        275                 280                 285

Asn Asn Lys Leu Arg His Ala Ser Leu Lys Val Ile Trp Lys Val Met
    290                 295                 300

Ser Ile Leu Lys Gly Arg Lys Phe Gln Gln His Lys Gln Ile
305                 310                 315
```

<210> 33
<211> 309
<212> PRT
<213> Homo sapiens

<400> 33

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

Phe Ile Leu Gly Ile Leu Gly Asn Gly Tyr Ile Ala Leu Val Asn Trp
            20                  25                  30

Ile Asp Trp Ile Lys Lys Lys Lys Ile Ser Thr Val Asp Tyr Ile Leu
        35                  40                  45
```

```
Thr Asn Leu Val Ile Ala Arg Ile Cys Leu Ile Ser Val Met Val Val
    50                  55                  60

Asn Gly Ile Val Ile Val Leu Asn Pro Asp Val Tyr Thr Lys Asn Lys
65                  70                  75                  80

Gln Gln Ile Val Ile Phe Thr Phe Trp Thr Phe Ala Asn Tyr Leu Asn
                85                  90                  95

Met Trp Ile Thr Thr Cys Leu Asn Val Phe Tyr Phe Leu Lys Ile Ala
            100                 105                 110

Ser Ser Ser His Pro Leu Phe Leu Trp Leu Lys Trp Lys Ile Asp Met
        115                 120                 125

Val Val His Trp Ile Leu Leu Gly Cys Phe Ala Ile Ser Leu Leu Val
    130                 135                 140

Ser Leu Ile Ala Ala Ile Val Leu Ser Cys Asp Tyr Arg Phe His Ala
145                 150                 155                 160

Ile Ala Lys His Lys Arg Asn Ile Thr Glu Met Phe His Val Ser Lys
                165                 170                 175

Ile Pro Tyr Phe Glu Pro Leu Thr Leu Phe Asn Leu Phe Ala Ile Val
            180                 185                 190

Pro Phe Ile Val Ser Leu Ile Ser Phe Phe Leu Leu Val Arg Ser Leu
        195                 200                 205

Trp Arg His Thr Lys Gln Ile Lys Leu Tyr Ala Thr Gly Ser Arg Asp
    210                 215                 220

Pro Ser Thr Glu Val His Val Arg Ala Ile Lys Thr Met Thr Ser Phe
225                 230                 235                 240

Ile Phe Phe Phe Phe Leu Tyr Tyr Ile Ser Ser Ile Leu Met Thr Phe
                245                 250                 255

Ser Tyr Leu Met Thr Lys Tyr Lys Leu Ala Val Glu Phe Gly Glu Ile
            260                 265                 270

Ala Ala Ile Leu Tyr Pro Leu Gly His Ser Leu Ile Leu Ile Val Leu
        275                 280                 285

Asn Asn Lys Leu Arg Gln Thr Phe Val Arg Met Leu Thr Cys Arg Lys
    290                 295                 300

Ile Ala Cys Met Ile
305
```

<210> 34
<211> 312
<212> PRT
<213> Homo sapiens

<400> 34

```
Met Pro Ser Ala Ile Glu Ala Ile Tyr Ile Ile Leu Ile Ala Gly Glu
1               5                  10                  15

Leu Thr Ile Gly Ile Trp Gly Asn Gly Phe Ile Val Leu Val Asn Cys
            20                  25                  30

Ile Asp Trp Leu Lys Arg Arg Asp Ile Ser Leu Ile Asp Ile Ile Leu
        35                  40                  45

Ile Ser Leu Ala Ile Ser Arg Ile Cys Leu Leu Cys Val Ile Ser Leu
    50                  55                  60

Asp Gly Phe Phe Met Leu Leu Phe Pro Gly Thr Tyr Gly Asn Ser Val
65                  70                  75                  80

Leu Val Ser Ile Val Asn Val Val Trp Thr Phe Ala Asn Asn Ser Ser
                85                  90                  95

Leu Trp Phe Thr Ser Cys Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala
            100                 105                 110

Asn Ile Ser His Pro Phe Phe Phe Trp Leu Lys Leu Lys Ile Asn Lys
        115                 120                 125

Val Met Leu Ala Ile Leu Leu Gly Ser Phe Leu Ile Ser Leu Ile Ile
    130                 135                 140

Ser Val Pro Lys Asn Asp Asp Met Trp Tyr His Leu Phe Lys Val Ser
145                 150                 155                 160

His Glu Glu Asn Ile Thr Trp Lys Phe Lys Val Ser Lys Ile Pro Gly
                165                 170                 175

Thr Phe Lys Gln Leu Thr Leu Asn Leu Gly Val Met Val Pro Phe Ile
            180                 185                 190

Leu Cys Leu Ile Ser Phe Phe Leu Leu Leu Phe Ser Leu Val Arg His
        195                 200                 205

Thr Lys Gln Ile Arg Leu His Ala Thr Gly Phe Arg Asp Pro Ser Thr
    210                 215                 220

Glu Ala His Met Arg Ala Ile Lys Ala Val Ile Ile Phe Leu Leu Leu
225                 230                 235                 240
```

Leu Ile Val Tyr Tyr Pro Val Phe Leu Val Met Thr Ser Ser Ala Leu
245 250 255

Ile Pro Gln Gly Lys Leu Val Leu Met Ile Gly Asp Ile Val Thr Val
260 265 270

Ile Phe Pro Ser Ser His Ser Phe Ile Leu Ile Met Gly Asn Ser Lys
275 280 285

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

Arg Arg Arg Lys Pro Phe Val Pro
305 310

<210> 35
<211> 307
<212> PRT
<213> Homo sapiens

<400> 35
Met Leu Arg Val Val Glu Gly Ile Phe Ile Phe Val Val Val Ser Glu
1 5 10 15

Ser Val Phe Gly Val Leu Gly Asn Gly Phe Ile Gly Leu Val Asn Cys
20 25 30

Ile Asp Cys Ala Lys Asn Lys Leu Ser Thr Ile Gly Phe Ile Leu Thr
35 40 45

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

Gly Phe Ile Gln Ile Phe Ser Pro Asn Ile Tyr Ala Ser Gly Asn Leu
65 70 75 80

Ile Glu Tyr Ile Ser Tyr Phe Trp Val Ile Gly Asn Gln Ser Ser Met
85 90 95

Trp Phe Ala Thr Ser Leu Ser Ile Phe Tyr Phe Leu Lys Ile Ala Asn
100 105 110

Phe Ser Asn Tyr Ile Phe Leu Trp Leu Lys Ser Arg Thr Asn Met Val
115 120 125

Leu Pro Phe Met Ile Val Phe Leu Leu Ile Ser Ser Leu Leu Asn Phe
130 135 140

Ala Tyr Ile Ala Lys Ile Leu Asn Asp Tyr Lys Met Lys Asn Asp Thr
145 150 155 160

Val Trp Asp Leu Asn Met Tyr Lys Ser Glu Tyr Phe Ile Lys Gln Ile
165 170 175

Leu Leu Asn Leu Gly Val Ile Phe Phe Phe Thr Leu Ser Leu Ile Thr
180 185 190

Cys Ile Phe Leu Ile Ile Ser Leu Trp Arg His Asn Arg Gln Met Gln
195 200 205

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

Ala Met Lys Val Leu Ile Ser Phe Ile Ile Leu Phe Ile Leu Tyr Phe
225 230 235 240

Ile Gly Met Ala Ile Glu Ile Ser Cys Phe Thr Val Arg Glu Asn Lys
245 250 255

Leu Leu Leu Met Phe Gly Met Thr Thr Thr Ala Ile Tyr Pro Trp Gly
260 265 270

His Ser Phe Ile Leu Ile Leu Gly Asn Ser Lys Leu Lys Gln Ala Ser
275 280 285

Leu Arg Val Leu Gln Gln Leu Lys Cys Cys Glu Lys Arg Lys Asn Leu
290 295 300

Arg Val Thr
305

<210> 36
<211> 303
<212> PRT
<213> Homo sapiens

<400> 36
Met Glu Ser Ala Leu Pro Ser Ile Phe Thr Leu Val Ile Ile Ala Glu
1 5 10 15

Phe Ile Ile Gly Asn Leu Ser Asn Gly Phe Ile Val Leu Ile Asn Cys
20 25 30

Ile Asp Trp Val Ser Lys Arg Glu Leu Ser Ser Val Asp Lys Leu Leu
35 40 45

Ile Ile Leu Ala Ile Ser Arg Ile Gly Leu Ile Trp Glu Ile Leu Val
50 55 60

Ser Trp Phe Leu Ala Leu His Tyr Leu Ala Ile Phe Val Ser Gly Thr
65 70 75 80

Gly Leu Arg Ile Met Ile Phe Ser Trp Ile Val Ser Asn His Phe Asn
85 90 95

Leu Trp Leu Ala Thr Ile Phe Ser Ile Phe Tyr Leu Leu Lys Ile Ala
100 105 110

Ser Phe Ser Ser Pro Ala Phe Leu Tyr Leu Lys Trp Arg Val Asn Lys
115 120 125

Val Ile Leu Met Ile Leu Leu Gly Thr Leu Val Phe Leu Phe Leu Asn
130 135 140

Leu Ile Gln Ile Asn Met His Ile Lys Asp Trp Leu Asp Arg Tyr Glu
145 150 155 160

Arg Asn Thr Thr Trp Asn Phe Ser Met Ser Asp Phe Glu Thr Phe Ser
165 170 175

Val Ser Val Lys Phe Thr Met Thr Met Phe Ser Leu Thr Pro Phe Thr
180 185 190

Val Ala Phe Ile Ser Phe Leu Leu Leu Ile Phe Ser Leu Gln Lys His
195 200 205

Leu Gln Lys Met Gln Leu Asn Tyr Lys Gly His Arg Asp Pro Arg Thr
210 215 220

Lys Val His Thr Asn Ala Leu Lys Ile Val Ile Ser Phe Leu Leu Phe
225 230 235 240

Tyr Ala Ser Phe Phe Leu Cys Val Leu Ile Ser Trp Ile Ser Glu Leu
245 250 255

Tyr Gln Asn Thr Val Ile Tyr Met Leu Cys Glu Thr Ile Gly Val Phe
260 265 270

Ser Pro Ser Ser His Ser Phe Leu Leu Ile Leu Gly Asn Ala Lys Leu
275 280 285

Arg Gln Ala Phe Leu Leu Val Ala Ala Lys Val Trp Ala Lys Arg
290 295 300

<210> 37
<211> 317
<212> PRT
<213> Homo sapiens

<400> 37
Met Gly Gly Val Ile Lys Ser Ile Phe Thr Phe Val Leu Ile Val Glu
1 5 10 15

Phe Ile Ile Gly Asn Leu Gly Asn Ser Phe Ile Ala Leu Val Asn Cys
20 25 30

Ile Asp Trp Val Lys Gly Arg Lys Ile Ser Ser Val Asp Arg Ile Leu
35 40 45

```
Thr Ala Leu Ala Ile Ser Arg Ile Ser Leu Val Trp Leu Ile Phe Gly
    50                  55                  60

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

Met Phe Arg Met Leu Thr Asn Ile Trp Thr Val Ile Asn His Phe Ser
                85                  90                  95

Val Trp Leu Ala Thr Gly Leu Gly Thr Phe Tyr Phe Leu Lys Ile Ala
            100                 105                 110

Asn Phe Ser Asn Ser Ile Phe Leu Tyr Leu Lys Trp Arg Val Lys Lys
        115                 120                 125

Val Val Leu Val Leu Leu Leu Val Thr Ser Val Phe Leu Phe Leu Asn
    130                 135                 140

Ile Ala Leu Ile Asn Ile His Ile Asn Ala Ser Ile Asn Gly Tyr Arg
145                 150                 155                 160

Arg Asn Lys Thr Cys Ser Ser Asp Ser Ser Asn Phe Thr Arg Phe Ser
                165                 170                 175

Ser Leu Ile Val Leu Thr Ser Thr Val Phe Ile Phe Ile Pro Phe Thr
            180                 185                 190

Leu Ser Leu Ala Met Phe Leu Leu Leu Ile Phe Ser Met Trp Lys His
        195                 200                 205

Arg Lys Lys Met Gln His Thr Val Lys Ile Ser Gly Asp Ala Ser Thr
    210                 215                 220

Lys Ala His Arg Gly Val Lys Ser Val Ile Thr Phe Phe Leu Leu Tyr
225                 230                 235                 240

Ala Ile Phe Ser Leu Ser Phe Phe Ile Ser Val Trp Thr Ser Glu Arg
                245                 250                 255

Leu Glu Glu Asn Leu Ile Ile Leu Ser Gln Val Met Gly Met Ala Tyr
            260                 265                 270

Pro Ser Cys His Ser Cys Val Leu Ile Leu Gly Asn Lys Lys Leu Arg
        275                 280                 285

Gln Ala Ser Leu Ser Val Leu Leu Trp Leu Arg Tyr Met Phe Lys Asp
    290                 295                 300

Gly Glu Pro Ser Gly His Lys Glu Phe Arg Glu Ser Ser
305                 310                 315
```

<210> 38
<211> 291
<212> PRT
<213> Homo sapiens

<400> 38

```
Met Ile Pro Ile Gln Leu Thr Val Phe Phe Met Ile Ile Tyr Val Leu
1               5                  10                  15

Glu Ser Leu Thr Ile Ile Val Gln Ser Ser Leu Ile Val Ala Val Leu
            20                  25                  30

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

Leu Ile Ser Leu Gly Ile Ser Arg Phe Cys Leu Gln Trp Ala Ser Met
    50                  55                  60

Leu Asn Asn Phe Cys Ser Tyr Phe Asn Leu Asn Tyr Val Leu Cys Asn
65                  70                  75                  80

Leu Thr Ile Thr Trp Glu Phe Phe Asn Ile Leu Thr Phe Trp Leu Asn
                85                  90                  95

Ser Leu Leu Thr Val Phe Tyr Cys Ile Lys Val Ser Ser Phe Thr His
            100                 105                 110

His Ile Phe Leu Trp Leu Arg Trp Arg Ile Leu Arg Leu Phe Pro Trp
        115                 120                 125

Ile Leu Leu Gly Ser Leu Met Ile Thr Cys Val Thr Ile Ile Pro Ser
    130                 135                 140

Ala Ile Gly Asn Tyr Ile Gln Ile Gln Leu Leu Thr Met Glu His Leu
145                 150                 155                 160

Pro Arg Asn Ser Thr Val Thr Asp Lys Leu Glu Asn Phe His Gln Tyr
                165                 170                 175

Gln Phe Gln Ala His Thr Val Ala Leu Val Ile Pro Phe Ile Leu Phe
            180                 185                 190

Leu Ala Ser Thr Ile Phe Leu Met Ala Ser Leu Thr Lys Gln Ile Gln
        195                 200                 205

His His Ser Thr Gly His Cys Asn Pro Ser Met Lys Ala Arg Phe Thr
    210                 215                 220

Ala Leu Arg Ser Leu Ala Val Leu Phe Ile Val Phe Thr Ser Tyr Phe
225                 230                 235                 240
```

```
Leu Thr Ile Leu Ile Thr Ile Ile Gly Thr Leu Phe Asp Lys Arg Cys
                245                 250                 255

Trp Leu Trp Val Trp Glu Ala Phe Val Tyr Ala Phe Ile Leu Met His
            260                 265                 270

Ser Thr Ser Leu Met Leu Ser Ser Pro Thr Leu Lys Arg Ile Leu Lys
        275                 280                 285

Gly Lys Cys
    290
```

<210> 39
<211> 333
<212> PRT
<213> Homo sapiens

<400> 39

```
Met Leu Thr Leu Thr Arg Ile Arg Thr Val Ser Tyr Glu Val Arg Ser
1               5                   10                  15

Thr Phe Leu Phe Ile Ser Val Leu Glu Phe Ala Val Gly Phe Leu Thr
            20                  25                  30

Asn Ala Phe Val Phe Leu Val Asn Phe Trp Asp Val Val Lys Arg Gln
        35                  40                  45

Ala Leu Ser Asn Ser Asp Cys Val Leu Leu Cys Leu Ser Ile Ser Arg
    50                  55                  60

Leu Phe Leu His Gly Leu Leu Phe Leu Ser Ala Ile Gln Leu Thr His
65                  70                  75                  80

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

Met Leu Trp Met Ile Ala Asn Gln Ala Asn Leu Trp Leu Ala Ala Cys
            100                 105                 110

Leu Ser Leu Leu Tyr Cys Ser Lys Leu Ile Arg Phe Ser His Thr Phe
        115                 120                 125

Leu Ile Cys Leu Ala Ser Trp Val Ser Arg Lys Ile Ser Gln Met Leu
    130                 135                 140

Leu Gly Ile Ile Leu Cys Ser Cys Ile Cys Thr Val Leu Cys Val Trp
145                 150                 155                 160

Cys Phe Phe Ser Arg Pro His Phe Thr Val Thr Thr Val Leu Phe Met
                165                 170                 175

Asn Asn Asn Thr Arg Leu Asn Trp Gln Ile Lys Asp Leu Asn Leu Phe
            180                 185                 190
```

Tyr Ser Phe Leu Phe Cys Tyr Leu Trp Ser Val Pro Pro Phe Leu Leu
195 200 205

Phe Leu Val Ser Ser Gly Met Leu Thr Val Ser Leu Gly Arg His Met
210 215 220

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

Ala His Ile Lys Ala Leu Lys Ser Leu Val Ser Phe Phe Cys Phe Phe
245 250 255

Val Ile Ser Ser Cys Ala Ala Phe Ile Ser Val Pro Leu Leu Ile Leu
260 265 270

Trp Arg Asp Lys Ile Gly Val Met Val Cys Val Gly Ile Met Ala Ala
275 280 285

Cys Pro Ser Gly His Ala Ala Ile Leu Ile Ser Gly Asn Ala Lys Leu
290 295 300

Arg Arg Ala Val Met Thr Ile Leu Leu Trp Ala Gln Ser Ser Leu Lys
305 310 315 320

Val Arg Ala Asp His Lys Ala Asp Ser Arg Thr Leu Cys
325 330

<210> 40
<211> 338
<212> PRT
<213> Homo sapiens

<400> 40
Met Leu Gly Arg Cys Phe Pro Pro Asp Thr Lys Glu Lys Gln Gln Leu
1 5 10 15

Arg Met Thr Lys Leu Cys Asp Pro Ala Glu Ser Glu Leu Ser Pro Phe
20 25 30

Leu Ile Thr Leu Ile Leu Ala Val Leu Leu Ala Glu Tyr Leu Ile Gly
35 40 45

Ile Ile Ala Asn Gly Phe Ile Met Ala Ile His Ala Ala Glu Trp Val
50 55 60

Gln Asn Lys Ala Val Ser Thr Ser Gly Arg Ile Leu Val Phe Leu Ser
65 70 75 80

Val Ser Arg Ile Ala Leu Gln Ser Leu Met Met Leu Glu Ile Thr Ile
85 90 95

Ser Ser Thr Ser Leu Ser Phe Tyr Ser Glu Asp Ala Val Tyr Tyr Ala
100 105 110

Phe Lys Ile Ser Phe Ile Phe Leu Asn Phe Cys Ser Leu Trp Phe Ala
115 120 125

Ala Trp Leu Ser Phe Phe Tyr Phe Val Lys Ile Ala Asn Phe Ser Tyr
130 135 140

Pro Leu Phe Leu Lys Leu Arg Trp Arg Ile Thr Gly Leu Ile Pro Trp
145 150 155 160

Leu Leu Trp Leu Ser Val Phe Ile Ser Phe Ser His Ser Met Phe Cys
165 170 175

Ile Asn Ile Cys Thr Val Tyr Cys Asn Asn Ser Phe Pro Ile His Ser
180 185 190

Ser Asn Ser Thr Lys Lys Thr Tyr Leu Ser Glu Ile Asn Val Val Gly
195 200 205

Leu Ala Phe Phe Phe Asn Leu Gly Ile Val Thr Pro Leu Ile Met Phe
210 215 220

Ile Leu Thr Ala Thr Leu Leu Ile Leu Ser Leu Lys Arg His Thr Leu
225 230 235 240

His Met Gly Ser Asn Ala Thr Gly Ser Asn Asp Pro Ser Met Glu Ala
245 250 255

His Met Gly Ala Ile Lys Ala Ile Ser Tyr Phe Leu Ile Leu Tyr Ile
260 265 270

Phe Asn Ala Val Ala Leu Phe Ile Tyr Leu Ser Asn Met Phe Asp Ile
275 280 285

Asn Ser Leu Trp Asn Asn Leu Cys Gln Ile Ile Met Ala Ala Tyr Pro
290 295 300

Ala Ser His Ser Ile Leu Leu Ile Gln Asp Asn Pro Gly Leu Arg Arg
305 310 315 320

Ala Trp Lys Arg Leu Gln Leu Arg Leu His Leu Tyr Pro Lys Glu Trp
325 330 335

Thr Leu

<210> 41
<211> 323
<212> PRT
<213> Homo sapiens

<400> 41

```
Met Ala Thr Val Asn Thr Asp Ala Thr Asp Lys Asp Ile Ser Lys Phe
1               5                  10                  15

Lys Val Thr Phe Thr Leu Val Val Ser Gly Ile Glu Cys Ile Thr Gly
            20                  25                  30

Ile Leu Gly Ser Gly Phe Ile Thr Ala Ile Tyr Gly Ala Glu Trp Ala
        35                  40                  45

Arg Gly Lys Thr Leu Pro Thr Gly Asp Arg Ile Met Leu Met Leu Ser
    50                  55                  60

Phe Ser Arg Leu Leu Leu Gln Ile Trp Met Met Leu Glu Asn Ile Phe
65                  70                  75                  80

Ser Leu Leu Phe Arg Ile Val Tyr Asn Gln Asn Ser Val Tyr Ile Leu
                85                  90                  95

Phe Lys Val Ile Thr Val Phe Leu Asn His Ser Asn Leu Trp Phe Ala
            100                 105                 110

Ala Trp Leu Lys Val Phe Tyr Cys Leu Arg Ile Ala Asn Phe Asn His
        115                 120                 125

Pro Leu Phe Phe Leu Met Lys Arg Lys Ile Ile Val Leu Met Pro Trp
    130                 135                 140

Leu Leu Arg Leu Ser Val Leu Val Ser Leu Ser Phe Ser Phe Pro Leu
145                 150                 155                 160

Ser Arg Asp Val Phe Asn Val Tyr Val Asn Ser Ser Ile Pro Ile Pro
                165                 170                 175

Ser Ser Asn Ser Thr Glu Lys Lys Tyr Phe Ser Glu Thr Asn Met Val
            180                 185                 190

Asn Leu Val Phe Phe Tyr Asn Met Gly Ile Phe Val Pro Leu Ile Met
        195                 200                 205

Phe Ile Leu Ala Ala Thr Leu Leu Ile Leu Ser Leu Lys Arg His Thr
    210                 215                 220

Leu His Met Gly Ser Asn Ala Thr Gly Ser Arg Asp Pro Ser Met Lys
225                 230                 235                 240

Ala His Ile Gly Ala Ile Lys Ala Thr Ser Tyr Phe Leu Ile Leu Tyr
                245                 250                 255

Ile Phe Asn Ala Ile Ala Leu Phe Leu Ser Thr Ser Asn Ile Phe Asp
            260                 265                 270
```

```
Thr Tyr Ser Ser Trp Asn Ile Leu Cys Lys Ile Ile Met Ala Ala Tyr
        275                 280                 285

Pro Ala Gly His Ser Val Gln Leu Ile Leu Gly Asn Pro Gly Leu Arg
    290                 295                 300

Arg Ala Trp Lys Arg Phe Gln His Gln Val Pro Leu Tyr Leu Lys Gly
305                 310                 315                 320

Gln Thr Leu
```

<210> 42
<211> 307
<212> PRT
<213> Homo sapiens

<400> 42

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

Ser Leu Leu Gly Ile Ala Ala Asn Gly Phe Ile Val Leu Val Leu Gly
            20                  25                  30

Arg Glu Trp Leu Arg Tyr Gly Arg Leu Leu Pro Leu Asp Met Ile Leu
        35                  40                  45

Ile Ser Leu Gly Ala Ser Arg Phe Cys Leu Gln Leu Val Gly Thr Val
    50                  55                  60

His Asn Phe Tyr Tyr Ser Ala Gln Lys Val Glu Tyr Ser Gly Gly Leu
65                  70                  75                  80

Gly Arg Gln Phe Phe His Leu His Trp His Phe Leu Asn Ser Ala Thr
                85                  90                  95

Phe Trp Phe Cys Ser Trp Leu Ser Val Leu Phe Cys Val Lys Ile Ala
            100                 105                 110

Asn Ile Thr His Ser Thr Phe Leu Trp Leu Lys Trp Arg Phe Leu Gly
        115                 120                 125

Trp Val Pro Trp Leu Leu Leu Gly Ser Val Leu Ile Ser Phe Ile Ile
    130                 135                 140

Thr Leu Leu Phe Phe Trp Val Asn Tyr Pro Val Tyr Gln Glu Phe Leu
145                 150                 155                 160

Ile Arg Lys Phe Ser Gly Asn Met Thr Tyr Lys Trp Asn Thr Arg Ile
                165                 170                 175
```

Glu Thr Tyr Tyr Phe Pro Ser Leu Lys Leu Val Ile Trp Ser Ile Pro
180 185 190

Phe Ser Val Phe Leu Val Ser Ile Met Leu Leu Ile Asn Ser Leu Arg
195 200 205

Arg His Thr Gln Arg Met Gln His Asn Gly His Ser Leu Gln Asp Pro
210 215 220

Ser Thr Gln Ala His Thr Arg Ala Leu Lys Ser Leu Ile Ser Phe Leu
225 230 235 240

Ile Leu Tyr Ala Leu Ser Phe Leu Ser Leu Ile Ile Asp Ala Ala Lys
245 250 255

Phe Ile Ser Met Gln Asn Asp Phe Tyr Trp Pro Trp Gln Ile Ala Val
260 265 270

Tyr Leu Cys Ile Ser Val His Pro Phe Ile Leu Ile Phe Ser Asn Leu
275 280 285

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

Trp Val Ala
305

<210> 43
<211> 309
<212> PRT
<213> Homo sapiens

<400> 43
Met Ile Thr Phe Leu Pro Ile Ile Phe Ser Ser Leu Val Val Val Thr
1 5 10 15

Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
20 25 30

Ile Glu Ser Phe Lys Arg Gln Lys Ile Ser Phe Ala Asp Gln Ile Leu
35 40 45

Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Leu Leu
50 55 60

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

Arg Thr Thr Ala Tyr Asn Ile Trp Ala Val Ile Asn His Phe Ser Asn
85 90 95

Trp Leu Ala Thr Thr Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
100 105 110

Phe Ser Asn Phe Ile Phe Leu His Leu Lys Arg Arg Val Lys Ser Val
115 120 125

Ile Leu Val Met Leu Leu Gly Pro Leu Leu Phe Leu Ala Cys His Leu
130 135 140

Phe Val Ile Asn Met Asn Glu Ile Val Arg Thr Lys Glu Phe Glu Gly
145 150 155 160

Asn Met Thr Trp Lys Ile Lys Leu Lys Ser Ala Met Tyr Phe Ser Asn
165 170 175

Met Thr Val Thr Met Val Ala Asn Leu Val Pro Phe Thr Leu Thr Leu
180 185 190

Leu Ser Phe Met Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
195 200 205

Met Gln Leu Arg Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
210 215 220

Ile Lys Ala Leu Gln Thr Val Ile Ser Phe Leu Leu Leu Cys Ala Ile
225 230 235 240

Tyr Phe Leu Ser Ile Met Ile Ser Val Trp Ser Phe Gly Ser Leu Glu
245 250 255

Asn Lys Pro Val Phe Met Phe Cys Lys Ala Ile Arg Phe Ser Tyr Pro
260 265 270

Ser Ile His Pro Phe Ile Leu Ile Trp Gly Asn Lys Lys Leu Lys Gln
275 280 285

Thr Phe Leu Ser Val Phe Trp Gln Met Arg Tyr Trp Val Lys Gly Glu
290 295 300

Lys Thr Ser Ser Pro
305

<210> 44
<211> 300
<212> PRT
<213> Homo sapiens

<400> 44
Met Thr Thr Phe Ile Pro Ile Ile Phe Ser Ser Val Val Val Val Leu
1 5 10 15

Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
20 25 30

```
Ile Glu Arg Val Lys Arg Gln Lys Ile Ser Phe Ala Asp Gln Ile Leu
        35                  40                  45

Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Leu Leu
    50                  55                  60

Asn Trp Tyr Ser Thr Val Phe Asn Pro Ala Phe Tyr Ser Val Glu Val
65                  70                  75                  80

Arg Thr Thr Ala Tyr Asn Val Trp Ala Val Thr Gly His Phe Ser Asn
                85                  90                  95

Trp Leu Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
            100                 105                 110

Phe Ser Asn Leu Ile Phe Leu His Leu Lys Arg Arg Val Lys Ser Val
        115                 120                 125

Ile Leu Val Met Leu Leu Gly Pro Leu Leu Phe Leu Ala Cys Gln Leu
    130                 135                 140

Phe Val Ile Asn Met Lys Glu Ile Val Arg Thr Lys Glu Tyr Glu Gly
145                 150                 155                 160

Asn Met Thr Trp Lys Ile Lys Leu Arg Ser Ala Val Tyr Leu Ser Asp
                165                 170                 175

Ala Thr Val Thr Thr Leu Gly Asn Leu Val Pro Phe Thr Leu Thr Leu
            180                 185                 190

Leu Cys Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
        195                 200                 205

Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
    210                 215                 220

Ile Lys Ala Leu Gln Thr Val Ile Phe Phe Leu Leu Leu Cys Ala Val
225                 230                 235                 240

Tyr Phe Leu Ser Ile Met Ile Ser Val Trp Ser Phe Gly Ser Leu Glu
                245                 250                 255

Asn Lys Pro Val Phe Met Phe Cys Lys Ala Ile Arg Phe Ser Tyr Pro
            260                 265                 270

Ser Ile His Pro Phe Ile Leu Ile Trp Gly Asn Lys Lys Leu Lys Gln
        275                 280                 285

Thr Phe Leu Ser Val Leu Arg Gln Val Arg Tyr Trp
    290                 295                 300
```

<210> 45
<211> 299
<212> PRT
<213> Homo sapiens

<400> 45

```
Met Ile Thr Phe Leu Pro Ile Ile Phe Ser Ile Leu Val Val Val Thr
1               5                  10                  15

Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
            20                  25                  30

Thr Glu Trp Val Lys Arg Gln Lys Ile Ser Phe Ala Asp Gln Ile Val
        35                  40                  45

Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Leu Leu
    50                  55                  60

Asn Trp Tyr Ser Thr Val Leu Asn Pro Ala Phe Cys Ser Val Glu Leu
65                  70                  75                  80

Arg Thr Thr Ala Tyr Asn Ile Trp Ala Val Thr Gly His Phe Ser Asn
                85                  90                  95

Trp Pro Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
            100                 105                 110

Phe Ser Asn Leu Ile Phe Leu Arg Leu Lys Arg Arg Val Lys Ser Val
        115                 120                 125

Ile Leu Val Val Leu Leu Gly Pro Leu Leu Phe Leu Ala Cys His Leu
    130                 135                 140

Phe Val Val Asn Met Asn Gln Ile Val Trp Thr Lys Glu Tyr Glu Gly
145                 150                 155                 160

Asn Met Thr Trp Lys Ile Lys Leu Arg Arg Ala Met Tyr Leu Ser Asp
                165                 170                 175

Thr Thr Val Thr Met Leu Ala Asn Leu Val Pro Phe Thr Val Thr Leu
            180                 185                 190

Ile Ser Phe Leu Leu Leu Val Cys Ser Leu Cys Lys His Leu Lys Lys
        195                 200                 205

Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
    210                 215                 220

Ile Lys Val Leu Gln Thr Val Ile Ser Phe Phe Leu Leu Arg Ala Ile
225                 230                 235                 240

Tyr Phe Val Ser Val Ile Ile Ser Val Trp Ser Phe Lys Asn Leu Glu
                245                 250                 255
```

Asn Lys Pro Val Phe Met Phe Cys Gln Ala Ile Gly Phe Ser Cys Ser
260 265 270

Ser Ala His Pro Phe Ile Leu Ile Trp Gly Asn Lys Lys Leu Lys Gln
275 280 285

Thr Tyr Leu Ser Val Leu Trp Gln Met Arg Tyr
290 295

<210> 46
<211> 309
<212> PRT
<213> Homo sapiens

<400> 46
Met Ile Thr Phe Leu Pro Ile Ile Phe Ser Ile Leu Ile Val Val Thr
1 5 10 15

Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
20 25 30

Ile Glu Trp Phe Lys Arg Gln Lys Ile Ser Phe Ala Asp Gln Ile Leu
35 40 45

Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Val Leu
50 55 60

Asn Trp Tyr Ala Thr Glu Leu Asn Pro Ala Phe Asn Ser Ile Glu Val
65 70 75 80

Arg Ile Thr Ala Tyr Asn Val Trp Ala Val Ile Asn His Phe Ser Asn
85 90 95

Trp Leu Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
100 105 110

Phe Ser Asn Leu Ile Phe Leu His Leu Lys Arg Arg Val Lys Ser Val
115 120 125

Val Leu Val Ile Leu Leu Gly Pro Leu Leu Phe Leu Val Cys His Leu
130 135 140

Phe Val Ile Asn Met Asn Gln Ile Ile Trp Thr Lys Glu Tyr Glu Gly
145 150 155 160

Asn Met Thr Trp Lys Ile Lys Leu Arg Ser Ala Met Tyr Leu Ser Asn
165 170 175

Thr Thr Val Thr Ile Leu Ala Asn Leu Val Pro Phe Thr Leu Thr Leu
180 185 190

Ile Ser Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
195 200 205

Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Met Lys Val His
210 215 220

Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Leu Leu Cys Ala Ile
225 230 235 240

Tyr Phe Leu Ser Ile Ile Met Ser Val Trp Ser Phe Glu Ser Leu Glu
245 250 255

Asn Lys Pro Val Phe Met Phe Cys Glu Ala Ile Ala Phe Ser Tyr Pro
260 265 270

Ser Thr His Pro Phe Ile Leu Ile Trp Gly Asn Lys Lys Leu Lys Gln
275 280 285

Thr Phe Leu Ser Val Leu Trp His Val Arg Tyr Trp Val Lys Gly Glu
290 295 300

Lys Pro Ser Ser Ser
305

<210> 47
<211> 319
<212> PRT
<213> Homo sapiens

<400> 47
Met Ile Thr Phe Leu Pro Ile Ile Phe Ser Ile Leu Ile Val Val Ile
1 5 10 15

Phe Val Ile Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Ser
20 25 30

Ile Glu Trp Val Lys Arg Gln Lys Ile Ser Phe Val Asp Gln Ile Leu
35 40 45

Thr Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Leu Leu Leu
50 55 60

His Trp Tyr Ala Thr Gln Leu Asn Pro Ala Phe Tyr Ser Val Glu Val
65 70 75 80

Arg Ile Thr Ala Tyr Asn Val Trp Ala Val Thr Asn His Phe Ser Ser
85 90 95

Trp Leu Ala Thr Ser Leu Ser Met Phe Tyr Leu Leu Arg Ile Ala Asn
100 105 110

Phe Ser Asn Leu Ile Phe Leu Arg Ile Lys Arg Arg Val Lys Ser Val
115 120 125

```
Val Leu Val Ile Leu Leu Gly Pro Leu Leu Phe Leu Val Cys His Leu
    130                 135                 140

Phe Val Ile Asn Met Asp Glu Thr Val Trp Thr Lys Glu Tyr Glu Gly
145                 150                 155                 160

Asn Val Thr Trp Lys Ile Lys Leu Arg Ser Ala Met Tyr His Ser Asn
                165                 170                 175

Met Thr Leu Thr Met Leu Ala Asn Phe Val Pro Leu Thr Leu Thr Leu
            180                 185                 190

Ile Ser Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
        195                 200                 205

Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
    210                 215                 220

Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Leu Leu Cys Ala Ile
225                 230                 235                 240

Tyr Phe Leu Ser Met Ile Ile Ser Val Cys Asn Leu Gly Arg Leu Glu
                245                 250                 255

Lys Gln Pro Val Phe Met Phe Cys Gln Ala Ile Ile Phe Ser Tyr Pro
            260                 265                 270

Ser Thr His Pro Phe Ile Leu Ile Leu Gly Asn Lys Lys Leu Lys Gln
        275                 280                 285

Ile Phe Leu Ser Val Leu Arg His Val Arg Tyr Trp Val Lys Asp Arg
    290                 295                 300

Ser Leu Arg Leu His Arg Phe Thr Arg Ala Ala Leu Cys Lys Gly
305                 310                 315


<210> 48
<211> 299
<212> PRT
<213> Homo sapiens

<400> 48
Met Met Cys Phe Leu Leu Ile Ile Ser Ser Ile Leu Val Val Phe Ala
1               5                   10                  15

Phe Val Leu Gly Asn Val Ala Asn Gly Phe Ile Ala Leu Val Asn Val
            20                  25                  30

Ile Asp Trp Val Asn Thr Arg Lys Ile Ser Ser Ala Glu Gln Ile Leu
        35                  40                  45
```

Thr Ala Leu Val Val Ser Arg Ile Gly Leu Leu Trp Val Met Leu Phe
50 55 60

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

Arg Ile Val Ala Ser Asn Ala Trp Ala Val Thr Asn His Phe Ser Met
85 90 95

Trp Leu Ala Ala Ser Leu Ser Ile Phe Cys Leu Leu Lys Ile Ala Asn
100 105 110

Phe Ser Asn Leu Ile Ser Leu His Leu Lys Lys Arg Ile Lys Ser Val
115 120 125

Val Leu Val Ile Leu Leu Gly Pro Leu Val Phe Leu Ile Cys Asn Leu
130 135 140

Ala Val Ile Thr Met Asp Glu Arg Val Trp Thr Lys Glu Tyr Glu Gly
145 150 155 160

Asn Val Thr Trp Lys Ile Lys Leu Arg Asn Ala Ile His Leu Ser Ser
165 170 175

Leu Thr Val Thr Thr Leu Ala Asn Leu Ile Pro Phe Thr Leu Ser Leu
180 185 190

Ile Cys Phe Leu Leu Leu Ile Cys Ser Leu Cys Lys His Leu Lys Lys
195 200 205

Met Arg Leu His Ser Lys Gly Ser Gln Asp Pro Ser Thr Lys Val His
210 215 220

Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Met Leu Phe Ala Ile
225 230 235 240

Tyr Phe Leu Cys Ile Ile Thr Ser Thr Trp Asn Leu Arg Thr Gln Gln
245 250 255

Ser Lys Leu Val Leu Leu Leu Cys Gln Thr Val Ala Ile Met Tyr Pro
260 265 270

Ser Phe His Ser Phe Ile Leu Ile Met Gly Ser Arg Lys Leu Lys Gln
275 280 285

Thr Phe Leu Ser Val Leu Trp Gln Met Thr Arg
290 295

<210> 49
<211> 309
<212> PRT
<213> Homo sapiens

<400> 49

```
Met Met Ser Phe Leu His Ile Val Phe Ser Ile Leu Val Val Val Ala
1               5                  10                  15

Phe Ile Leu Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Ile Asn Phe
            20                  25                  30

Ile Ala Trp Val Lys Arg Gln Lys Ile Ser Ser Ala Asp Gln Ile Ile
        35                  40                  45

Ala Ala Leu Ala Val Ser Arg Val Gly Leu Leu Trp Val Ile Leu Leu
    50                  55                  60

His Trp Tyr Ser Thr Val Leu Asn Pro Thr Ser Ser Asn Leu Lys Val
65                  70                  75                  80

Ile Ile Phe Ile Ser Asn Ala Trp Ala Val Thr Asn His Phe Ser Ile
                85                  90                  95

Trp Leu Ala Thr Ser Leu Ser Ile Phe Tyr Leu Leu Lys Ile Val Asn
            100                 105                 110

Phe Ser Arg Leu Ile Phe His His Leu Lys Arg Lys Ala Lys Ser Val
        115                 120                 125

Val Leu Val Ile Val Leu Gly Ser Leu Phe Phe Leu Val Cys His Leu
    130                 135                 140

Val Met Lys His Thr Tyr Ile Asn Val Trp Thr Glu Glu Cys Glu Gly
145                 150                 155                 160

Asn Val Thr Trp Lys Ile Lys Leu Arg Asn Ala Met His Leu Ser Asn
                165                 170                 175

Leu Thr Val Ala Met Leu Ala Asn Leu Ile Pro Phe Thr Leu Thr Leu
            180                 185                 190

Ile Ser Phe Leu Leu Leu Ile Tyr Ser Leu Cys Lys His Leu Lys Lys
        195                 200                 205

Met Gln Leu His Gly Lys Gly Ser Gln Asp Pro Ser Thr Lys Ile His
    210                 215                 220

Ile Lys Ala Leu Gln Thr Val Thr Ser Phe Leu Ile Leu Leu Ala Ile
225                 230                 235                 240

Tyr Phe Leu Cys Leu Ile Ile Ser Phe Trp Asn Phe Lys Met Arg Pro
                245                 250                 255

Lys Glu Ile Val Leu Met Leu Cys Gln Ala Phe Gly Ile Ile Tyr Pro
            260                 265                 270
```

Ser Phe His Ser Phe Ile Leu Ile Trp Gly Asn Lys Thr Leu Lys Gln
275 280 285

Thr Phe Leu Ser Val Leu Trp Gln Val Thr Cys Trp Ala Lys Gly Gln
290 295 300

Asn Gln Ser Thr Pro
305

<210> 50
<211> 299
<212> PRT
<213> Homo sapiens

<400> 50
Met Ile Thr Phe Leu Tyr Ile Phe Phe Ser Ile Leu Ile Met Val Leu
1 5 10 15

Phe Val Leu Gly Asn Phe Ala Asn Gly Phe Ile Ala Leu Val Asn Phe
20 25 30

Ile Asp Trp Val Lys Arg Lys Lys Ile Ser Ser Ala Asp Gln Ile Leu
35 40 45

Thr Ala Leu Ala Val Ser Arg Ile Gly Leu Leu Trp Ala Leu Leu Leu
50 55 60

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

Arg Ile Thr Ser Tyr Asn Ala Trp Val Val Thr Asn His Phe Ser Met
85 90 95

Trp Leu Ala Ala Asn Leu Ser Ile Phe Tyr Leu Leu Lys Ile Ala Asn
100 105 110

Phe Ser Asn Leu Leu Phe Leu His Leu Lys Arg Arg Val Arg Ser Val
115 120 125

Ile Leu Val Ile Leu Leu Gly Thr Leu Ile Phe Leu Val Cys His Leu
130 135 140

Leu Val Ala Asn Met Asp Glu Ser Met Trp Ala Glu Glu Tyr Glu Gly
145 150 155 160

Asn Met Thr Gly Lys Met Lys Leu Arg Asn Thr Val His Leu Ser Tyr
165 170 175

Leu Thr Val Thr Thr Leu Trp Ser Phe Ile Pro Phe Thr Leu Ser Leu
180 185 190

Ile Ser Phe Leu Met Leu Ile Cys Ser Leu Tyr Lys His Leu Lys Lys
195 200 205

Met Gln Leu His Gly Glu Gly Ser Gln Asp Leu Ser Thr Lys Val His
210 215 220

Ile Lys Ala Leu Gln Thr Leu Ile Ser Phe Leu Leu Leu Cys Ala Ile
225 230 235 240

Phe Phe Leu Phe Leu Ile Val Ser Val Trp Ser Pro Arg Arg Leu Arg
245 250 255

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

Ala Phe Asp Ser Phe Ile Leu Ile Trp Arg Thr Lys Lys Leu Lys His
275 280 285

Thr Phe Leu Leu Ile Leu Cys Gln Ile Arg Cys
290 295

<210> 51
<211> 314
<212> PRT
<213> Homo sapiens

<400> 51
Met Ala Thr Glu Leu Asp Lys Ile Phe Leu Ile Leu Ala Ile Ala Glu
1 5 10 15

Phe Ile Ile Ser Met Leu Gly Asn Val Phe Ile Gly Leu Val Asn Cys
20 25 30

Ser Glu Gly Ile Lys Asn Gln Lys Val Phe Ser Ala Asp Phe Ile Leu
35 40 45

Thr Cys Leu Ala Ile Ser Thr Ile Gly Gln Leu Leu Val Ile Leu Phe
50 55 60

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

Leu Gly Lys Thr Val Ile Met Leu Trp His Met Thr Asn His Leu Thr
85 90 95

Thr Trp Leu Ala Thr Cys Leu Ser Ile Phe Tyr Phe Phe Lys Ile Ala
100 105 110

His Phe Pro His Ser Leu Phe Leu Trp Leu Arg Trp Arg Met Asn Gly
115 120 125

Met Ile Val Met Leu Leu Ile Leu Ser Leu Phe Leu Leu Ile Phe Asp
130 135 140

```
Ser Leu Val Leu Glu Ile Phe Ile Asp Ile Ser Leu Asn Ile Ile Asp
145                 150                 155                 160

Lys Ser Asn Leu Thr Leu Tyr Leu Asp Glu Ser Lys Thr Leu Tyr Asp
                165                 170                 175

Lys Leu Ser Ile Leu Lys Thr Leu Leu Ser Leu Thr Ser Phe Ile Pro
            180                 185                 190

Phe Ser Leu Phe Leu Thr Ser Leu Leu Phe Leu Phe Leu Ser Leu Val
        195                 200                 205

Arg His Thr Arg Asn Leu Lys Leu Ser Ser Leu Gly Ser Arg Asp Ser
    210                 215                 220

Ser Thr Glu Ala His Arg Arg Ala Met Lys Met Val Met Ser Phe Leu
225                 230                 235                 240

Phe Leu Phe Ile Val His Phe Phe Ser Leu Gln Val Ala Asn Gly Ile
                245                 250                 255

Phe Phe Met Leu Trp Asn Asn Lys Tyr Ile Lys Phe Val Met Leu Ala
            260                 265                 270

Leu Asn Ala Phe Pro Ser Cys His Ser Phe Ile Leu Ile Leu Gly Asn
        275                 280                 285

Ser Lys Leu Arg Gln Thr Ala Val Arg Leu Leu Trp His Leu Arg Asn
    290                 295                 300

Tyr Thr Lys Thr Pro Asn Ala Leu Pro Leu
305                 310


<210> 52
<211> 318
<212> PRT
<213> Homo sapiens

<400> 52
Met Asn Gly Asp His Met Val Leu Gly Ser Ser Val Thr Asp Lys Lys
1               5                   10                  15

Ala Ile Ile Leu Val Thr Ile Leu Leu Leu Leu Arg Leu Val Ala Ile
            20                  25                  30

Ala Gly Asn Gly Phe Ile Thr Ala Ala Leu Gly Val Glu Trp Val Leu
        35                  40                  45

Arg Arg Met Leu Leu Pro Cys Asp Lys Leu Leu Val Ser Leu Gly Ala
    50                  55                  60
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Ser Arg Phe Cys Leu Gln Ser Val Val Met Gly Lys Thr Ile Tyr Val
65                  70                  75                  80

Phe Leu His Pro Met Ala Phe Pro Tyr Asn Pro Val Leu Gln Phe Leu
                85                  90                  95

Ala Phe Gln Trp Asp Phe Leu Asn Ala Ala Thr Leu Trp Ser Ser Thr
            100                 105                 110

Trp Leu Ser Val Phe Tyr Cys Val Lys Ile Ala Thr Phe Thr His Pro
        115                 120                 125

Val Phe Phe Trp Leu Lys His Lys Leu Ser Gly Trp Leu Pro Trp Met
    130                 135                 140

Leu Phe Ser Ser Val Gly Leu Ser Ser Phe Thr Thr Ile Leu Phe Phe
145                 150                 155                 160

Ile Gly Asn His Arg Met Tyr Gln Asn Tyr Leu Arg Asn His Leu Gln
                165                 170                 175

Pro Trp Asn Val Thr Gly Asp Ser Ile Arg Ser Tyr Cys Glu Lys Phe
            180                 185                 190

Tyr Leu Phe Pro Leu Lys Met Ile Thr Trp Thr Met Pro Thr Ala Val
        195                 200                 205

Phe Phe Ile Cys Met Ile Leu Leu Ile Thr Ser Leu Gly Arg His Arg
    210                 215                 220

Lys Lys Ala Leu Leu Thr Thr Ser Gly Phe Arg Glu Pro Ser Val Gln
225                 230                 235                 240

Ala His Ile Lys Ala Leu Leu Ala Leu Leu Ser Phe Ala Met Leu Phe
                245                 250                 255

Ile Ser Tyr Phe Leu Ser Leu Val Phe Ser Ala Ala Gly Ile Phe Pro
            260                 265                 270

Pro Leu Asp Phe Lys Phe Trp Val Trp Glu Ser Val Ile Tyr Leu Cys
        275                 280                 285

Ala Ala Val His Pro Ile Ile Leu Leu Phe Ser Asn Cys Arg Leu Arg
    290                 295                 300

Ala Val Leu Lys Ser Arg Arg Ser Ser Arg Cys Gly Thr Pro
305                 310                 315
```

<210> 53
<211> 236
<212> PRT
<213> Mus musculus

<400> 53
Met Ala Arg Ser Thr Trp Gly Cys Cys Trp Cys Thr Lys Thr Ala Ala
1 5 10 15

Arg Asp Asn Arg Lys Lys Arg Lys Gly Gly Ser Gly Lys Ser Thr Lys
20 25 30

Met Arg His Gly Val Gly Tyr Ser Asp Arg Arg Ala Arg Tyr Asn Val
35 40 45

Ser Met Ala Met Asp Ala Met Asp Arg Ser Arg Asp Ser Lys His Ala
50 55 60

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

Tyr Trp Arg Asp Ala Gly Arg Ala Cys Tyr Arg Arg Arg His Asp Ser
85 90 95

Ala Val Tyr Tyr Ser His Arg Ser Asp Ser Tyr Thr Ala Asp Val Arg
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Ser Arg Met Thr Thr Gly Asn Tyr Cys Ser Val Lys Lys Thr Lys Arg
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Val Asp Val Gly Gly Arg Ser Arg Arg Lys Trp His Cys Asn Val Ala
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Tyr Ala Ser Ser Tyr Asp Cys Asn Asp Asn Arg Met Ser Ala Ser Thr
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Trp Lys Ser Thr Ser Val Asn Lys Thr Asp Asp Lys His Thr Ser His
165 170 175

Ala Thr Tyr Ser Gly Arg Arg Asp Ala Ala Ala Lys Ser Asp Met Tyr
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Ala Arg Val Tyr Ala Ser Cys Ala Asp Gly Gly Arg Lys Gly Ser Arg
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Lys Asp Val Arg Asp Ser Val Ala Arg Tyr Asp Asn
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Asn Ala Phe Val Phe Leu Val Asn Phe Trp Asp Val Val Lys Arg Gln
        35                  40                  45

Pro Leu Ser Asn Ser Asp Cys Val Leu Leu Cys Leu Ser Ile Ser Arg
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Leu Phe Leu His Gly Leu Leu Phe Leu Ser Ala Ile Gln Leu Thr His
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Phe Gln Lys Leu Ser Glu Pro Leu Asn His Ser Tyr Gln Ala Ile Ile
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Met Leu Trp Met Ile Ala Asn Gln Ala Asn Leu Trp Leu Ala Ala Cys
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Leu Ser Leu Leu Tyr Cys Ser Lys Leu Ile Arg Phe Ser His Thr Phe
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Leu Ile Cys Leu Ala Ser Trp Val Ser Arg Lys Ile Ser Gln Met Leu
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Leu Gly Ile Ile Leu Cys Ser Cys Ile Cys Thr Val Leu Cys Val Trp
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Cys Phe Phe Ser Arg Pro His Phe Thr Val Thr Thr Val Leu Phe Met
                165                 170                 175

Asn Asn Asn Thr Arg Leu Asn Trp Gln Ile Lys Asp Leu Asn Leu Phe
            180                 185                 190

Tyr Ser Phe Leu Phe Cys Tyr Leu Trp Ser Val Pro Pro Phe Leu Leu
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Phe Leu Val Ser Ser Gly Met Leu Thr Val Ser Leu Gly Arg His Met
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Arg Thr Met Lys Val Tyr Thr Arg Asn Ser Arg Asp Pro Ser Leu Glu
225                 230                 235                 240

Ala His Ile Lys Ala Leu Lys Ser Leu Val Ser Phe Phe Cys Phe Phe
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Val Ile Ser Ser Cys Ala Ala Phe Ile Ser Val Pro Leu Leu Ile Leu
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Trp Arg Asp Lys Ile Gly Val Met Val Cys Val Gly Ile Met Ala Ala
275 280 285

Cys Pro Ser Gly His Ala Ala Val Leu Ile Ser Gly Asn Ala Lys Leu
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Arg Arg Ala Val Met Thr Ile Leu Leu Trp Ala Gln Ser Ser Leu Lys
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Val Arg Ala Asp His Lys Ala Asp Ser Arg Thr Leu Cys
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