SEQUENCE LISTING

<110> Rinat Neuroscience Corporation

<120> ANTAGONIST ANTI-IL-7 RECEPTOR ANTIBODIES AND METHODS

<130> PC33990A

<140> 61/438,205
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<160> 61

<170> PatentIn version 3.5

<210> 1
<211> 111
<212> PRT
<213> Homo sapiens

<400> 1

Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Gly Ser Pro Gly Lys
1 5 10 15

Thr Val Thr Ile Ser Cys Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser
20 25 30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Asn Ser Pro Thr Thr Val
35 40 45

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

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65 70 75 80

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

Ser His Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Cys
100 105 110

<210> 2
<211> 117
<212> PRT
<213> Homo sapiens

<400> 2

Gln Val Asn Leu Arg 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 Asp Asp Ser
20 25 30

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Thr Lys Asn Leu 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 Gln Gly Asp Tyr Val Phe Asp Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
115

<210> 3
<211> 112
<212> PRT
<213> Homo sapiens

<400> 3

Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Glu Ser Pro Gly Lys
1 5 10 15

Thr Val Thr Ile Ser Cys Thr Gly Ser Ser Gly Arg Ile Ala Ser Ser
20 25 30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Ser Ala Pro Thr Thr Val
35 40 45

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

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65 70 75 80

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

Ser Ser Leu Trp Val Phe Gly Gly Gly Thr Gln Leu Thr Val Leu Ser
100 105 110

<210> 4
<211> 118
<212> PRT
<213> Homo sapiens

<400> 4

Gln Val Thr Leu Lys 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 Tyr
            20                  25                  30

Gly Met His 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 Val Tyr
65                  70                  75                  80

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

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

Thr Val Thr Val Ser Ser
        115
```

<210> 5
<211> 111
<212> PRT
<213> Homo sapiens

<400> 5

```
Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Gly Ser Pro Gly Lys
1               5                   10                  15

Thr Val Thr Ile Ser Cys Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser
            20                  25                  30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Asn Ser Pro Thr Thr Val
        35                  40                  45

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

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65                  70                  75                  80

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

Ser His Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Cys
            100                 105                 110
```

<210> 6
<211> 117
<212> PRT

<213> Homo sapiens

<400> 6

```
Gln Val Asn Leu Arg 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 Asp Asp Ser
            20                  25                  30

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

Ser Leu Val Gly Trp Asp Gly Phe Phe Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Thr Lys Asn Leu 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 Gln Gly Asp Tyr Val Phe Asn Asn Trp Gly Gln Gly Thr Leu
            100                 105                 110

Val Thr Val Ser Ser
        115
```

<210> 7
<211> 111
<212> PRT
<213> Homo sapiens

<400> 7

```
Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Gly Ser Pro Gly Lys
1               5                  10                  15

Thr Val Thr Ile Ser Cys Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser
            20                  25                  30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Asn Ser Pro Thr Thr Val
        35                  40                  45

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

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65                  70                  75                  80

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

His His Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Cys
```

100 105 110

<210> 8
<211> 117
<212> PRT
<213> Homo sapiens

<400> 8

Gln Val Asn Leu Arg 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 Asp Asp Ser
20 25 30

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

Ser Leu Val Gly Trp Asp Gly Phe Phe Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Thr Lys Asn Leu 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 Gln Gly Asp Tyr Met Gly Asp Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
115

<210> 9
<211> 111
<212> PRT
<213> Homo sapiens

<400> 9

Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Gly Ser Pro Gly Lys
1 5 10 15

Thr Val Thr Ile Ser Cys Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser
20 25 30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Asn Ser Pro Thr Thr Val
35 40 45

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

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65 70 75 80

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

His His Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Cys
            100                 105                 110
```

<210> 10
<211> 117
<212> PRT
<213> Homo sapiens

<400> 10

```
Gln Val Asn Leu Arg 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 Asp Asp Ser
            20                  25                  30

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

Ser Leu Val Gly Trp Asp Gly Phe Phe Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Thr Lys Asn Leu 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 Gln Gly Asp Tyr Met Gly Asn Asn Trp Gly Gln Gly Thr Leu
            100                 105                 110

Val Thr Val Ser Ser
        115
```

<210> 11
<211> 111
<212> PRT
<213> Homo sapiens

<400> 11

```
Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Gly Ser Pro Gly Lys
1               5                  10                  15

Thr Val Thr Ile Ser Cys Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser
            20                  25                  30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Asn Ser Pro Thr Thr Val
        35                  40                  45

Ile Tyr Glu Asp Asp Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
```

50 55 60

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65 70 75 80

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

His His Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Cys
100 105 110

<210> 12
<211> 117
<212> PRT
<213> Homo sapiens

<400> 12

Gln Val Asn Leu Arg 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 Asp Asp Ser
20 25 30

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

Ser Leu Val Gly Trp Asp Gly Phe Phe Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Thr Lys Asn Leu 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 Gln Gly Asp Tyr Met Gly Asn Asn Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
115

<210> 13
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Linking peptide

<400> 13

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 14
<211> 351
<212> DNA
<213> Homo sapiens

<400> 14
caggtcaact taagggagtc tgggggaggc ctggtcaagc cgggggggtc cctgagactc 60

tcctgtgcag cctctggatt cacctttgat gattctgtca tgcactgggt ccgtcaagct 120

ccggggaagg gtctggagtg gctctctctt gttggttggg atggtttttt tacatactat 180

gcagactcag tgaagggccg attcaccatc tccagagaca acaccaagaa cttactgtat 240

ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagacaaggg 300

gattacatgg ggaacaactg gggccaggga accctggtca ccgtctcctc a 351

<210> 15
<211> 333
<212> DNA
<213> Homo sapiens

<400> 15
aattttatgc tgactcagcc ccactctgtg tcggggtctc cgggaaagac ggtgaccatc 60

tcctgcaccc gcagcagtgg cagcattgac agttcctatg tgcagtggta ccagcagcgc 120

ccgggcaatt cccccaccac tgtgatctat gaggatgacc aaagaccctc tggggtccct 180

gatcggttct ctggctccat cgacagctcc tccaactctg cctccctcac catctctgga 240

ctggtgactg aggacgaggc tgactactac tgtcagtctt atgattttca tcatctggtg 300

ttcggcggag ggaccaagct gaccgtccta tgt 333

<210> 16
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> linker peptide

<400> 16

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 17
<211> 431
<212> PRT
<213> Homo sapiens

<400> 17

Gln Val Asn Leu Arg 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 Asp Asp Ser
20 25 30

Val Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu

```
        35                  40                  45

Ser Leu Val Gly Trp Asp Gly Phe Phe Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Thr Lys Asn Leu 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 Gln Gly Asp Tyr Met Gly Asn Asn Trp Gly Gln Gly Thr Leu
            100                 105                 110

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

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

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

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

Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Thr Val Ala Pro Pro Val Ala Gly Pro Ser Val
    210                 215                 220

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
225                 230                 235                 240

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
                245                 250                 255

Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
            260                 265                 270

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
        275                 280                 285

Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
    290                 295                 300

Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile
```

305 310 315 320

Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
325 330 335

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
340 345 350

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
355 360 365

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser
370 375 380

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
385 390 395 400

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
405 410 415

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
420 425 430

<210> 18
<211> 216
<212> PRT
<213> Homo sapiens

<400> 18

Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Gly Ser Pro Gly Lys
1 5 10 15

Thr Val Thr Ile Ser Cys Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser
20 25 30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Asn Ser Pro Thr Thr Val
35 40 45

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

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65 70 75 80

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

His His Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Thr Val
100 105 110

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

```
Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg
    130                 135                 140

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

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

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

Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr
        195                 200                 205

Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215
```

<210> 19
<211> 5
<212> PRT
<213> Homo sapiens

<400> 19

```
Asp Ser Val Met His
1               5
```

<210> 20
<211> 5
<212> PRT
<213> Homo sapiens

<400> 20

```
Asn Tyr Gly Met His
1               5
```

<210> 21
<211> 17
<212> PRT
<213> Homo sapiens

<400> 21

```
Leu Val Gly Trp Asp Gly Ser Ala Thr Tyr Tyr Ala Asp Ser Val Lys
1               5                   10                  15

Gly
```

<210> 22
<211> 17
<212> PRT
<213> Homo sapiens

<400> 22

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

Gly

<210> 23
<211> 17
<212> PRT
<213> Homo sapiens

<400> 23

Leu Val Gly Trp Asp Gly Phe Phe Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 24
<211> 8
<212> PRT
<213> Homo sapiens

<400> 24

Gln Gly Asp Tyr Val Phe Asp Tyr
1 5

<210> 25
<211> 9
<212> PRT
<213> Homo sapiens

<400> 25

Asp Ile Ser Gly Gly Gly Met Asp Val
1 5

<210> 26
<211> 8
<212> PRT
<213> Homo sapiens

<400> 26

Gln Gly Asp Tyr Val Phe Asn Asn
1 5

<210> 27
<211> 8
<212> PRT
<213> Homo sapiens

<400> 27

Gln Gly Asp Tyr Met Gly Asp Tyr
1 5

<210> 28
<211> 8
<212> PRT
<213> Homo sapiens

<400> 28

Gln Gly Asp Tyr Met Gly Asn Asn
1 5

<210> 29
<211> 13
<212> PRT
<213> Homo sapiens

<400> 29

Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser Tyr Val Gln
1 5 10

<210> 30
<211> 13
<212> PRT
<213> Homo sapiens

<400> 30

Thr Gly Ser Ser Gly Arg Ile Ala Ser Ser Tyr Val Gln
1 5 10

<210> 31
<211> 7
<212> PRT
<213> Homo sapiens

<400> 31

Glu Asp Asp Gln Arg Pro Ser
1 5

<210> 32
<211> 7
<212> PRT
<213> Homo sapiens

<400> 32

Glu Asp Asn Gln Arg Pro Ser
1 5

<210> 33
<211> 9
<212> PRT
<213> Homo sapiens

<400> 33

Gln Ser Tyr Asp Ser Ser His Leu Val
1 5

<210> 34

<211> 10
<212> PRT
<213> Homo sapiens

<400> 34

Gln Ser Tyr Ala Ser Ser Ser Leu Trp Val
1 5 10

<210> 35
<211> 9
<212> PRT
<213> Homo sapiens

<400> 35

Met Gln Tyr Asp Ser Ser His Leu Val
1 5

<210> 36
<211> 9
<212> PRT
<213> Homo sapiens

<400> 36

aattttatgc tgactcagcc ccactctgtg tcggaatctc cgggaaagac ggtgaccatc 60

tcctgcaccc gcagcagtgg cagcattgac agttcctatg tgcagtggta ccagcagcgc 120

ccgggcagct cccccaccac tgtgatctat gaggatgacc aaagaccctc tggggtccct 180

gatcggttct ctggctccat cgacagctcc tccaactctg cctccctcac catctctgga 240

ctgaaaactg aggacgaggc tgactactac tgtcagtctt atgattttca tcatctggtg 300

ttcggcggag ggaccaagct gaccgtccta 330

<210> 40
<211> 117
<212> PRT
<213> Homo sapiens

<400> 40

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 Asp Asp Ser
20 25 30

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

Ser Leu Val Gly Trp Asp Gly Phe Phe Thr Tyr Tyr Ala Asp Ser Val
50 55 60

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

Val Thr Val Ser Ser
115

<210> 41
<211> 110
<212> PRT
<213> Homo sapiens

<400> 41

Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Glu Ser Pro Gly Lys
1 5 10 15

Thr Val Thr Ile Ser Cys Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser
20 25 30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Ser Ser Pro Thr Thr Val

35 40 45

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

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65 70 75 80

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

His His Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

<210> 42
<211> 432
<212> PRT
<213> Homo sapiens

<400> 42

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 Asp Asp Ser
20 25 30

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

Ser Leu Val Gly Trp Asp Gly Phe Phe Thr Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

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

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

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

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

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

Thr Lys Val Asp Lys Lys Val Ala Pro Glu Leu Leu Gly Gly Pro Ser
    210                 215                 220

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
225                 230                 235                 240

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
                245                 250                 255

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
            260                 265                 270

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
        275                 280                 285

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
    290                 295                 300

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
305                 310                 315                 320

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

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
            340                 345                 350

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
        355                 360                 365

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
    370                 375                 380

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
385                 390                 395                 400

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
                405                 410                 415

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
            420                 425                 430
```

<210> 43
<211> 215

<212> PRT
<213> Homo sapiens

<400> 43

Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Glu Ser Pro Gly Lys
1 5 10 15

Thr Val Thr Ile Ser Cys Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser
20 25 30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Ser Ser Pro Thr Thr Val
35 40 45

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

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65 70 75 80

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

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

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

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

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

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

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

Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr
195 200 205

Val Ala Pro Thr Glu Cys Ser
210 215

<210> 44
<211> 110
<212> PRT
<213> Homo sapiens

<400> 44

```
Asn Phe Met Leu Thr Gln Pro His Ser Val Ser Glu Ser Pro Gly Lys
1               5                  10                  15

Thr Val Thr Ile Ser Cys Thr Arg Ser Ser Gly Ser Ile Asp Ser Ser
            20                  25                  30

Tyr Val Gln Trp Tyr Gln Gln Arg Pro Gly Ser Ser Pro Thr Thr Val
        35                  40                  45

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

Gly Ser Ile Asp Ser Ser Ser Asn Ser Ala Ser Leu Thr Ile Ser Gly
65                  70                  75                  80

Leu Lys Thr Glu Asp Glu Ala Asp Tyr Tyr Cys Met Gln Tyr Asp Phe
                85                  90                  95

His His Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100                 105                 110
```

<210> 45
<211> 431
<212> PRT
<213> Homo sapiens

<400> 45

```
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 Asp Asp Ser
            20                  25                  30

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

Ser Leu Val Gly Trp Asp Gly Phe Phe Thr Tyr Tyr Ala Asp Ser Val
    50                  55                  60

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

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

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
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130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

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

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

Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
195 200 205

Thr Lys Val Asp Lys Thr Val Ala Pro Pro Val Ala Gly Pro Ser Val
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Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
225 230 235 240

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
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Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
260 265 270

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
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Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
290 295 300

Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile
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Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
325 330 335

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

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
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Phe His His Leu
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