<110> HANMI PHARM. CO., LTD.

<120> Novel conjugate of immune stimulating IL-2 analog and a preparation method thereof

<130> OPA22036

<150> KR 10-2021-0042305
<151> 2021-03-31

<160> 439

<170> KoPatentIn 3.0

<210> 1
<211> 133
<212> PRT
<213> homo sapiens

<400> 1
Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

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

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile
115 120 125

Ile Ser Thr Leu Thr
130

<210> 2

<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 1

<400> 2
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 3
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 2

<400> 3
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

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Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Cys Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    4
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 3


<400>    4
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Cys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg
```

```
 65                  70                  75                  80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    5
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 4


<400>    5
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Cys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125
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Ser Thr Leu Thr
130

<210> 6
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 5

<400> 6
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Arg Met Leu Thr Phe Cys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 7
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 6

<400> 7
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Cys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 8
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 7

<400> 8
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Cys
        35   40   45

```
Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    9
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 9


<400>    9
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Cys Asn Phe His Leu Arg
 65                  70                  75                  80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
```

```
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    10
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 10


<400>    10
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    11
<211>    132
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<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 10

<400> 11
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 12
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 11

<400> 12
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

```
Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    13
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 12


<400>    13
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg
 65                  70                  75                  80
```

```
Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    14
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 13


<400>    14
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Ala Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
```

130

<210> 15
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 14

<400> 15
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Tyr Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 16
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 15

<400> 16
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 17
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 16

<400> 17
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

```
Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Gln Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    18
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 17


<400>    18
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Thr Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110
```

```
Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    19
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 18


<400>    19
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Gln Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    20
<211>    132
<212>    PRT
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<213> Artificial Sequence

<220>
<223> IL-2 analog 19

<400> 20
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 21
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 20

<400> 21
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn

```
            20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    22
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 21


<400>    22
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe Asp
 65                  70                  75                  80
```

```
Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    23
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 22


<400>    23
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Val Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 24
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 23

<400> 24
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Phe Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 25
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 24

<400> 25
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Val Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 26
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 25

<400> 26
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Phe Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro

```
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    27
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 26


<400>    27
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Phe Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110
```

```
Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    28
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 27


<400>    28
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Phe Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    29
<211>    132
<212>    PRT
<213>    Artificial Sequence
```

<220>
<223> IL-2 analog 28

<400> 29
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Val Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 30
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 29

<400> 30
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

```
Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Thr Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    31
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 30


<400>    31
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
```

```
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    32
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 31


<400>    32
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 33
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 32

<400> 33
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50   55   60

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

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 34
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 33

<400> 34

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Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    35
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 34


<400>    35
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60
```

```
Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe Arg
 65                  70                  75                  80

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    36
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 35


<400>    36
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Phe Glu Phe Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
```

```
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    37
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 36


<400>    37
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Phe Glu Val Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    38
<211>    132
<212>    PRT
<213>    Artificial Sequence
```

<220>
<223> IL-2 analog 37

<400> 38
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Phe Glu Ile Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 39
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 38

<400> 39
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

```
Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Phe Glu Phe Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    40
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 39


<400>    40
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Phe Glu Val Lys
                 85                  90                  95
```

```
Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    41
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 40


<400>    41
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Phe Glu Ile Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 42
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 41

<400> 42
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 43
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 42

<400> 43
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu

```
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    44
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 43


<400>    44
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60
```

```
Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Asp
 65                  70                  75                  80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Leu Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    45
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 44


<400>    45
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Val Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125
```

Ser Thr Leu Thr
130

<210> 46
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 45

<400> 46
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Phe Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 47
<211> 132
<212> PRT
<213> Artificial Sequence

<220>

<223> IL-2 analog 46

<400> 47
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Val Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 48
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 47

<400> 48
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Phe Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys

```
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    49
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 48


<400>    49
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Val Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95
```

```
Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    50
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 49


<400>    50
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Phe Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    51
```

<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 50

<400> 51
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 52
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 51

<400> 52
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

```
Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Gln Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    53
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 52


<400>    53
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe Asp
```

```
 65                  70                  75                  80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    54
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 53


<400>    54
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125
```

Ser Thr Leu Thr
130

<210> 55
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 54

<400> 55
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

Leu Glu Glu Val Leu Asn Leu Ala His Ser Lys Asn Phe His Leu Asp
65 70 75 80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 56
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 55

<400> 56
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

Leu Glu Glu Val Leu Asn Leu Ala His Ser Lys Asn Phe His Phe Asp
65   70   75   80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 57
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 56

<400> 57
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Ala Met Pro Lys Lys
        35   40   45

```
Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala His Ser Lys Asn Phe His Leu Asp
 65                  70                  75                  80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    58
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 57


<400>    58
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Ala Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala His Ser Lys Asn Phe His Phe Asp
 65                  70                  75                  80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
```

```
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    59
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 61


<400>    59
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Ala Ala Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    60
<211>    132
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<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 59

<400> 60
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Ala Ala Ser Asn Ile Asn Val Tyr Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 61
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 60

<400> 61
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

```
Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Ala Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Ala Ala Ser Asn Ile Asn Val Tyr Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    62
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 61


<400>    62
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

```
Pro Arg Asp Gly Val Ser Asn Ile Asn Val Tyr Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    63
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 62


<400>    63
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Gly Ala Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
```

130

<210> 64
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 63

<400> 64
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Thr Gly Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 65
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 64

<400> 65
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Tyr Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 66
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 65

<400> 66
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

```
Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    67
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 66


<400>    67
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Phe Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110
```

```
Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    68
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 67


<400>    68
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Phe Val Ser Asn Ile Asn Val Trp Val Leu Asp Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    69
<211>    132
<212>    PRT
```

<213> Artificial Sequence

<220>
<223> IL-2 analog 68

<400> 69
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Ile Val Ser Asn Ile Asn Glu Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 70
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 69

<400> 70
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn

```
            20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Phe Leu Ser Asn Ile Asn Glu Trp Val Leu Asp Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    71
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 70


<400>    71
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

```
Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    72
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 71


<400>    72
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 73
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 72

<400> 73
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50   55   60

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

Pro Arg Asp Val Gly Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 74
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 73

<400> 74
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Trp Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 75
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 74

<400> 75
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Asp Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro

```
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    76
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 75


<400>    76
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Ala Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110
```

```
Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    77
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 76


<400>    77
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Gln Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Arg Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Gly Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    78
<211>    132
<212>    PRT
<213>    Artificial Sequence
```

<220>
<223> IL-2 analog 77

<400> 78
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Glu Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Arg Glu Leu Lys Pro
     50   55   60

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

Pro Arg Asp Trp Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 79
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 78

<400> 79
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

```
Pro Glu Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    80
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 79


<400>    80
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Glu Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
```

```
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    81
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 80


<400>    81
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Glu Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Gly Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 82
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 81

<400> 82
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Glu Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50   55   60

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

Val Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 83
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 82

<400> 83

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Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Glu Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    84
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 83


<400>    84
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Arg Arg Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60
```

```
Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe Asp
 65                  70                  75                  80

Pro Arg Asp Glu Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    85
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 84


<400>    85
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Glu Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
```

```
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    86
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 85


<400>    86
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    87
<211>    132
<212>    PRT
<213>    Artificial Sequence
```

<220>
<223> IL-2 analog 86

<400> 87
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 88
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 87

<400> 88
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Arg Arg Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

```
Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    89
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 88


<400>    89
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Asp Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95
```

```
Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    90
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 89


<400>    90
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 91
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 90

<400> 91
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Trp Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 92
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 91

<400> 92
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu

```
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Gln Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    93
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 92


<400>    93
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60
```

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

Pro Arg Asp Val Val Ser Asn Ile Asn Thr Phe Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    94
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 93


<400>    94
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Glu Val Val Ser Asn Ile Asn Thr Phe Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125
```

Ser Thr Leu Thr
130

<210> 95
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 94

<400> 95
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Phe Glu Phe Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 96
<211> 132
<212> PRT
<213> Artificial Sequence

<220>

<223> IL-2 analog 95

<400> 96
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 97
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 96

<400> 97
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys

```
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    98
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 97


<400>    98
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95
```

```
Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    99
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 98


<400>    99
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    100
```

<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 99

<400> 100
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 101
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 100

<400> 101
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

```
Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Tyr Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    102
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 101


<400>    102
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
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Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ala Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    103
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 102


<400>    103
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125
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Ser Thr Leu Thr
130

<210> 104
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 103

<400> 104
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 105
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 104

<400> 105
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Asp Glu Leu Lys Pro
     50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 106
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 105

<400> 106
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35   40   45

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Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
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<210> 107
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 1

<400> 107

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa        180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga        240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca        300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg        360

attaccttta gtcaaagcat catctcaaca ctgacttga                               399
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<210> 108
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 2

<400> 108
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatctgcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 109
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 3

<400> 109
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cagatgattt tgaatggaat taataattac tgtaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 110
<211> 399
<212> DNA

<213> Artificial Sequence

<220>
<223> IL-2 analog 4

<400> 110
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cagatgattt tgaatggaat taataattac aagaatccct gtctcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 111
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 5

<400> 111
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ttttgttttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 112
<211> 399

<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 6

<400> 112
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tttaagtttt acatgccctg taaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 113
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 7

<400> 113
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gtgtgccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 114

<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 8

<400> 114
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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gctgtaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 115
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 9

<400> 115
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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 116
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 10

<400> 116
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 117
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 11

<400> 117
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gctaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 118
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
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<400> 118
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 119
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 13

<400> 119
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gctaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 120
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
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<400> 120
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<210> 121
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggagt taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<210> 122
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 16

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcca aatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<210> 123
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacaca atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<210> 124
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 18

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacag 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

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<210> 125
<211> 399
<212> DNA
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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<210> 126
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 20

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<210> 127
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 21

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<210> 128
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 22

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<211> 399
<212> DNA
<213> Artificial Sequence

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<223> IL-2 analog 23

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 24

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<210> 131
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 25

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<220>
<223> IL-2 analog 26

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tttcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 27

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacttt atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
<223> IL-2 analog 28

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttgtgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
<223> IL-2 analog 29

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtacaagcat catctcaaca ctgacttga 399

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<220>
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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggagt taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<213> Artificial Sequence

<220>
<223> IL-2 analog 32

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggagt taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<213> Artificial Sequence

<220>
<223> IL-2 analog 34

<400> 140
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttaga 240

cccagggagt taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 35

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttttcg aatttaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 142
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 36

<400> 142
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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttttcg aagtaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 37

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta ttagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
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<213> Artificial Sequence

<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttttcg aatttaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>
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<400> 145

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttttcg aagtaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

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attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
<223> IL-2 analog 41

<400> 147
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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 148
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 42

<400> 148
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagaa 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
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<220>
<223> IL-2 analog 43

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta ttagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
<223> IL-2 analog 44

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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggtct taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
<223> IL-2 analog 45

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccaggttct taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 152
<211> 399
<212> DNA
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<220>
<223> IL-2 analog 46

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<213> Artificial Sequence

<220>

<223> IL-2 analog 47

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
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<220>
<223> IL-2 analog 48

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcgt tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 49

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagctt tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<213> Artificial Sequence

<220>
<223> IL-2 analog 50

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacag 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<213> Artificial Sequence

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggagt taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<223> IL-2 analog 54

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399

<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 55

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gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcactttgac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<220>
<223> IL-2 analog 56

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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttg ccatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 163

<211> 399
<212> DNA
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<220>
<223> IL-2 analog 57

<400> 163
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttg ccatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcactttgac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 58

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg ctgccagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
<223> IL-2 analog 59

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg ctgccagcaa tatcaacgta tatgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
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<220>
<223> IL-2 analog 60

<400> 166
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aagaagtttg ccatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactataga 240

cccagggacg ctgccagcaa tatcaacgta tatgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 167
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 61

<400> 167
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactatgac 240

cccagggacg gtgttagcaa tatcaacgta tatgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
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<213> Artificial Sequence

<220>
<223> IL-2 analog 62

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactgggaa 240

cccagggacg gagccagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacgacgaa 240

cccagggaca caggcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 170
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 64

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactacaac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 171
<211> 399
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<220>
<223> IL-2 analog 65

<400> 171
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactacgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 172
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<223> IL-2 analog 66

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggact tcgtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 173
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<223> IL-2 analog 67

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactatgac 240

cccagggact tcgtcagcaa tatcaacgta tgggttctgg acctaaaggg atctgaaaca 300

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attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
<223> IL-2 analog 68

<400> 174
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggaca tagtcagcaa tatcaacgaa ttcgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 175
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<220>
<223> IL-2 analog 69

<400> 175
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactacgaa 240

cccagggact tcctcagcaa tatcaacgaa tgggttctgg acctaaaggg atctgaaaca 300

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attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 176
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<220>
<223> IL-2 analog 70

<400> 176
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactatgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg taggcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
<223> IL-2 analog 73

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggact gggtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
<223> IL-2 analog 74

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactatgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttg ccatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
<223> IL-2 analog 76

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aagcagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacgg 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg taggcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<223> IL-2 analog 77

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aaggagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacgg 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggact gggtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
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<223> IL-2 analog 80

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttcgaa 240

ggcagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<212> DNA
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<223> IL-2 analog 81

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttcgaa 240

gtcagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 82

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg aagtgagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<223> IL-2 analog 83

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg aagtgagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<223> IL-2 analog 84

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacgtggat 240

cccagggacg aagtgagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<212> DNA
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<223> IL-2 analog 85

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>
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gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 193
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 87

<400> 193
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gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 194
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 88

<400> 194

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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagac 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 195
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 89

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagca ggtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 196
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 90

<400> 196
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tggaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 197
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 91

<400> 197
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 198
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 92

<400> 198
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacaca tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
<213> Artificial Sequence

<220>
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<400> 199
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggagg tagtcagcaa tatcaacaca tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 200
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 94

<400> 200
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttttcg aattcaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 201
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 95

<400> 201
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agggctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>

<223> IL-2 analog 96

<400> 202
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agggctaaat ttagctgcaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 203
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 97

<400> 203
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 204
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 98

<400> 204
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgag 240

cccagggacg taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 205
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 99

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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgag 240

cccagggact tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 206
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
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<400> 206
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggact acgtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 207
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<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 101

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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacc tggccagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta attgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 209
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 103

<400> 209
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gaaatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 210
<211> 399

<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 104

<400> 210
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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagac 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 211
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<212> DNA
<213> Artificial Sequence

<220>
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gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga cgtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 212

<211> 133
<212> PRT
<213> Artificial Sequence

<220>
<223> General Formula 1

<220>
<221> MISC_FEATURE
<222> (1)
<223> Xaa is a deletion

<220>
<221> MISC_FEATURE
<222> (18)
<223> Xaa is leucine (L) or arginine (R)

<220>
<221> MISC_FEATURE
<222> (19)
<223> Xaa is leucine (L) or tyrosine (Y)

<220>
<221> MISC_FEATURE
<222> (22)
<223> Xaa is glutamic acid (E) or glutamine (Q)

<220>
<221> MISC_FEATURE
<222> (38)
<223> Xaa is alanine (A), aspartic acid (D), or arginine (R)

<220>
<221> MISC_FEATURE
<222> (42)
<223> Xaa is alanine (A), phenylalanine (F), lysine (K), or tryptophan (W)

<220>
<221> MISC_FEATURE
<222> (43)
<223> Xaa is glutamic acid (E), lysine (K), or glutamine (Q)

<220>
<221> MISC_FEATURE
<222> (45)
<223> Xaa is alanine (A) or tyrosine (Y)

<220>
<221> MISC_FEATURE
<222> (61)
<223> Xaa is aspartic acid (D), glutamic acid (E), glutamine (Q), or arginine (R)

<220>
<221> MISC_FEATURE
<222> (68)
<223> Xaa is aspartic acid (D) or glutamic acid (E)

<220>
<221> MISC_FEATURE
<222> (74)
<223> Xaa is histidine (H) or glutamine (Q)

<220>
<221> MISC_FEATURE
<222> (80)
<223> Xaa is phenylalanine (F), leucine (L), valine (V), or tyrosine (Y)

<220>
<221> MISC_FEATURE
<222> (81)
<223> Xaa is aspartic acid (D), glutamic acid (E), or arginine (R)

<220>
<221> MISC_FEATURE
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<223> Xaa is aspartic acid (D) or glutamic acid (E)

<220>
<221> MISC_FEATURE
<222> (85)

<223> Xaa is alanine (A), glutamic acid (E), glycine (G), leucine (L), valine (V), tryptophan (W), or tyrosine (Y)

<220>
<221> MISC_FEATURE
<222> (86)
<223> Xaa is alanine (A), glycine (G), isoleucine (I), or valine (V)

<220>
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<222> (91)
<223> Xaa is threonine (T) or valine (V)

<220>
<221> MISC_FEATURE
<222> (92)
<223> Xaa is phenylalanine (F), isoleucine (I), or tyrosine (Y)

<220>
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<222> (94)
<223> Xaa is phenylalanine (F) or leucine (L)

<220>
<221> MISC_FEATURE
<222> (96)
<223> Xaa is phenylalanine (F) or leucine (L)

<400> 212

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             20                  25                  30

Asn Pro Lys Leu Thr Xaa Met Leu Thr Xaa Xaa Phe Xaa Met Pro Lys
         35                  40                  45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Xaa Glu Leu Lys
     50                  55                  60

Pro Leu Glu Xaa Val Leu Asn Leu Ala Xaa Ser Lys Asn Phe His Xaa
 65                  70                  75                  80
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Xaa Pro Arg Xaa Xaa Xaa Ser Asn Ile Asn Xaa Xaa Val Xaa Glu Xaa
                85                  90                  95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
            100                 105                 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile
        115                 120                 125

Ile Ser Thr Leu Thr
    130


<210>    213
<211>    133
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    General Formula 2


<220>
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<223>    Xaa is a deletion


<220>
<221>    MISC_FEATURE
<222>    (18)
<223>    Xaa is leucine (L) or arginine (R)


<220>
<221>    MISC_FEATURE
<222>    (22)
<223>    Xaa is glutamic acid (E) or glutamine (Q)


<220>
<221>    MISC_FEATURE
<222>    (38)
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<220>
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<222> (42)
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<220>
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<223> Xaa is aspartic acid (D) or glutamic acid (E)

<220>
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<223> Xaa is aspartic acid (D) or glutamic acid (E)

<220>
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<223> Xaais aspartic acid (D) or glutamic acid (E)

<220>
<221> MISC_FEATURE
<222> (85)
<223> Xaa is leucine (L) or valine (V)

<220>
<221> MISC_FEATURE
<222> (86)
<223> Xaa is isoleucine (I) or valine (V)

<400> 213
Xaa Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
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Leu Xaa Leu Asp Leu Xaa Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
             20   25   30

Asn Pro Lys Leu Thr Xaa Met Leu Thr Xaa Lys Phe Tyr Met Pro Lys
         35   40   45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Xaa Glu Leu Lys
     50   55   60

Pro Leu Glu Xaa Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe
 65   70   75   80

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Xaa Pro Arg Asp Xaa Xaa Ser Asn Ile Asn Val Phe Val Leu Glu Leu
                 85                  90                  95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
            100                 105                 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile
        115                 120                 125

Ile Ser Thr Leu Thr
    130
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<210> 214
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #1 (IL2_L12F_F)

<400> 214
caaagaaaac acagtttcaa ctggagcatt tac 33

<210> 215
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #2 (IL2_L12F_R)

<400> 215
gtaaatgctc cagttgaaac tgtgttttct ttg 33

<210> 216
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #3 (IL2_L12V_F)

<400> 216
caaagaaaac acaggtacaa ctggagcatt tac 33

<210> 217
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #4 (IL2_L12V_R)

<400> 217
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<210> 218
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #5 (IL2_L18R_L19R_Q22E_F)

<400> 218
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<210> 219
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #6 (IL2_L18R_L19R_Q22E_R)

<400> 219
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<210> 220
<211> 39
<212> DNA
<213> Artificial Sequence

<220>

<223> primer #7 (IL2_L18R_Q22E_F)

<400> 220
ctggagcatt tacgtctgga tttagaaatg attttgaat 39

<210> 221
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #8 (IL2_L18R_Q22E_R)

<400> 221
attcaaaatc atttctaaat ccagacgtaa atgctccag 39

<210> 222
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<400> 222
gagcatttac tgttcgattt acagatgatt ttg 33

<210> 223
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<212> DNA
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<220>
<223> primer #10 (IL2_L19F_R)

<400> 223
caaaatcatc tgtaaatcga acagtaaatg ctc 33

<210> 224
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<213> Artificial Sequence

<220>
<223> primer #11 (IL2_L19V_F)

<400> 224
gagcatttac tggtggattt acagatgatt ttg 33

<210> 225
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<212> DNA
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<220>
<223> primer #12 (IL2_L19V_R)

<400> 225
caaaatcatc tgtaaatcca ccagtaaatg ctc 33

<210> 226
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<212> DNA
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<220>
<223> primer #13 (IL2_L19Y_F)

<400> 226
caactggagc atttactgta cgatttacag atg 33

<210> 227
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<212> DNA
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<220>
<223> primer #14 (IL2_L19Y_R)

<400> 227
catctgtaaa tcgtacagta aatgctccag ttg 33

<210> 228
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<220>
<223> primer #15 (IL2_D20F_F)

<400> 228
ggagcattta ctgctgtttt tacagatgat tttg 34

<210> 229
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<212> DNA
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<220>
<223> primer #16 (IL2_D20F_R)

<400> 229
caaaatcatc tgtaaaaaca gcagtaaatg ctcc 34

<210> 230
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<212> DNA
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<220>
<223> primer #17 (IL2_D20V_F)

<400> 230
gagcatttac tgctggtttt acagatgatt ttg 33

<210> 231
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<212> DNA
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<220>
<223> primer #18 (IL2_D20V_R)

<400> 231

caaaatcatc tgtaaaacca gcagtaaatg ctc 33

<210> 232
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<220>
<223> primer #19 (IL2_K32C_F)

<400> 232
ggaattaata attactgtaa tcccaaactc acc 33

<210> 233
<211> 33
<212> DNA
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<220>
<223> primer #20 (IL2_K32C_R)

<400> 233
ggtgagtttg ggattacagt aattattaat tcc 33

<210> 234
<211> 33
<212> DNA
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<220>
<223> primer #21 (IL2_K35C_F)

<400> 234
aattacaaga atccctgtct caccaggatg ctc 33

<210> 235
<211> 33
<212> DNA
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<220>
<223> primer #22 (IL2_K35C_R)

<400> 235
gagcatcctg gtgagacagg gattcttgta att 33

<210> 236
<211> 33
<212> DNA
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<220>
<223> primer #23 (IL2_K35E_F)

<400> 236
taattacaag aatcccgaac tcaccgcgat gct 33

<210> 237
<211> 33
<212> DNA
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<220>
<223> primer #24 (IL2_K35E_R)

<400> 237
agcatcgcgg tgagttcggg attcttgtaa tta 33

<210> 238
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<220>
<223> primer #25 (IL2_R38A_F)

<400> 238
ccaaactcac cgcgatgctc acatt 25

<210> 239
<211> 25
<212> DNA
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<220>
<223> primer #26 (IL2_R38A_R)

<400> 239
aatgtgagca tcgcggtgag tttgg 25

<210> 240
<211> 33
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<220>
<223> primer #27 (IL2_R38A_F42F_F)

<400> 240
caccgcgatg ctcacattta agttttacat gcc 33

<210> 241
<211> 33
<212> DNA
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<220>
<223> primer #28 (IL2_R38A_F42F_R)

<400> 241
ggcatgtaaa acttaaatgt gagcatcgcg gtg 33

<210> 242
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<220>
<223> primer #29 (IL2_A38R_F)

<400> 242
ccaaactcac caggatgctc acatt 25

<210> 243

<211> 25
<212> DNA
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<220>
<223> primer #30 (IL2_A38R_R)

<400> 243
aatgtgagca tcctggtgag tttgg 25

<210> 244
<211> 30
<212> DNA
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<220>
<223> primer #31 (IL2_R38D_F)

<400> 244
aagaatccca aactcaccga tatgctcaca 30

<210> 245
<211> 30
<212> DNA
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<220>
<223> primer #32 (IL2_R38D_R)

<400> 245
tgtgagcata tcggtgagtt tgggattctt 30

<210> 246
<211> 30
<212> DNA
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<220>
<223> primer #33 (IL2_F42A_F)

<400> 246
ccaggatgct cacagctaag ttttacatgc 30

<210> 247
<211> 30
<212> DNA
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<220>
<223> primer #34 (IL2_F42A_R)

<400> 247
gcatgtaaaa cttagctgtg agcatcctgg 30

<210> 248
<211> 30
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<220>
<223> primer #35 (IL2_F42K_F)

<400> 248
ccaggatgct cacaaagaag ttttacatgc 30

<210> 249
<211> 30
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<220>
<223> primer #36 (IL2_F42K_R)

<400> 249
gcatgtaaaa cttctttgtg agcatcctgg 30

<210> 250
<211> 30
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<220>
<223> primer #37 (IL2_F42K_K43E_F)

<400> 250
atgctcacaa aggagtttta catgcccaag 30

<210> 251
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<220>
<223> primer #38 (IL2_F42K_K43E_R)

<400> 251
cttgggcatg taaaactcct ttgtgagcat 30

<210> 252
<211> 30
<212> DNA
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<220>
<223> primer #39 (IL2_F42K_K43Q_F)

<400> 252
atgctcacaa agcagtttta catgcccaag 30

<210> 253
<211> 30
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<220>
<223> primer #40 (IL2_F42K_K43Q_R)

<400> 253
cttgggcatg taaaactgct ttgtgagcat 30

<210> 254
<211> 30
<212> DNA
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<220>
<223> primer #41 (IL2_K42F_F)

<400> 254
ccaggatgct cacatttaag ttttacatgc 30

<210> 255
<211> 30
<212> DNA
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<220>
<223> primer #42 (IL2_K42F_R)

<400> 255
gcatgtaaaa cttaaatgtg agcatcctgg 30

<210> 256
<211> 39
<212> DNA
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<220>
<223> primer #43 (IL2_K42F_F_long)

<400> 256
ctcaccagga tgctcacatt taagttttac atgcccaag 39

<210> 257
<211> 39
<212> DNA
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<220>
<223> primer #44 (IL2_K42F_R_long)

<400> 257
cttgggcatg taaaacttaa atgtgagcat cctggtgag 39

<210> 258
<211> 33

<212> DNA
<213> Artificial Sequence

<220>
<223> primer #45 (IL2_F42W_F)

<400> 258
accaggatgc tcacatggaa gttttacatg ccc 33

<210> 259
<211> 33
<212> DNA
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<220>
<223> primer #46 (IL2_F42W_R)

<400> 259
gggcatgtaa aacttccatg tgagcatcct ggt 33

<210> 260
<211> 33
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<220>
<223> primer #47 (IL2_K43C_F)

<400> 260
aggatgctca cattttgttt ttacatgccc aag 33

<210> 261
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<220>
<223> primer #48 (IL2_K43C_R)

<400> 261
cttgggcatg taaaaacaaa atgtgagcat cct 33

<210> 262
<211> 19
<212> DNA
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<220>
<223> primer #49 (IL2_Y45A_F)

<400> 262
gaagtttgcc atgcccaag 19

<210> 263
<211> 19
<212> DNA
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<220>
<223> primer #50 (IL2_Y45A_R)

<400> 263
cttgggcatg gcaaacttc 19

<210> 264
<211> 34
<212> DNA
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<220>
<223> primer #51 (IL2_Y45A_F_long)

<400> 264
gctcacaaag aagtttgcca tgcccaagaa ggcc 34

<210> 265
<211> 34
<212> DNA
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<220>
<223> primer #52 (IL2_Y45A_R_long)

<400> 265
ggccttcttg ggcatggcaa acttctttgt gagc 34

<210> 266
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #53 (IL2_K48C_F)

<400> 266
aagttttaca tgccctgtaa ggccacagaa ctg 33

<210> 267
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #54 (IL2_K48C_R)

<400> 267
cagttctgtg gccttacagg gcatgtaaaa ctt 33

<210> 268
<211> 33
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<220>
<223> primer #55 (IL2_K49C_F)

<400> 268
ttttacatgc ccaagtgtgc cacagaactg aaa 33

<210> 269
<211> 33
<212> DNA
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<220>

<223> primer #56 (IL2_K49C_R)

<400> 269
tttcagttct gtggcacact tgggcatgta aaa 33

<210> 270
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<220>
<223> primer #57 (IL2_E61D_F)

<400> 270
cttcagtgtc tagaagacga actcaaacct ctg 33

<210> 271
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<220>
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<400> 271
cagaggtttg agttcgtctt ctagacactg aag 33

<210> 272
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<220>
<223> primer #59 (IL2_E61Q_F)

<400> 272
cttcagtgtc tagaacaaga actcaaacct ctg 33

<210> 273
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<213> Artificial Sequence

<220>
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<400> 273
cagaggtttg agttcttgtt ctagacactg aag 33

<210> 274
<211> 30
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<220>
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<400> 274
cttcagtgtc tagaacggga actcaaacct 30

<210> 275
<211> 30
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<220>
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<400> 275
aggtttgagt tcccgttcta gacactgaag 30

<210> 276
<211> 33
<212> DNA
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<220>
<223> primer #63 (IL2_E68D_F)

<400> 276
ctcaaacctc tggaggacgt gctaaattta gct 33

<210> 277
<211> 33
<212> DNA
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<220>
<223> primer #64 (IL2_E68D_R)

<400> 277
agctaaattt agcacgtcct ccagaggttt gag 33

<210> 278
<211> 33
<212> DNA
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<220>
<223> primer #65 (IL2_E68Q_F)

<400> 278
ctcaaacctc tggagcaggt gctaaattta gct 33

<210> 279
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #66 (IL2_E68Q_R)

<400> 279
agctaaattt agcacctgct ccagaggttt gag 33

<210> 280
<211> 32
<212> DNA
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<220>
<223> primer #67 (IL2_V69G_F)

<400> 280

caaacctctg gaggaagggc taaatttagc tc 32

<210> 281
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<220>
<223> primer #68 (IL2_V69G_R)

<400> 281
gagctaaatt tagcccttcc tccagaggtt tg 32

<210> 282
<211> 40
<212> DNA
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<220>
<223> primer #69 (IL2_V69G_Q74A_F)

<400> 282
ctggaggaag ggctaaattt agctgcaagc aaaaactttc 40

<210> 283
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #70 (IL2_V69G_Q74A_R)

<400> 283
gaaagttttt gcttgcagct aaatttagcc cttcctccag 40

<210> 284
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<220>
<223> primer #71 (IL2_Q74H_F)

<400> 284
ctaaatttag ctcacagcaa aaac 24

<210> 285
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<212> DNA
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<220>
<223> primer #72 (IL2_Q74H_R)

<400> 285
gtttttgctg tgagctaaat ttag 24

<210> 286
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<220>
<223> primer #73 (IL2_K76C_F)

<400> 286
aatttagctc aaagctgtaa ctttcactta aga 33

<210> 287
<211> 33
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<220>
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<400> 287
tcttaagtga aagttacagc tttgagctaa att 33

<210> 288
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<220>
<223> primer #75 (IL2_L80D_R81E_F)

<400> 288
aaagcaaaaa ctttcacgac gaacccaggg ac 32

<210> 289
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<212> DNA
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<220>
<223> primer #76 (IL2_L80D_R81E_R)

<400> 289
gtccctgggt tcgtcgtgaa agtttttgct tt 32

<210> 290
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<212> DNA
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<220>
<223> primer #77 (IL2_L80F_F)

<400> 290
gcaaaaactt tcactttaga cccagggac 29

<210> 291
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<212> DNA
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<220>
<223> primer #78 (IL2_L80F_R)

<400> 291
gtccctgggt ctaaagtgaa agtttttgc 29

<210> 292

<211> 29
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<220>
<223> primer #79 (IL2_L80F_R81D_F)

<400> 292
gcaaaaactt tcactttgac cccagggac 29

<210> 293
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<212> DNA
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<220>
<223> primer #80 (IL2_L80F_R81D_R)

<400> 293
gtccctgggg tcaaagtgaa agtttttgc 29

<210> 294
<211> 32
<212> DNA
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<220>
<223> primer #81 (IL2_L80F_R81E_F)

<400> 294
aaagcaaaaa ctttcacttc gaacccaggg ac 32

<210> 295
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<212> DNA
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<220>
<223> primer #82 (IL2_L80F_R81E_R)

<400> 295
gtccctgggt tcgaagtgaa agtttttgct tt 32

<210> 296
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #83 (IL2_L80V_R81D_F)

<400> 296
aaagcaaaaa ctttcacgtg gatcccaggg ac 32

<210> 297
<211> 32
<212> DNA
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<220>
<223> primer #84 (IL2_L80V_R81D_R)

<400> 297
gtccctggga tccacgtgaa agtttttgct tt 32

<210> 298
<211> 32
<212> DNA
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<220>
<223> primer #85 (IL2_L80W_R81E_F)

<400> 298
aaagcaaaaa ctttcactgg gaacccaggg ac 32

<210> 299
<211> 32
<212> DNA
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<220>
<223> primer #86 (IL2_L80W_R81E_R)

<400> 299
gtccctgggt tcccagtgaa agtttttgct tt 32

<210> 300
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<212> DNA
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<220>
<223> primer #87 (IL2_L80Y_R81D_F)

<400> 300
gcaaaaactt tcactatgac cccagggac 29

<210> 301
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<212> DNA
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<220>
<223> primer #88 (IL2_L80Y_R81D_R)

<400> 301
gtccctgggg tcatagtgaa agtttttgc 29

<210> 302
<211> 32
<212> DNA
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<220>
<223> primer #89 (IL2_L80Y_R81E_F)

<400> 302
aaagcaaaaa ctttcactac gaacccaggg ac 32

<210> 303
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #90 (IL2_L80Y_R81E_R)

<400> 303
gtccctgggt tcgtagtgaa agtttttgct tt 32

<210> 304
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #91 (IL2_L80Y_R81N_F)

<400> 304
aaagcaaaaa ctttcactac aaccccaggg ac 32

<210> 305
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #92 (IL2_L80Y_R81N_R)

<400> 305
gtccctgggg ttgtagtgaa agtttttgct tt 32

<210> 306
<211> 29
<212> DNA
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<220>
<223> primer #93 (IL2_L80Y_R81R_F)

<400> 306
gcaaaaactt tcactataga cccagggac 29

<210> 307
<211> 29

<212> DNA
<213> Artificial Sequence

<220>
<223> primer #94 (IL2_L80Y_R81R_R)

<400> 307
gtccctgggt ctatagtgaa agtttttgc 29

<210> 308
<211> 31
<212> DNA
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<220>
<223> primer #95 (IL2_R81D_D84E_F)

<400> 308
ctttcactta gaccccaggg agttaatcag c 31

<210> 309
<211> 31
<212> DNA
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<220>
<223> primer #96 (IL2_R81D_D84E_R)

<400> 309
gctgattaac tccctggggt ctaagtgaaa g 31

<210> 310
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #97 (IL2_R81D_F)

<400> 310
caaaaacttt cacttagacc ccagggactt aatc 34

<210> 311
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #98 (IL2_R81D_R)

<400> 311
gattaagtcc ctggggtcta agtgaaagtt tttg 34

<210> 312
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #99 (IL2_R81D_F_long)

<400> 312
ctcaaagcaa aaactttcac ttagacccca gggacttaat cagcaaatat c 51

<210> 313
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #100 (IL2_R81D_R_long)

<400> 313
gatatttgct gattaagtcc ctggggtcta agtgaaagtt tttgctttga g 51

<210> 314
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #101 (IL2_R81E_D84E_L85V_I86V_V91T_I92F_F)

<400> 314
gaacccaggg aggtagtcag caatatcaac acatttgttc tgg 43

<210> 315
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #102 (IL2_R81E_D84E_L85V_I86V_V91T_I92F_R)

<400> 315
ccagaacaaa tgtgttgata ttgctgacta cctccctggg ttc 43

<210> 316
<211> 31
<212> DNA
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<220>
<223> primer #103 (IL2_R81E_F)

<400> 316
aaactttcac ttagaaccca gggacttaat c 31

<210> 317
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #104 (IL2_R81E_R)

<400> 317
gattaagtcc ctgggttcta agtgaaagtt t 31

<210> 318
<211> 33
<212> DNA
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<220>

<223> primer #105 (IL2_P82G_F)

<400> 318
aactttcact tcgaaggcag ggacgtagtc agc 33

<210> 319
<211> 33
<212> DNA
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<220>
<223> primer #106 (IL2_P82G_R)

<400> 319
gctgactacg tccctgcctt cgaagtgaaa gtt 33

<210> 320
<211> 33
<212> DNA
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<220>
<223> primer #107 (IL2_P82V_F)

<400> 320
aactttcact tcgaagtcag ggacgtagtc agc 33

<210> 321
<211> 33
<212> DNA
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<220>
<223> primer #108 (IL2_P82V_R)

<400> 321
gctgactacg tccctgactt cgaagtgaaa gtt 33

<210> 322
<211> 34
<212> DNA

<213> Artificial Sequence

<220>
<223> primer #109 (IL2_D84E_F)

<400> 322
cttaagaccc agggagttaa tcagcaatat caac 34

<210> 323
<211> 34
<212> DNA
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<220>
<223> primer #110 (IL2_D84E_R)

<400> 323
gttgatattg ctgattaact ccctgggtct taag 34

<210> 324
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #111 (IL2_D84F_F)

<400> 324
cacttagacc ccaggttctt aatcagcaat at 32

<210> 325
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #112 (IL2_D84F_R)

<400> 325
atattgctga ttaagaacct ggggtctaag tg 32

<210> 326
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #113 (IL2_D84V_F)

<400> 326
acttagaccc cagggtctta atcagcaata t 31

<210> 327
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #114 (IL2_D84V_R)

<400> 327
atattgctga ttaagaccct ggggtctaag t 31

<210> 328
<211> 35
<212> DNA
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<220>
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<400> 328
ctttgacccc agggacgctg ccagcaatat caacg 35

<210> 329
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<220>
<223> primer #116 (IL2_L85A_I86A_R)

<400> 329

cgttgatatt gctggcagcg tccctggggt caaag 35

<210> 330
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<220>
<223> primer #117 (IL2_L85E_I86V_F)

<400> 330
cccagggacg aagtgagcaa tatcaacgta 30

<210> 331
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<220>
<223> primer #118 (IL2_L85E_I86V_R)

<400> 331
tacgttgata ttgctcactt cgtccctggg 30

<210> 332
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<220>
<223> primer #119 (IL2_L85F_I86L_F)

<400> 332
cccagggact tcctcagcaa tatcaac 27

<210> 333
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<220>
<223> primer #120 (IL2_L85F_I86L_R)

<400> 333
gttgatattg ctgaggaagt ccctggg 27

<210> 334
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<220>
<223> primer #121 (IL2_L85F_I86V_F)

<400> 334
cccagggact tcgtcagcaa tatcaac 27

<210> 335
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<220>
<223> primer #122 (IL2_L85F_I86V_R)

<400> 335
gttgatattg ctgacgaagt ccctggg 27

<210> 336
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<220>
<223> primer #123 (IL2_L85G_I86A_F)

<400> 336
cccagggacg gagccagcaa tatcaac 27

<210> 337
<211> 27
<212> DNA
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<220>
<223> primer #124 (IL2_L85G_I86A_R)

<400> 337
gttgatattg ctggctccgt ccctggg 27

<210> 338
<211> 35
<212> DNA
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<220>
<223> primer #125 (IL2_L85G_I86V_F)

<400> 338
ctttgacccc agggacggtg ttagcaatat caacg 35

<210> 339
<211> 35
<212> DNA
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<220>
<223> primer #126 (IL2_L85G_I86V_R)

<400> 339
cgttgatatt gctaacccag tccctggggt caaag 35

<210> 340
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<220>
<223> primer #127 (IL2_L85I_I86V_F)

<400> 340
cccagggaca tagtcagcaa tatcaac 27

<210> 341

<211> 27
<212> DNA
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<220>
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<400> 341
gttgatattg ctgactatgt ccctggg 27

<210> 342
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<220>
<223> primer #129 (IL2_L85L_I86A_F)

<400> 342
cttcgaaccc agggacctgg ccagcaatat caac 34

<210> 343
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<220>
<223> primer #130 (IL2_L85L_I86A_R)

<400> 343
gttgatattg ctggccaggt ccctgggttc gaag 34

<210> 344
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<220>
<223> primer #131 (IL2_L85L_I86V_F)

<400> 344
ctttgagccc agggacttag tcagcaatat caac 34

<210> 345
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<220>
<223> primer #132 (IL2_L85L_I86V_R)

<400> 345
gttgatattg ctgactaagt ccctgggctc aaag 34

<210> 346
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<220>
<223> primer #133 (IL2_L85T_I86G_F)

<400> 346
cccagggaca caggcagcaa tatcaac 27

<210> 347
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<220>
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<400> 347
gttgatattg ctgcctgtgt ccctggg 27

<210> 348
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<212> DNA
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<220>
<223> primer #135 (IL2_L85V_I86G_F)

<400> 348
cccagggacg taggcagcaa tatcaacgt 29

<210> 349
<211> 29
<212> DNA
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<220>
<223> primer #136 (IL2_L85V_I86G_R)

<400> 349
acgttgatat tgctgcctac gtccctggg 29

<210> 350
<211> 31
<212> DNA
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<220>
<223> primer #137 (IL2_L85V_I86I_codon_F)

<400> 350
gaacccaggg acgtaatcag caatatcaac g 31

<210> 351
<211> 31
<212> DNA
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<220>
<223> primer #138 (IL2_L85V_I86I_codon_R)

<400> 351
cgttgatatt gctgattacg tccctgggtt c 31

<210> 352
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<220>
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<400> 352
gacccaggga cgtagtcagc aatatcaacg 30

<210> 353
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<220>
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<400> 353
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<210> 354
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<220>
<223> primer #141 (IL2_L85W_I86V_F)

<400> 354
cccagggact gggtcagcaa tatcaacgt 29

<210> 355
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<220>
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<400> 355
acgttgatat tgctgaccca gtccctggg 29

<210> 356
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<212> DNA
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<220>
<223> primer #143 (IL2_L85W_I86V_Long_F)

<400> 356
tttgacccca gggactgggt cagcaatatc 30

<210> 357
<211> 30
<212> DNA
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<220>
<223> primer #144 (IL2_L85W_I86V_Long_R)

<400> 357
gatattgctg acccagtccc tggggtcaaa 30

<210> 358
<211> 34
<212> DNA
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<220>
<223> primer #145 (IL2_L85Y_I86V_F)

<400> 358
cttcgaaccc agggactacg tcagcaatat caac 34

<210> 359
<211> 34
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<220>
<223> primer #146 (IL2_L85Y_I86V_R)

<400> 359
gttgatattg ctgacgtagt ccctgggttc gaag 34

<210> 360
<211> 31
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<220>
<223> primer #147 (IL2_I86V_V91T_I92F_F)

<400> 360
gtcagcaata tcaacacatt tgttctggaa c 31

<210> 361
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<220>
<223> primer #148 (IL2_I86V_V91T_I92F_R)

<400> 361
gttccagaac aaatgtgttg atattgctga c 31

<210> 362
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<220>
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<400> 362
cccagggact taatctgcaa tatcaacgta ata 33

<210> 363
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<400> 363
tattacgttg atattgcaga ttaagtccct ggg 33

<210> 364
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<220>
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<400> 364
cagggactta atcagcttta tcaacgtatt tgtt 34

<210> 365
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<220>
<223> primer #152 (IL2_N88F_R)

<400> 365
aacaaatacg ttgataaagc tgattaagtc cctg 34

<210> 366
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<220>
<223> primer #153 (IL2_N88Q_F)

<400> 366
gggacttaat cagccaaatc aacgtaatag ttc 33

<210> 367
<211> 33
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<220>

<223> primer #154 (IL2_N88Q_R)

<400> 367
gaactattac gttgatttgg ctgattaagt ccc 33

<210> 368
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<400> 368
cagggactta atcagcgtta tcaacgtatt tgtt 34

<210> 369
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<220>
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<400> 369
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<210> 370
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<400> 370
gacttaatca gcaatttcaa cgtaatagtt ctg 33

<210> 371
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<220>
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<400> 371
cagaactatt acgttgaaat tgctgattaa gtc 33

<210> 372
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<220>
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<400> 372
agcaatatca acgaattcgt tctggaacta aag 33

<210> 373
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<220>
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<400> 373
ctttagttcc agaacgaatt cgttgatatt gct 33

<210> 374
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<220>
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<210> 375
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<220>
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<400> 375
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<210> 376
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<400> 376
cagcaatatc aactttatag ttctggaact aaag 34

<210> 377
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<220>
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<400> 377
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<210> 378
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<220>
<223> primer #165 (IL2_V91T_F)

<400> 378

cagcaatatc aacacaatag ttctggaact aaag 34

<210> 379
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<220>
<223> primer #166 (IL2_V91T_R)

<400> 379
ctttagttcc agaactattg tgttgatatt gctg 34

<210> 380
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<220>
<223> primer #167 (IL2_I92F_F)

<400> 380
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<210> 381
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<220>
<223> primer #168 (IL2_I92F_R)

<400> 381
ctttagttcc agaacaaata cgttgatatt gc 32

<210> 382
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<220>
<223> primer #169 (IL2_I92F_F_long)

<400> 382
gacttaatca gcaatatcaa cgtatttgtt ctggaactaa agggatctg 49

<210> 383
<211> 49
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<220>
<223> primer #170 (IL2_I92F_R_long)

<400> 383
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<210> 384
<211> 45
<212> DNA
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<220>
<223> primer #171 (IL2_I92F_F_long2)

<400> 384
cttaatcagc aatatcaacg tatttgttct ggaactaaag ggatc 45

<210> 385
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #172 (IL2_I92F_R_long2)

<400> 385
gatcccttta gttccagaac aaatacgttg atattgctga ttaag 45

<210> 386
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #173 (IL2_I92F_L94F_L96F_F)

<400> 386
caacgtattt gttttcgaat tcaagggatc tg 32

<210> 387
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #174 (IL2_I92F_L94F_L96F_R)

<400> 387
cagatccctt gaattcgaaa acaaatacgt tg 32

<210> 388
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<220>
<223> primer #175 (IL2_I92F_L94F_L96F_F)

<400> 388
gcaatatcaa cgtatttgtt ttcgaattta agggatctg 39

<210> 389
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<220>
<223> primer #176 (IL2_I92F_L94F_L96F_R)

<400> 389
cagatccctt aaattcgaaa acaaatacgt tgatattgc 39

<210> 390

<211> 39
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<220>
<223> primer #177 (IL2_I92F_L94F_L96I_F)

<400> 390
gcaatatcaa cgtatttgtt ttcgaaatta agggatctg 39

<210> 391
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<220>
<223> primer #178 (IL2_I92F_L94F_L96I_R)

<400> 391
cagatccctt aatttcgaaa acaaatacgt tgatattgc 39

<210> 392
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<220>
<223> primer #179 (IL2_I92F_L94F_L96V_F)

<400> 392
gcaatatcaa cgtatttgtt ttcgaagtaa agggatctg 39

<210> 393
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<220>
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<400> 393
cagatccctt tacttcgaaa acaaatacgt tgatattgc 39

<210> 394
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<400> 394
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<210> 395
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<220>
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<400> 395
cctttagttc cagaacaatt acgttgatat tgc 33

<210> 396
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<220>
<223> primer #183 (IL2_I92L_F)

<400> 396
gcaatatcaa cgtattagtt ctggaactaa agg 33

<210> 397
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<220>
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cctttagttc cagaactaat acgttgatat tgc 33

<210> 398
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<220>
<223> primer #185 (IL2_I92W_F)

<400> 398
agcaatatca acgtatgggt tctggaacta aag 33

<210> 399
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<220>
<223> primer #186 (IL2_I92W_R)

<400> 399
ctttagttcc agaacccata cgttgatatt gct 33

<210> 400
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<220>
<223> primer #187 (IL2_I92Y_F)

<400> 400
gcaatatcaa cgtatatgtt ctggaactaa ag 32

<210> 401
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<220>
<223> primer #188 (IL2_I92Y_R)

<400> 401
ctttagttcc agaacatata cgttgatatt gc 32

<210> 402
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<220>
<223> primer #189 (IL2_L94F_L96F_F)

<400> 402
cgtaatagtt ttcgaattta agggatctga aac 33

<210> 403
<211> 33
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<220>
<223> primer #190 (IL2_L94F_L96F_R)

<400> 403
gtttcagatc ccttaaattc gaaaactatt acg 33

<210> 404
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<220>
<223> primer #191 (IL2_L94F_L96I_F)

<400> 404
cgtaatagtt ttcgaaatta agggatctga aac 33

<210> 405
<211> 33

<212> DNA
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<220>
<223> primer #192 (IL2_L94F_L96I_R)

<400> 405
gtttcagatc ccttaatttc gaaaactatt acg 33

<210> 406
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<212> DNA
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<220>
<223> primer #193 (IL2_L94F_L96V_F)

<400> 406
cgtaatagtt ttcgaagtaa agggatctga aac 33

<210> 407
<211> 33
<212> DNA
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<220>
<223> primer #194 (IL2_L94F_L96V_R)

<400> 407
gtttcagatc cctttacttc gaaaactatt acg 33

<210> 408
<211> 30
<212> DNA
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<220>
<223> primer #195 (IL2_E95D_F)

<400> 408
gttctggacc taaagggatc tgaaacaaca 30

<210> 409
<211> 30
<212> DNA
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<220>
<223> primer #196 (IL2_E95D_R)

<400> 409
tgttgtttca gatcccttta ggtccagaac 30

<210> 410
<211> 33
<212> DNA
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<220>
<223> primer #197 (IL2_C125S_F)

<400> 410
agatggatta cctttagtca aagcatcatc tca 33

<210> 411
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<212> DNA
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<220>
<223> primer #198 (IL2_C125S_R)

<400> 411
tgagatgatg ctttgactaa aggtaatcca tct 33

<210> 412
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<212> DNA
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<220>
<223> primer #199 (IL2_Q126T_F)

<400> 412
gatggattac ctttagtaca agcatcatct caac 34

<210> 413
<211> 34
<212> DNA
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<220>
<223> primer #200 (IL2_Q126T_R)

<400> 413
gttgagatga tgcttgtact aaaggtaatc catc 34

<210> 414
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #201 (IL2_desA1_F)

<400> 414
taagaatata catatgccta cttcaagttc tac 33

<210> 415
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #202 (IL2_desA1_R)

<400> 415
gtagaacttg aagtaggcat atgtatattc tta 33

<210> 416
<211> 34
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<220>

<223> primer #203 (IL2_NdeI_desA1_N-term)

<400> 416
cgccatatgc ctacttcaag ttctacaaag aaaa 34

<210> 417
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #204 (IL2_BHI_C-term)

<400> 417
cgggatcctc aagtcagtgt tgagatgatg cttt 34

<210> 418
<211> 12
<212> PRT
<213> HOMO SAPIENS

<400> 418
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro
  1   5   10

<210> 419
<211> 11
<212> PRT
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<220>
<223> Variant of hinge region

<400> 419
Glu Ser Lys Tyr Gly Pro Pro Pro Ser Cys Pro
  1   5   10

<210> 420
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 420
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Pro
 1   5   10

<210> 421
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 421
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser
 1   5   10

<210> 422
<211> 10
<212> PRT
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<220>
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<400> 422
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro
 1   5   10

<210> 423
<211> 8
<212> PRT
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<220>
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<400> 423
Lys Tyr Gly Pro Pro Cys Pro Ser
 1   5

<210> 424
<211> 8
<212> PRT
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<220>
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<400> 424
Glu Ser Lys Tyr Gly Pro Pro Cys
  1   5

<210> 425
<211> 7
<212> PRT
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<220>
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<400> 425
Glu Lys Tyr Gly Pro Pro Cys
  1   5

<210> 426
<211> 6
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<220>
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<400> 426
Glu Ser Pro Ser Cys Pro
  1   5

<210> 427
<211> 5
<212> PRT
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<220>
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<400> 427
Glu Pro Ser Cys Pro
  1   5

<210> 428
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<212> PRT
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<220>
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<400> 428
Pro Ser Cys Pro
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<210> 429
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 429
Glu Ser Lys Tyr Gly Pro Pro Ser Cys Pro
  1   5   10

<210> 430
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<212> PRT
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<220>
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<400> 430
Lys Tyr Gly Pro Pro Pro Ser Cys Pro
  1   5

<210> 431
<211> 9
<212> PRT
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<220>
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<400> 431
Glu Ser Lys Tyr Gly Pro Ser Cys Pro
  1   5

<210> 432
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 432
Glu Ser Lys Tyr Gly Pro Pro Cys
  1   5

<210> 433
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 433
Lys Tyr Gly Pro Pro Cys Pro
  1   5

<210> 434
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 434
Glu Ser Lys Pro Ser Cys Pro
  1   5

<210> 435
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 435
Glu Ser Pro Ser Cys Pro
  1   5

<210> 436
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 436
Glu Pro Ser Cys
  1

<210> 437
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 437
Ser Cys Pro
  1

<210> 438
<211> 221
<212> PRT
<213> homo sapiens

<400> 438
Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu
  1   5   10   15

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

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
         35   40   45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
     50   55   60

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

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
                 85   90   95

Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys
            100   105   110

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

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
    130   135   140

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
145   150   155   160

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
                165   170   175

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
            180   185   190

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
        195   200   205

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
    210   215   220

<210> 439
<211> 442
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(442)
<223> Amino acids at position 1 to 442 form Human Immunoglobulin G4 Fc Fragment (homodimer)

<220>
<221> MISC_FEATURE
<222> (1)..(221)
<223> Amino acids at position 1 to 221 form one monomer

<220>
<221> MISC_FEATURE
<222> (222)..(442)
<223> Amino acids at position 222 to 442 form one monomer

<220>
<221> DISULFID
<222> (3)..(224)
<223> Amino acids at position 3 and position 224 form an inter-disulfide bond

<220>
<221> DISULFID
<222> (35)..(95)
<223> Amino acids at position 35 and position 95 form an intra-chain disulfide bond

<220>
<221> DISULFID
<222> (141)..(199)
<223> Amino acids at position 141 and position 199 form an intra-chain disulfide bond

<220>
<221> DISULFID
<222> (256)..(316)
<223> Amino acids at position 256 and position 316 form an intra-chain disulfide bond

<220>
<221> DISULFID
<222> (362)..(420)
<223> Amino acids at position 362 and position 420 form an intra-chain disulfide bond

<400> 439

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Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu
  1               5                  10                  15

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

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
         35                  40                  45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
     50                  55                  60

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

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
                 85                  90                  95

Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys
            100                 105                 110

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

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
    130                 135                 140

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
145                 150                 155                 160

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
                165                 170                 175

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
```

```
            180                 185                 190

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
        195                 200                 205

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Pro Ser Cys
    210                 215                 220

Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
225                 230                 235                 240

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
                245                 250                 255

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
            260                 265                 270

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
        275                 280                 285

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
    290                 295                 300

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

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
                325                 330                 335

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
            340                 345                 350

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
        355                 360                 365

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
    370                 375                 380

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

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
                405                 410                 415

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
            420                 425                 430

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
        435                 440
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<110> HANMI PHARM. CO., LTD.

<120> Novel conjugate of immune stimulating IL-2 analog and a preparation method thereof

<130> OPA22036

<150> KR 10-2021-0042305
<151> 2021-03-31

<160> 439

<170> KoPatentIn 3.0

<210> 1
<211> 133
<212> PRT
<213> homo sapiens

<400> 1
Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

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

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile
115 120 125

Ile Ser Thr Leu Thr
130

<210> 2
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 1

<400> 2
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 3
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 2

<400> 3
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro

```
     50                  55                  60

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

Pro Arg Asp Leu Ile Cys Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    4
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 3


<400>    4
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Cys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
```

130

<210> 5
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 4

<400> 5
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Cys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 6
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 5

<400> 6
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

```
Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Cys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    7
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 6


<400>    7
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Cys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95
```

```
Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    8
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 7


<400>    8
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Cys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    9
<211>    132
<212>    PRT
<213>    Artificial Sequence
```

<220>
<223> IL-2 analog 9

<400> 9
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Cys Asn Phe His Leu Arg
65   70   75   80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 10
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 10

<400> 10
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

```
Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 11
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 10

<400> 11

```
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125
```

Ser Thr Leu Thr
130

<210> 12
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 11

<400> 12
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 13
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 12

<400> 13
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu

```
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    14
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 13


<400>    14
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Ala Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
```

```
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    15
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 14


<400>    15
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Tyr Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    16
<211>    132
<212>    PRT
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<213> Artificial Sequence

<220>
<223> IL-2 analog 15

<400> 16
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 17
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 16

<400> 17
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

```
Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Gln Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    18
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 17


<400>    18
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Thr Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125
```

Ser Thr Leu Thr
130

<210> 19
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 18

<400> 19
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Gln Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 20
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 19

<400> 20

```
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    21
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 20


<400>    21
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg
 65                  70                  75                  80
```

```
Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    22
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 21


<400>    22
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    23
<211>    132
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<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 22

<400> 23
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Val Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 24
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 23

<400> 24
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Phe Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys

```
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    25
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 24


<400>    25
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Val Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
```

```
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    26
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 25


<400>    26
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Phe Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    27
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 26
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<400> 27
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Phe Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 28
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 27

<400> 28
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

```
Pro Arg Asp Leu Ile Ser Asn Ile Asn Phe Ile Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    29
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 28


<400>    29
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Val Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    30
```

<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 29

<400> 30
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Thr Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 31
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 30

<400> 31
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

```
Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
          35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 32
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 31

<400> 32

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Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
          35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110
```

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 33
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 32

<400> 33
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 34
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 33

<400> 34
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 35
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 34

<400> 35
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe Arg

```
 65                  70                  75                  80

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    36
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 35


<400>    36
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Phe Glu Phe Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 37
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 36

<400> 37
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Phe Glu Val Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 38
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 37

<400> 38
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

```
Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
          35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Phe Glu Ile Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    39
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 38


<400>    39
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
          35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Phe Glu Phe Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110
```

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 40
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 39

<400> 40
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Phe Glu Val Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 41
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 40

<400> 41
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Phe Glu Ile Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 42
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 41

<400> 42
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

```
Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe Asp
 65                  70                  75                  80

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    43
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 42


<400>    43
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 44
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 43

<400> 44
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Leu Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 45
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 44

<400> 45
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn

```
            20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Val Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    46
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 45


<400>    46
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Phe Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
```

```
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    47
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 46


<400>    47
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Val Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    48
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
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<223> IL-2 analog 47

<400> 48
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Phe Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 49
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 48

<400> 49
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

```
Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Asp
 65                  70                  75                  80

Pro Arg Asp Leu Ile Ser Val Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    50
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 49


<400>    50
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Phe Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 51
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 50

<400> 51
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Arg Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 52
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 51

<400> 52
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

```
Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Gln Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    53
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 52


<400>    53
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95
```

```
Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    54
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 53


<400>    54
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Glu Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    55
<211>    132
<212>    PRT
<213>    Artificial Sequence
```

<220>
<223> IL-2 analog 54

<400> 55
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

Leu Glu Glu Val Leu Asn Leu Ala His Ser Lys Asn Phe His Leu Asp
65   70   75   80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 56
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 55

<400> 56
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro

```
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala His Ser Lys Asn Phe His Phe Asp
 65                  70                  75                  80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    57
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 56


<400>    57
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Ala Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala His Ser Lys Asn Phe His Leu Asp
 65                  70                  75                  80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
```

130

<210> 58
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 57

<400> 58
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Ala Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

Leu Glu Glu Val Leu Asn Leu Ala His Ser Lys Asn Phe His Phe Asp
65 70 75 80

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 59
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 61

<400> 59
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

```
Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Gly Val Ser Asn Ile Asn Val Tyr Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    60
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 59


<400>    60
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Ala Ala Ser Asn Ile Asn Val Tyr Val Leu Glu Leu Lys
                 85                  90                  95
```

```
Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    61
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 60


<400>    61
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Ala Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Ala Ala Ser Asn Ile Asn Val Tyr Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    62
<211>    132
<212>    PRT
<213>    Artificial Sequence
```

<220>
<223> IL-2 analog 61

<400> 62
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Gly Val Ser Asn Ile Asn Val Tyr Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 63
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 62

<400> 63
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

```
Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Gly Ala Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    64
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 63


<400>    64
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Thr Gly Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125
```

Ser Thr Leu Thr
130

<210> 65
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 64

<400> 65
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Tyr Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 66
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 65

<400> 66
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu

```
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    67
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 66


<400>    67
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Phe Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
```

```
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    68
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 67


<400>    68
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Phe Val Ser Asn Ile Asn Val Trp Val Leu Asp Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    69
<211>    132
<212>    PRT
```

<213> Artificial Sequence

<220>
<223> IL-2 analog 68

<400> 69
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Ile Val Ser Asn Ile Asn Glu Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 70
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 69

<400> 70
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
        35   40   45

```
Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Phe Leu Ser Asn Ile Asn Glu Trp Val Leu Asp Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    71
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 70


<400>    71
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125
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Ser Thr Leu Thr
130

<210> 72
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 71

<400> 72
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 73
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 72

<400> 73

```
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Gly Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    74
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 73


<400>    74
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe Asp
 65                  70                  75                  80
```

```
Pro Arg Asp Trp Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    75
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 74


<400>    75
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Asp Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    76
<211>    132
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<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 75

<400> 76
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Lys Phe Ala Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 77
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 76

<400> 77
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Lys Gln Phe Tyr Met Pro Lys Lys

```
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Arg Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Gly Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    78
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 77


<400>    78
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Lys Glu Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Arg Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Trp Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
```

```
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    79
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 78


<400>    79
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Glu Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    80
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 79
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<400> 80
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Glu Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 81
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 80

<400> 81
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Glu Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

```
Gly Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    82
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 81


<400>    82
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Glu Leu Thr Ala Met Leu Thr Lys Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Val Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    83
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<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 82

<400> 83
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Glu Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 84
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 83

<400> 84
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Arg Arg Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

```
Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
          35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Glu Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    85
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 84


<400>    85
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
          35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Glu Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110
```

```
Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    86
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 85


<400>    86
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    87
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 86
```

<400> 87
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 88
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 87

<400> 88
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Arg Arg Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe Glu

```
 65                  70                  75                  80

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    89
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 88


<400>    89
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Asp Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 90
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 89

<400> 90
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 91
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 90

<400> 91
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

```
Pro Lys Leu Thr Arg Met Leu Thr Trp Lys Phe Tyr Met Pro Lys Lys
          35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    92
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 91


<400>    92
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
          35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Gln Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110
```

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 93
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 92

<400> 93
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Thr Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 94
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 93

<400> 94
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Glu Val Val Ser Asn Ile Asn Thr Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 95
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 94

<400> 95
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Phe Glu Phe Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    96
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 95


<400>    96
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
```

<210> 97
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 96

<400> 97
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50   55   60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 98
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 97

<400> 98
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn

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            20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    99
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 98


<400>    99
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Ile Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
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            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    100
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 99


<400>    100
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Leu Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    101
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
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<223> IL-2 analog 100

<400> 101
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Tyr Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85   90   95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100   105   110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115   120   125

Ser Thr Leu Thr
    130

<210> 102
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 101

<400> 102
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
 1   5   10   15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
            20   25   30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
        35   40   45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
    50   55   60

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

Pro Arg Asp Leu Ala Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    103
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 102


<400>    103
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys
                85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130
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<210> 104
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 103

<400> 104
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
20 25 30

Pro Lys Leu Thr Ala Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
35 40 45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
50 55 60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
85 90 95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 105
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> IL-2 analog 104

<400> 105
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
1 5 10 15

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Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Asp Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95

Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
            100                 105                 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
        115                 120                 125

Ser Thr Leu Thr
    130


<210>    106
<211>    132
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    IL-2 analog 105


<400>    106
Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu
  1               5                  10                  15

Arg Leu Asp Leu Glu Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
             20                  25                  30

Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys
         35                  40                  45

Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro
     50                  55                  60

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

Pro Arg Asp Val Val Ser Asn Ile Asn Val Phe Val Leu Glu Leu Lys
                 85                  90                  95
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Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr
100 105 110

Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile
115 120 125

Ser Thr Leu Thr
130

<210> 107
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 1

<400> 107
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 108
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 2

<400> 108
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatctgcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 109
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 3

<400> 109
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac tgtaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 110
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 4

<400> 110
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cagatgattt tgaatggaat taataattac aagaatccct gtctcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 111
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 5

<400> 111
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

ttttgttttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 112
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 6

<400> 112
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgccctg taaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 113
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 7

<400> 113
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gtgtgccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 114
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 8

<400> 114
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gctgtaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 115
<211> 399

<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 9

<400> 115
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 116
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 10

<400> 116
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 117
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 11

<400> 117
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

gctaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 118
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 12

<400> 118
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 119
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 13

<400> 119
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

gctaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 120
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 14

<400> 120
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 121
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 15

<400> 121
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggagt taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 122
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 16

<400> 122
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcca aatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 123
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 17

<400> 123
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacaca atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 124
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 18

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacag 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 125
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 19

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tttcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacttt atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttgtgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtacaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>
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<400> 136
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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggagt taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggagt taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttaga 240

cccagggact taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttaga 240

cccagggagt taatcagcaa tatcaacgta atagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttttcg aatttaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
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<220>
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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttaaga 240

cccagggact taatcagcaa tatcaacgta atagttttcg aagtaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta ttagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

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acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttttcg aagtaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

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attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagaa 240

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acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<220>
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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta ttagttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggtct taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA

<213> Artificial Sequence

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<223> IL-2 analog 45

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccaggttct taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<223> IL-2 analog 47

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcgt tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagctt tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<223> IL-2 analog 50

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<220>
<223> IL-2 analog 51

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tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacag 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
<223> IL-2 analog 52

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggagt taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcactttgac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttg ccatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttagac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttg ccatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcactttgac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg ctgccagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<220>
<223> IL-2 analog 59

<400> 165
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg ctgccagcaa tatcaacgta tatgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 166
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<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 60

<400> 166
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aagaagtttg ccatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactataga 240

cccagggacg ctgccagcaa tatcaacgta tatgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 167
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 61

<400> 167
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactatgac 240

cccagggacg gtgttagcaa tatcaacgta tatgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 168
<211> 399

<212> DNA
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<220>
<223> IL-2 analog 62

<400> 168
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactgggaa 240

cccagggacg gagccagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
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<220>
<223> IL-2 analog 63

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacgacgaa 240

cccagggaca caggcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 170
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<220>
<223> IL-2 analog 64

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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactacaac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
<223> IL-2 analog 65

<400> 171
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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactacgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 66

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggact tcgtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
<223> IL-2 analog 67

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactatgac 240

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attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
<223> IL-2 analog 68

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggaca tagtcagcaa tatcaacgaa ttcgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<213> Artificial Sequence

<220>
<223> IL-2 analog 69

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactacgaa 240

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attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
<223> IL-2 analog 70

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactatgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
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<220>
<223> IL-2 analog 71

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
<223> IL-2 analog 72

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg taggcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 73

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggact gggtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
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<220>
<223> IL-2 analog 74

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactatgac 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 75

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aagaagtttg ccatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
<212> DNA
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<220>
<223> IL-2 analog 76

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aagcagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacgg 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg taggcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

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<211> 399
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<220>
<223> IL-2 analog 77

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aaggagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacgg 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggact gggtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

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<213> Artificial Sequence

<220>
<223> IL-2 analog 78

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 185

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<220>
<223> IL-2 analog 79

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aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 186
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 80

<400> 186
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatcccg aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttcgaa 240

ggcagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 187
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 81

<400> 187
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cagatgattt tgaatggaat taataattac aagaatcccg aactcaccgc gatgctcaca 120

aagaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaca gcaaaaactt tcacttcgaa 240

gtcagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 188
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 82

<400> 188
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttacg tctggattta 60

gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg aagtgagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 189
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 83

<400> 189
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttacg tcgtgattta 60

gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggacg aagtgagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 190
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 84

<400> 190
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttacg tctggattta 60

gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacgtggat 240

cccagggacg aagtgagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 191
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 85

<400> 191

cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 192
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 86

<400> 192
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gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 193
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 87

<400> 193
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttacg tcgtgattta 60

gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 194
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 88

<400> 194
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagac 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 195
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 89

<400> 195
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagca ggtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 196
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 90

<400> 196
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tggaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 197
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 91

<400> 197
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaacaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 198
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 92

<400> 198
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacaca tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 199
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 93

<400> 199
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggagg tagtcagcaa tatcaacaca tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 200
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 94

<400> 200
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttttcg aattcaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 201
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 95

<400> 201
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agggctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 202
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 96

<400> 202
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agggctaaat ttagctgcaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 203
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 97

<400> 203
cctacttcaa gttctacaaa gaaaacacag ctacaactgg agcatttact gctggattta 60

cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgac 240

cccagggact taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 204
<211> 399
<212> DNA

<213> Artificial Sequence

<220>
<223> IL-2 analog 98

<400> 204
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgag 240

cccagggacg taatcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 205
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 99

<400> 205
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcactttgag 240

cccagggact tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 206
<211> 399
<212> DNA
<213> Artificial Sequence

<220>

<223> IL-2 analog 100

<400> 206
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggact acgtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 207
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 101

<400> 207
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacc tggccagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 208
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 102

<400> 208
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cagatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta attgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 209
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 103

<400> 209
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gaaatgattt tgaatggaat taataattac aagaatccca aactcaccgc gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 210
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<220>
<223> IL-2 analog 104

<400> 210
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gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagac 180

gaactcaaac ctctggagga agtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 211
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 analog 105

<400> 211
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gaaatgattt tgaatggaat taataattac aagaatccca aactcaccag gatgctcaca 120

tttaagtttt acatgcccaa gaaggccaca gaactgaaac atcttcagtg tctagaagaa 180

gaactcaaac ctctggagga cgtgctaaat ttagctcaaa gcaaaaactt tcacttcgaa 240

cccagggacg tagtcagcaa tatcaacgta tttgttctgg aactaaaggg atctgaaaca 300

acattcatgt gtgaatatgc tgatgagaca gcaaccattg tagaatttct gaacagatgg 360

attaccttta gtcaaagcat catctcaaca ctgacttga 399

<210> 212
<211> 133
<212> PRT
<213> Artificial Sequence

<220>
<223> General Formula 1

<220>
<221> MISC_FEATURE
<222> (1)
<223> Xaa is a deletion

<220>
<221> MISC_FEATURE
<222> (18)
<223> Xaa is leucine (L) or arginine (R)

<220>
<221> MISC_FEATURE
<222> (19)
<223> Xaa is leucine (L) or tyrosine (Y)

<220>
<221> MISC_FEATURE
<222> (22)
<223> Xaa is glutamic acid (E) or glutamine (Q)

<220>
<221> MISC_FEATURE
<222> (38)
<223> Xaa is alanine (A), aspartic acid (D), or arginine (R)

<220>
<221> MISC_FEATURE
<222> (42)
<223> Xaa is alanine (A), phenylalanine (F), lysine (K), or tryptophan (W)

<220>
<221> MISC_FEATURE
<222> (43)
<223> Xaa is glutamic acid (E), lysine (K), or glutamine (Q)

<220>
<221> MISC_FEATURE
<222> (45)
<223> Xaa is alanine (A) or tyrosine (Y)

<220>
<221> MISC_FEATURE
<222> (61)
<223> Xaa is aspartic acid (D), glutamic acid (E), glutamine (Q), or arginine (R)

<220>
<221> MISC_FEATURE
<222> (68)

<223> Xaa is aspartic acid (D) or glutamic acid (E)

<220>
<221> MISC_FEATURE
<222> (74)
<223> Xaa is histidine (H) or glutamine (Q)

<220>
<221> MISC_FEATURE
<222> (80)
<223> Xaa is phenylalanine (F), leucine (L), valine (V), or tyrosine (Y)

<220>
<221> MISC_FEATURE
<222> (81)
<223> Xaa is aspartic acid (D), glutamic acid (E), or arginine (R)

<220>
<221> MISC_FEATURE
<222> (84)
<223> Xaa is aspartic acid (D) or glutamic acid (E)

<220>
<221> MISC_FEATURE
<222> (85)
<223> Xaa is alanine (A), glutamic acid (E), glycine (G), leucine (L), valine (V), tryptophan (W), or tyrosine (Y)

<220>
<221> MISC_FEATURE
<222> (86)
<223> Xaa is alanine (A), glycine (G), isoleucine (I), or valine (V)

<220>
<221> MISC_FEATURE
<222> (91)
<223> Xaa is threonine (T) or valine (V)

<220>
<221> MISC_FEATURE
<222> (92)
<223> Xaa is phenylalanine (F), isoleucine (I), or tyrosine (Y)

<220>
<221> MISC_FEATURE
<222> (94)
<223> Xaa is phenylalanine (F) or leucine (L)

<220>
<221> MISC_FEATURE
<222> (96)
<223> Xaa is phenylalanine (F) or leucine (L)

<400> 212
Xaa Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
 1   5   10   15

Leu Xaa Xaa Asp Leu Xaa Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
            20   25   30

Asn Pro Lys Leu Thr Xaa Met Leu Thr Xaa Xaa Phe Xaa Met Pro Lys
        35   40   45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Xaa Glu Leu Lys
    50   55   60

Pro Leu Glu Xaa Val Leu Asn Leu Ala Xaa Ser Lys Asn Phe His Xaa
65   70   75   80

Xaa Pro Arg Xaa Xaa Xaa Ser Asn Ile Asn Xaa Xaa Val Xaa Glu Xaa
                85   90   95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
            100   105   110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile
        115   120   125

Ile Ser Thr Leu Thr
    130

<210> 213
<211> 133
<212> PRT
<213> Artificial Sequence

<220>
<223> General Formula 2

<220>
<221> MISC_FEATURE
<222> (1)

<223> Xaa is a deletion

<220>
<221> MISC_FEATURE
<222> (18)
<223> Xaa is leucine (L) or arginine (R)

<220>
<221> MISC_FEATURE
<222> (22)
<223> Xaa is glutamic acid (E) or glutamine (Q)

<220>
<221> MISC_FEATURE
<222> (38)
<223> Xaa is alanine (A) or arginine (R)

<220>
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<222> (42)
<223> Xaa is phenylalanine (F) or lysine (K)

<220>
<221> MISC_FEATURE
<222> (61)
<223> Xaa is aspartic acid (D) or glutamic acid (E)

<220>
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<222> (68)
<223> Xaa is aspartic acid (D) or glutamic acid (E)

<220>
<221> MISC_FEATURE
<222> (81)
<223> Xaais aspartic acid (D) or glutamic acid (E)

<220>
<221> MISC_FEATURE
<222> (85)
<223> Xaa is leucine (L) or valine (V)

<220>
<221> MISC_FEATURE

<222> (86)
<223> Xaa is isoleucine (I) or valine (V)

<400> 213
Xaa Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15

Leu Xaa Leu Asp Leu Xaa Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Xaa Met Leu Thr Xaa Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Xaa Glu Leu Lys
50 55 60

Pro Leu Glu Xaa Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Phe
65 70 75 80

Xaa Pro Arg Asp Xaa Xaa Ser Asn Ile Asn Val Phe Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile
115 120 125

Ile Ser Thr Leu Thr
130

<210> 214
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #1 (IL2_L12F_F)

<400> 214
caaagaaaac acagtttcaa ctggagcatt tac 33

<210> 215
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #2 (IL2_L12F_R)

<400> 215
gtaaatgctc cagttgaaac tgtgttttct ttg 33

<210> 216
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #3 (IL2_L12V_F)

<400> 216
caaagaaaac acaggtacaa ctggagcatt tac 33

<210> 217
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #4 (IL2_L12V_R)

<400> 217
gtaaatgctc cagttgtacc tgtgttttct ttg 33

<210> 218
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #5 (IL2_L18R_L19R_Q22E_F)

<400> 218
ctggagcatt tacgtcgtga tttagaaatg attttgaat 39

<210> 219
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #6 (IL2_L18R_L19R_Q22E_R)

<400> 219
attcaaaatc atttctaaat cacgacgtaa atgctccag 39

<210> 220
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #7 (IL2_L18R_Q22E_F)

<400> 220
ctggagcatt tacgtctgga tttagaaatg attttgaat 39

<210> 221
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #8 (IL2_L18R_Q22E_R)

<400> 221
attcaaaatc atttctaaat ccagacgtaa atgctccag 39

<210> 222
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #9 (IL2_L19F_F)

<400> 222
gagcatttac tgttcgattt acagatgatt ttg 33

<210> 223
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #10 (IL2_L19F_R)

<400> 223
caaaatcatc tgtaaatcga acagtaaatg ctc 33

<210> 224
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #11 (IL2_L19V_F)

<400> 224
gagcatttac tggtggattt acagatgatt ttg 33

<210> 225
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #12 (IL2_L19V_R)

<400> 225
caaaatcatc tgtaaatcca ccagtaaatg ctc 33

<210> 226
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #13 (IL2_L19Y_F)

<400> 226
caactggagc atttactgta cgatttacag atg 33

<210> 227
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #14 (IL2_L19Y_R)

<400> 227

catctgtaaa tcgtacagta aatgctccag ttg 33

<210> 228
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #15 (IL2_D20F_F)

<400> 228
ggagcattta ctgctgtttt tacagatgat tttg 34

<210> 229
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #16 (IL2_D20F_R)

<400> 229
caaaatcatc tgtaaaaaca gcagtaaatg ctcc 34

<210> 230
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #17 (IL2_D20V_F)

<400> 230
gagcatttac tgctggtttt acagatgatt ttg 33

<210> 231
<211> 33
<212> DNA
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<220>
<223> primer #18 (IL2_D20V_R)

<400> 231
caaaatcatc tgtaaaacca gcagtaaatg ctc 33

<210> 232
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #19 (IL2_K32C_F)

<400> 232
ggaattaata attactgtaa tcccaaactc acc 33

<210> 233
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #20 (IL2_K32C_R)

<400> 233
ggtgagtttg ggattacagt aattattaat tcc 33

<210> 234
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #21 (IL2_K35C_F)

<400> 234
aattacaaga atccctgtct caccaggatg ctc 33

<210> 235
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #22 (IL2_K35C_R)

<400> 235
gagcatcctg gtgagacagg gattcttgta att 33

<210> 236
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #23 (IL2_K35E_F)

<400> 236
taattacaag aatcccgaac tcaccgcgat gct 33

<210> 237
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #24 (IL2_K35E_R)

<400> 237
agcatcgcgg tgagttcggg attcttgtaa tta 33

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #25 (IL2_R38A_F)

<400> 238
ccaaactcac cgcgatgctc acatt 25

<210> 239
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #26 (IL2_R38A_R)

<400> 239
aatgtgagca tcgcggtgag tttgg 25

<210> 240
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #27 (IL2_R38A_F42F_F)

<400> 240
caccgcgatg ctcacattta agttttacat gcc 33

<210> 241
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #28 (IL2_R38A_F42F_R)

<400> 241
ggcatgtaaa acttaaatgt gagcatcgcg gtg 33

<210> 242
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #29 (IL2_A38R_F)

<400> 242
ccaaactcac caggatgctc acatt 25

<210> 243
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #30 (IL2_A38R_R)

<400> 243
aatgtgagca tcctggtgag tttgg 25

<210> 244

<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #31 (IL2_R38D_F)

<400> 244
aagaatccca aactcaccga tatgctcaca 30

<210> 245
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #32 (IL2_R38D_R)

<400> 245
tgtgagcata tcggtgagtt tgggattctt 30

<210> 246
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #33 (IL2_F42A_F)

<400> 246
ccaggatgct cacagctaag ttttacatgc 30

<210> 247
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #34 (IL2_F42A_R)

<400> 247
gcatgtaaaa cttagctgtg agcatcctgg 30

<210> 248
<211> 30

<212> DNA
<213> Artificial Sequence

<220>
<223> primer #35 (IL2_F42K_F)

<400> 248
ccaggatgct cacaaagaag ttttacatgc 30

<210> 249
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #36 (IL2_F42K_R)

<400> 249
gcatgtaaaa cttctttgtg agcatcctgg 30

<210> 250
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #37 (IL2_F42K_K43E_F)

<400> 250
atgctcacaa aggagtttta catgcccaag 30

<210> 251
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #38 (IL2_F42K_K43E_R)

<400> 251
cttgggcatg taaaactcct ttgtgagcat 30

<210> 252
<211> 30
<212> DNA

<213> Artificial Sequence

<220>
<223> primer #39 (IL2_F42K_K43Q_F)

<400> 252
atgctcacaa agcagtttta catgcccaag 30

<210> 253
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #40 (IL2_F42K_K43Q_R)

<400> 253
cttgggcatg taaaactgct ttgtgagcat 30

<210> 254
<211> 30
<212> DNA
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<220>
<223> primer #41 (IL2_K42F_F)

<400> 254
ccaggatgct cacatttaag ttttacatgc 30

<210> 255
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #42 (IL2_K42F_R)

<400> 255
gcatgtaaaa cttaaatgtg agcatcctgg 30

<210> 256
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #43 (IL2_K42F_F_long)

<400> 256
ctcaccagga tgctcacatt taagttttac atgcccaag 39

<210> 257
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #44 (IL2_K42F_R_long)

<400> 257
cttgggcatg taaaacttaa atgtgagcat cctggtgag 39

<210> 258
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #45 (IL2_F42W_F)

<400> 258
accaggatgc tcacatggaa gttttacatg ccc 33

<210> 259
<211> 33
<212> DNA
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<220>
<223> primer #46 (IL2_F42W_R)

<400> 259
gggcatgtaa aacttccatg tgagcatcct ggt 33

<210> 260
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #47 (IL2_K43C_F)

<400> 260
aggatgctca cattttgttt ttacatgccc aag 33

<210> 261
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #48 (IL2_K43C_R)

<400> 261
cttgggcatg taaaaacaaa atgtgagcat cct 33

<210> 262
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #49 (IL2_Y45A_F)

<400> 262
gaagtttgcc atgcccaag 19

<210> 263
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #50 (IL2_Y45A_R)

<400> 263
cttgggcatg gcaaacttc 19

<210> 264
<211> 34
<212> DNA
<213> Artificial Sequence

<220>

<223> primer #51 (IL2_Y45A_F_long)

<400> 264
gctcacaaag aagtttgcca tgcccaagaa ggcc 34

<210> 265
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #52 (IL2_Y45A_R_long)

<400> 265
ggccttcttg ggcatggcaa acttctttgt gagc 34

<210> 266
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #53 (IL2_K48C_F)

<400> 266
aagttttaca tgccctgtaa ggccacagaa ctg 33

<210> 267
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #54 (IL2_K48C_R)

<400> 267
cagttctgtg gccttacagg gcatgtaaaa ctt 33

<210> 268
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #55 (IL2_K49C_F)

<400> 268
ttttacatgc ccaagtgtgc cacagaactg aaa 33

<210> 269
<211> 33
<212> DNA
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<220>
<223> primer #56 (IL2_K49C_R)

<400> 269
tttcagttct gtggcacact tgggcatgta aaa 33

<210> 270
<211> 33
<212> DNA
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<220>
<223> primer #57 (IL2_E61D_F)

<400> 270
cttcagtgtc tagaagacga actcaaacct ctg 33

<210> 271
<211> 33
<212> DNA
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<220>
<223> primer #58 (IL2_E61D_R)

<400> 271
cagaggtttg agttcgtctt ctagacactg aag 33

<210> 272
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #59 (IL2_E61Q_F)

<400> 272
cttcagtgtc tagaacaaga actcaaacct ctg 33

<210> 273
<211> 33
<212> DNA
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<220>
<223> primer #60 (IL2_E61Q_R)

<400> 273
cagaggtttg agttcttgtt ctagacactg aag 33

<210> 274
<211> 30
<212> DNA
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<220>
<223> primer #61 (IL2_E61R_F)

<400> 274
cttcagtgtc tagaacggga actcaaacct 30

<210> 275
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #62 (IL2_E61R_R)

<400> 275
aggtttgagt tcccgttcta gacactgaag 30

<210> 276
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #63 (IL2_E68D_F)

<400> 276
ctcaaacctc tggaggacgt gctaaattta gct 33

<210> 277
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #64 (IL2_E68D_R)

<400> 277
agctaaattt agcacgtcct ccagaggttt gag 33

<210> 278
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #65 (IL2_E68Q_F)

<400> 278
ctcaaacctc tggagcaggt gctaaattta gct 33

<210> 279
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #66 (IL2_E68Q_R)

<400> 279
agctaaattt agcacctgct ccagaggttt gag 33

<210> 280
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #67 (IL2_V69G_F)

<400> 280

caaacctctg gaggaagggc taaatttagc tc 32

<210> 281
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #68 (IL2_V69G_R)

<400> 281
gagctaaatt tagcccttcc tccagaggtt tg 32

<210> 282
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #69 (IL2_V69G_Q74A_F)

<400> 282
ctggaggaag ggctaaattt agctgcaagc aaaaactttc 40

<210> 283
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #70 (IL2_V69G_Q74A_R)

<400> 283
gaaagttttt gcttgcagct aaatttagcc cttcctccag 40

<210> 284
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #71 (IL2_Q74H_F)

<400> 284
ctaaatttag ctcacagcaa aaac 24

<210> 285
<211> 24
<212> DNA
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<220>
<223> primer #72 (IL2_Q74H_R)

<400> 285
gtttttgctg tgagctaaat ttag 24

<210> 286
<211> 33
<212> DNA
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<220>
<223> primer #73 (IL2_K76C_F)

<400> 286
aatttagctc aaagctgtaa ctttcactta aga 33

<210> 287
<211> 33
<212> DNA
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<220>
<223> primer #74 (IL2_K76C_R)

<400> 287
tcttaagtga aagttacagc tttgagctaa att 33

<210> 288
<211> 32
<212> DNA
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<220>
<223> primer #75 (IL2_L80D_R81E_F)

<400> 288
aaagcaaaaa ctttcacgac gaacccaggg ac 32

<210> 289
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #76 (IL2_L80D_R81E_R)

<400> 289
gtccctgggt tcgtcgtgaa agtttttgct tt 32

<210> 290
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #77 (IL2_L80F_F)

<400> 290
gcaaaaactt tcactttaga cccagggac 29

<210> 291
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #78 (IL2_L80F_R)

<400> 291
gtccctgggt ctaaagtgaa agtttttgc 29

<210> 292
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #79 (IL2_L80F_R81D_F)

<400> 292
gcaaaaactt tcactttgac cccagggac 29

<210> 293
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #80 (IL2_L80F_R81D_R)

<400> 293
gtccctgggg tcaaagtgaa agtttttgc 29

<210> 294
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #81 (IL2_L80F_R81E_F)

<400> 294
aaagcaaaaa ctttcacttc gaacccaggg ac 32

<210> 295
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #82 (IL2_L80F_R81E_R)

<400> 295
gtccctgggt tcgaagtgaa agtttttgct tt 32

<210> 296
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #83 (IL2_L80V_R81D_F)

<400> 296
aaagcaaaaa ctttcacgtg gatcccaggg ac 32

<210> 297

<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #84 (IL2_L80V_R81D_R)

<400> 297
gtccctggga tccacgtgaa agtttttgct tt 32

<210> 298
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #85 (IL2_L80W_R81E_F)

<400> 298
aaagcaaaaa ctttcactgg gaacccaggg ac 32

<210> 299
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #86 (IL2_L80W_R81E_R)

<400> 299
gtccctgggt tcccagtgaa agtttttgct tt 32

<210> 300
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #87 (IL2_L80Y_R81D_F)

<400> 300
gcaaaaactt tcactatgac cccagggac 29

<210> 301
<211> 29

<212> DNA
<213> Artificial Sequence

<220>
<223> primer #88 (IL2_L80Y_R81D_R)

<400> 301
gtccctgggg tcatagtgaa agtttttgc 29

<210> 302
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #89 (IL2_L80Y_R81E_F)

<400> 302
aaagcaaaaa ctttcactac gaacccaggg ac 32

<210> 303
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #90 (IL2_L80Y_R81E_R)

<400> 303
gtccctgggt tcgtagtgaa agtttttgct tt 32

<210> 304
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #91 (IL2_L80Y_R81N_F)

<400> 304
aaagcaaaaa ctttcactac aaccccaggg ac 32

<210> 305
<211> 32
<212> DNA

<213> Artificial Sequence

<220>
<223> primer #92 (IL2_L80Y_R81N_R)

<400> 305
gtccctgggg ttgtagtgaa agtttttgct tt 32

<210> 306
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #93 (IL2_L80Y_R81R_F)

<400> 306
gcaaaaactt tcactataga cccagggac 29

<210> 307
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #94 (IL2_L80Y_R81R_R)

<400> 307
gtccctgggt ctatagtgaa agtttttgc 29

<210> 308
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #95 (IL2_R81D_D84E_F)

<400> 308
ctttcactta gaccccaggg agttaatcag c 31

<210> 309
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #96 (IL2_R81D_D84E_R)

<400> 309
gctgattaac tccctggggt ctaagtgaaa g 31

<210> 310
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #97 (IL2_R81D_F)

<400> 310
caaaaacttt cacttagacc ccagggactt aatc 34

<210> 311
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #98 (IL2_R81D_R)

<400> 311
gattaagtcc ctggggtcta agtgaaagtt tttg 34

<210> 312
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #99 (IL2_R81D_F_long)

<400> 312
ctcaaagcaa aaactttcac ttagacccca gggacttaat cagcaaatat c 51

<210> 313
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #100 (IL2_R81D_R_long)

<400> 313
gatatttgct gattaagtcc ctggggtcta agtgaaagtt tttgctttga g 51

<210> 314
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #101 (IL2_R81E_D84E_L85V_I86V_V91T_I92F_F)

<400> 314
gaacccaggg aggtagtcag caatatcaac acatttgttc tgg 43

<210> 315
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #102 (IL2_R81E_D84E_L85V_I86V_V91T_I92F_R)

<400> 315
ccagaacaaa tgtgttgata ttgctgacta cctccctggg ttc 43

<210> 316
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #103 (IL2_R81E_F)

<400> 316
aaactttcac ttagaaccca gggacttaat c 31

<210> 317
<211> 31
<212> DNA
<213> Artificial Sequence

<220>

<223> primer #104 (IL2_R81E_R)

<400> 317
gattaagtcc ctgggttcta agtgaaagtt t 31

<210> 318
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #105 (IL2_P82G_F)

<400> 318
aactttcact tcgaaggcag ggacgtagtc agc 33

<210> 319
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #106 (IL2_P82G_R)

<400> 319
gctgactacg tccctgcctt cgaagtgaaa gtt 33

<210> 320
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #107 (IL2_P82V_F)

<400> 320
aactttcact tcgaagtcag ggacgtagtc agc 33

<210> 321
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #108 (IL2_P82V_R)

<400> 321
gctgactacg tccctgactt cgaagtgaaa gtt 33

<210> 322
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #109 (IL2_D84E_F)

<400> 322
cttaagaccc agggagttaa tcagcaatat caac 34

<210> 323
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #110 (IL2_D84E_R)

<400> 323
gttgatattg ctgattaact ccctgggtct taag 34

<210> 324
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #111 (IL2_D84F_F)

<400> 324
cacttagacc ccaggttctt aatcagcaat at 32

<210> 325
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #112 (IL2_D84F_R)

<400> 325
atattgctga ttaagaacct ggggtctaag tg 32

<210> 326
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #113 (IL2_D84V_F)

<400> 326
acttagaccc cagggtctta atcagcaata t 31

<210> 327
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #114 (IL2_D84V_R)

<400> 327
atattgctga ttaagaccct ggggtctaag t 31

<210> 328
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #115 (IL2_L85A_I86A_F)

<400> 328
ctttgacccc agggacgctg ccagcaatat caacg 35

<210> 329
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #116 (IL2_L85A_I86A_R)

<400> 329
cgttgatatt gctggcagcg tccctggggt caaag 35

<210> 330
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #117 (IL2_L85E_I86V_F)

<400> 330
cccagggacg aagtgagcaa tatcaacgta 30

<210> 331
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #118 (IL2_L85E_I86V_R)

<400> 331
tacgttgata ttgctcactt cgtccctggg 30

<210> 332
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #119 (IL2_L85F_I86L_F)

<400> 332
cccagggact tcctcagcaa tatcaac 27

<210> 333
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #120 (IL2_L85F_I86L_R)

<400> 333

gttgatattg ctgaggaagt ccctggg 27

<210> 334
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #121 (IL2_L85F_I86V_F)

<400> 334
cccagggact tcgtcagcaa tatcaac 27

<210> 335
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #122 (IL2_L85F_I86V_R)

<400> 335
gttgatattg ctgacgaagt ccctggg 27

<210> 336
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #123 (IL2_L85G_I86A_F)

<400> 336
cccagggacg gagccagcaa tatcaac 27

<210> 337
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #124 (IL2_L85G_I86A_R)

<400> 337
gttgatattg ctggctccgt ccctggg 27

<210> 338
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #125 (IL2_L85G_I86V_F)

<400> 338
ctttgacccc agggacggtg ttagcaatat caacg 35

<210> 339
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #126 (IL2_L85G_I86V_R)

<400> 339
cgttgatatt gctaacccag tccctggggt caaag 35

<210> 340
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #127 (IL2_L85I_I86V_F)

<400> 340
cccagggaca tagtcagcaa tatcaac 27

<210> 341
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #128 (IL2_L85I_I86V_R)

<400> 341
gttgatattg ctgactatgt ccctggg 27

<210> 342
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #129 (IL2_L85L_I86A_F)

<400> 342
cttcgaaccc agggacctgg ccagcaatat caac 34

<210> 343
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #130 (IL2_L85L_I86A_R)

<400> 343
gttgatattg ctggccaggt ccctgggttc gaag 34

<210> 344
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #131 (IL2_L85L_I86V_F)

<400> 344
ctttgagccc agggacttag tcagcaatat caac 34

<210> 345
<211> 34
<212> DNA
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<220>
<223> primer #132 (IL2_L85L_I86V_R)

<400> 345
gttgatattg ctgactaagt ccctgggctc aaag 34

<210> 346
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #133 (IL2_L85T_I86G_F)

<400> 346
cccagggaca caggcagcaa tatcaac 27

<210> 347
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #134 (IL2_L85T_I86G_R)

<400> 347
gttgatattg ctgcctgtgt ccctggg 27

<210> 348
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #135 (IL2_L85V_I86G_F)

<400> 348
cccagggacg taggcagcaa tatcaacgt 29

<210> 349
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #136 (IL2_L85V_I86G_R)

<400> 349
acgttgatat tgctgcctac gtccctggg 29

<210> 350

<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #137 (IL2_L85V_I86I_codon_F)

<400> 350
gaacccaggg acgtaatcag caatatcaac g 31

<210> 351
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #138 (IL2_L85V_I86I_codon_R)

<400> 351
cgttgatatt gctgattacg tccctgggtt c 31

<210> 352
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #139 (IL2_L85V_I86V_F)

<400> 352
gacccaggga cgtagtcagc aatatcaacg 30

<210> 353
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #140 (IL2_L85V_I86V_R)

<400> 353
cgttgatatt gctgactacg tccctgggtc 30

<210> 354
<211> 29

<212> DNA
<213> Artificial Sequence

<220>
<223> primer #141 (IL2_L85W_I86V_F)

<400> 354
cccagggact gggtcagcaa tatcaacgt 29

<210> 355
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #142 (IL2_L85W_I86V_R)

<400> 355
acgttgatat tgctgaccca gtccctggg 29

<210> 356
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #143 (IL2_L85W_I86V_Long_F)

<400> 356
tttgacccca gggactgggt cagcaatatc 30

<210> 357
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #144 (IL2_L85W_I86V_Long_R)

<400> 357
gatattgctg acccagtccc tggggtcaaa 30

<210> 358
<211> 34
<212> DNA

<213> Artificial Sequence

<220>
<223> primer #145 (IL2_L85Y_I86V_F)

<400> 358
cttcgaaccc agggactacg tcagcaatat caac 34

<210> 359
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #146 (IL2_L85Y_I86V_R)

<400> 359
gttgatattg ctgacgtagt ccctgggttc gaag 34

<210> 360
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #147 (IL2_I86V_V91T_I92F_F)

<400> 360
gtcagcaata tcaacacatt tgttctggaa c 31

<210> 361
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #148 (IL2_I86V_V91T_I92F_R)

<400> 361
gttccagaac aaatgtgttg atattgctga c 31

<210> 362
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #149 (IL2_S87C_F)

<400> 362
cccagggact taatctgcaa tatcaacgta ata 33

<210> 363
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #150 (IL2_S87C_R)

<400> 363
tattacgttg atattgcaga ttaagtccct ggg 33

<210> 364
<211> 34
<212> DNA
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<220>
<223> primer #151 (IL2_N88F_F)

<400> 364
cagggactta atcagcttta tcaacgtatt tgtt 34

<210> 365
<211> 34
<212> DNA
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<220>
<223> primer #152 (IL2_N88F_R)

<400> 365
aacaaatacg ttgataaagc tgattaagtc cctg 34

<210> 366
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #153 (IL2_N88Q_F)

<400> 366
gggacttaat cagccaaatc aacgtaatag ttc 33

<210> 367
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #154 (IL2_N88Q_R)

<400> 367
gaactattac gttgatttgg ctgattaagt ccc 33

<210> 368
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #155 (IL2_N88V_F)

<400> 368
cagggactta atcagcgtta tcaacgtatt tgtt 34

<210> 369
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #156 (IL2_N88V_R)

<400> 369
aacaaatacg ttgataacgc tgattaagtc cctg 34

<210> 370
<211> 33
<212> DNA
<213> Artificial Sequence

<220>

<223> primer #157 (IL2_I89F_F)

<400> 370
gacttaatca gcaatttcaa cgtaatagtt ctg 33

<210> 371
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #158 (IL2_I89F_R)

<400> 371
cagaactatt acgttgaaat tgctgattaa gtc 33

<210> 372
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #159 (IL2_V91E_I92F_F)

<400> 372
agcaatatca acgaattcgt tctggaacta aag 33

<210> 373
<211> 33
<212> DNA
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<220>
<223> primer #160 (IL2_V91E_I92F_R)

<400> 373
ctttagttcc agaacgaatt cgttgatatt gct 33

<210> 374
<211> 33
<212> DNA
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<220>
<223> primer #161 (IL2_V91E_I92W_F)

<400> 374
agcaatatca acgaatgggt tctggaacta aag 33

<210> 375
<211> 33
<212> DNA
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<220>
<223> primer #162 (IL2_V91E_I92W_R)

<400> 375
ctttagttcc agaacccatt cgttgatatt gct 33

<210> 376
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #163 (IL2_V91F_F)

<400> 376
cagcaatatc aactttatag ttctggaact aaag 34

<210> 377
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #164 (IL2_V91F_R)

<400> 377
ctttagttcc agaactataa agttgatatt gctg 34

<210> 378
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #165 (IL2_V91T_F)

<400> 378
cagcaatatc aacacaatag ttctggaact aaag 34

<210> 379
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #166 (IL2_V91T_R)

<400> 379
ctttagttcc agaactattg tgttgatatt gctg 34

<210> 380
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #167 (IL2_I92F_F)

<400> 380
gcaatatcaa cgtatttgtt ctggaactaa ag 32

<210> 381
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #168 (IL2_I92F_R)

<400> 381
ctttagttcc agaacaaata cgttgatatt gc 32

<210> 382
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #169 (IL2_I92F_F_long)

<400> 382
gacttaatca gcaatatcaa cgtatttgtt ctggaactaa agggatctg 49

<210> 383
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #170 (IL2_I92F_R_long)

<400> 383
cagatccctt tagttccaga acaaatacgt tgatattgct gattaagtc 49

<210> 384
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #171 (IL2_I92F_F_long2)

<400> 384
cttaatcagc aatatcaacg tatttgttct ggaactaaag ggatc 45

<210> 385
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #172 (IL2_I92F_R_long2)

<400> 385
gatcccttta gttccagaac aaatacgttg atattgctga ttaag 45

<210> 386
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #173 (IL2_I92F_L94F_L96F_F)

<400> 386

caacgtattt gttttcgaat tcaagggatc tg 32

<210> 387
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #174 (IL2_I92F_L94F_L96F_R)

<400> 387
cagatccctt gaattcgaaa acaaatacgt tg 32

<210> 388
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #175 (IL2_I92F_L94F_L96F_F)

<400> 388
gcaatatcaa cgtatttgtt ttcgaattta agggatctg 39

<210> 389
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #176 (IL2_I92F_L94F_L96F_R)

<400> 389
cagatccctt aaattcgaaa acaaatacgt tgatattgc 39

<210> 390
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #177 (IL2_I92F_L94F_L96I_F)

<400> 390
gcaatatcaa cgtatttgtt ttcgaaatta agggatctg 39

<210> 391
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #178 (IL2_I92F_L94F_L96I_R)

<400> 391
cagatccctt aatttcgaaa acaaatacgt tgatattgc 39

<210> 392
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #179 (IL2_I92F_L94F_L96V_F)

<400> 392
gcaatatcaa cgtatttgtt ttcgaagtaa agggatctg 39

<210> 393
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #180 (IL2_I92F_L94F_L96V_R)

<400> 393
cagatccctt tacttcgaaa acaaatacgt tgatattgc 39

<210> 394
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #181 (IL2_I92I_F)

<400> 394
gcaatatcaa cgtaattgtt ctggaactaa agg 33

<210> 395
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #182 (IL2_I92I_R)

<400> 395
cctttagttc cagaacaatt acgttgatat tgc 33

<210> 396
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #183 (IL2_I92L_F)

<400> 396
gcaatatcaa cgtattagtt ctggaactaa agg 33

<210> 397
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #184 (IL2_I92L_R)

<400> 397
cctttagttc cagaactaat acgttgatat tgc 33

<210> 398
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #185 (IL2_I92W_F)

<400> 398
agcaatatca acgtatgggt tctggaacta aag 33

<210> 399
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #186 (IL2_I92W_R)

<400> 399
ctttagttcc agaacccata cgttgatatt gct 33

<210> 400
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #187 (IL2_I92Y_F)

<400> 400
gcaatatcaa cgtatatgtt ctggaactaa ag 32

<210> 401
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #188 (IL2_I92Y_R)

<400> 401
ctttagttcc agaacatata cgttgatatt gc 32

<210> 402
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #189 (IL2_L94F_L96F_F)

<400> 402
cgtaatagtt ttcgaattta agggatctga aac 33

<210> 403

<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #190 (IL2_L94F_L96F_R)

<400> 403
gtttcagatc ccttaaattc gaaaactatt acg 33

<210> 404
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #191 (IL2_L94F_L96I_F)

<400> 404
cgtaatagtt ttcgaaatta agggatctga aac 33

<210> 405
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #192 (IL2_L94F_L96I_R)

<400> 405
gtttcagatc ccttaatttc gaaaactatt acg 33

<210> 406
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #193 (IL2_L94F_L96V_F)

<400> 406
cgtaatagtt ttcgaagtaa agggatctga aac 33

<210> 407
<211> 33

<212> DNA
<213> Artificial Sequence

<220>
<223> primer #194 (IL2_L94F_L96V_R)

<400> 407
gtttcagatc cctttacttc gaaaactatt acg 33

<210> 408
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #195 (IL2_E95D_F)

<400> 408
gttctggacc taaagggatc tgaaacaaca 30

<210> 409
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #196 (IL2_E95D_R)

<400> 409
tgttgtttca gatcccttta ggtccagaac 30

<210> 410
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #197 (IL2_C125S_F)

<400> 410
agatggatta cctttagtca aagcatcatc tca 33

<210> 411
<211> 33
<212> DNA

<213> Artificial Sequence

<220>
<223> primer #198 (IL2_C125S_R)

<400> 411
tgagatgatg ctttgactaa aggtaatcca tct 33

<210> 412
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #199 (IL2_Q126T_F)

<400> 412
gatggattac ctttagtaca agcatcatct caac 34

<210> 413
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #200 (IL2_Q126T_R)

<400> 413
gttgagatga tgcttgtact aaaggtaatc catc 34

<210> 414
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #201 (IL2_desA1_F)

<400> 414
taagaatata catatgccta cttcaagttc tac 33

<210> 415
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #202 (IL2_desA1_R)

<400> 415
gtagaacttg aagtaggcat atgtatattc tta 33

<210> 416
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #203 (IL2_NdeI_desA1_N-term)

<400> 416
cgccatatgc ctacttcaag ttctacaaag aaaa 34

<210> 417
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> primer #204 (IL2_BHI_C-term)

<400> 417
cgggatcctc aagtcagtgt tgagatgatg cttt 34

<210> 418
<211> 12
<212> PRT
<213> HOMO SAPIENS

<400> 418
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro
  1   5   10

<210> 419
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 419
Glu Ser Lys Tyr Gly Pro Pro Pro Ser Cys Pro
1 5 10

<210> 420
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 420
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Pro
1 5 10

<210> 421
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 421
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser
1 5 10

<210> 422
<211> 10
<212> PRT
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<220>
<223> Variant of hinge region

<400> 422
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro
1 5 10

<210> 423
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 423
Lys Tyr Gly Pro Pro Cys Pro Ser
  1   5

<210> 424
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 424
Glu Ser Lys Tyr Gly Pro Pro Cys
  1   5

<210> 425
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 425
Glu Lys Tyr Gly Pro Pro Cys
  1   5

<210> 426
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 426
Glu Ser Pro Ser Cys Pro
  1   5

<210> 427
<211> 5

<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 427
Glu Pro Ser Cys Pro
  1   5

<210> 428
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 428
Pro Ser Cys Pro
  1

<210> 429
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 429
Glu Ser Lys Tyr Gly Pro Pro Ser Cys Pro
  1   5   10

<210> 430
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 430
Lys Tyr Gly Pro Pro Pro Ser Cys Pro
  1   5

<210> 431
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 431
Glu Ser Lys Tyr Gly Pro Ser Cys Pro
  1   5

<210> 432
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 432
Glu Ser Lys Tyr Gly Pro Pro Cys
  1   5

<210> 433
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 433
Lys Tyr Gly Pro Pro Cys Pro
  1   5

<210> 434
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 434

Glu Ser Lys Pro Ser Cys Pro
1 5

<210> 435
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 435
Glu Ser Pro Ser Cys Pro
1 5

<210> 436
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 436
Glu Pro Ser Cys
1

<210> 437
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 437
Ser Cys Pro
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<210> 438
<211> 221
<212> PRT
<213> homo sapiens

<400> 438
Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu

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  1               5                  10                  15

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

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
         35                  40                  45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
     50                  55                  60

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

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
                 85                  90                  95

Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys
            100                 105                 110

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

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
    130                 135                 140

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
145                 150                 155                 160

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
                165                 170                 175

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
            180                 185                 190

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
        195                 200                 205

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
    210                 215                 220
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<210> 439
<211> 442
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(442)
<223> Amino acids at position 1 to 442 form Human Immunoglobulin G4 Fc Fragment (homodimer)

<220>
<221> MISC_FEATURE
<222> (1)..(221)
<223> Amino acids at position 1 to 221 form one monomer

<220>
<221> MISC_FEATURE
<222> (222)..(442)
<223> Amino acids at position 222 to 442 form one monomer

<220>
<221> DISULFID
<222> (3)..(224)
<223> Amino acids at position 3 and position 224 form an
       inter-disulfide bond

<220>
<221> DISULFID
<222> (35)..(95)
<223> Amino acids at position 35 and position 95 form an intra-chain
       disulfide bond

<220>
<221> DISULFID
<222> (141)..(199)
<223> Amino acids at position 141 and position 199 form an intra-chain
       disulfide bond

<220>
<221> DISULFID
<222> (256)..(316)
<223> Amino acids at position 256 and position 316 form an intra-chain
       disulfide bond

<220>
<221> DISULFID
<222> (362)..(420)
<223> Amino acids at position 362 and position 420 form an intra-chain
       disulfide bond

<400> 439
Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu
  1   5   10   15

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu

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            20                  25                  30

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
         35                  40                  45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
     50                  55                  60

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

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
                 85                  90                  95

Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys
            100                 105                 110

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

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
    130                 135                 140

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
145                 150                 155                 160

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
                165                 170                 175

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
            180                 185                 190

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
        195                 200                 205

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys Pro Ser Cys
    210                 215                 220

Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
225                 230                 235                 240

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
                245                 250                 255

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
            260                 265                 270

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
        275                 280                 285

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
    290                 295                 300
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His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
305                 310                 315                 320

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
                325                 330                 335

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
            340                 345                 350

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
        355                 360                 365

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
    370                 375                 380

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

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
                405                 410                 415

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
            420                 425                 430

Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
        435                 440
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