SEQUENCE LISTING

<110> Molecular Partners AG

<120> RECOMBINANT FAP BINDING PROTEINS AND THEIR USE

<130> P5618PC00

<150> EP19178277.0
<151> 2019-06-04

<160> 160

<170> PatentIn version 3.5

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<400> 1

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Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1               5                  10                  15


Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
            20                  25                  30


Lys Asp Gln Tyr Gly Ile Thr Pro Leu His Leu Ala Ala Phe Arg Gly
        35                  40                  45


His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Gly Val Asn
    50                  55                  60


Ala Asp Asp Met Asp Gly Arg Thr Pro Leu His Pro Ala Ala Tyr Lys
65                  70                  75                  80


Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp Val
                85                  90                  95


Asn Ala Gln Asp Lys Phe Gly Lys Thr Ala Phe Asp Ile Ser Ile Asp
            100                 105                 110


Asn Gly Asn Glu Asp Leu Ala Glu Ile Leu Gln Lys Leu Asn
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115 120 125

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<211> 159
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<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 2

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Ile Asn Ala
20 25 30

Lys Asp Lys Tyr Gly Val Thr Pro Leu His Leu Ala Ala Trp Ala Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp Tyr Arg Gly Phe Thr Pro Leu His Leu Ala Ala Glu
100 105 110

Asp Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 3

<211> 159
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<213> Artificial Sequence

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<400> 3

Gly Ser Asp Met Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Met Ala Asn Gly Ala Asp Val Asn Ala
20 25 30

Phe Asp Gln Val Gly Arg Thr Pro Leu His Leu Asp Ala Leu Ala Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val Asn
50 55 60

Ala Ala Asp Met Phe Gly Ile Thr Pro Leu His Leu Ala Ala Phe Ile
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val
85 90 95

Asn Ala Tyr Asp Leu Asp Gly Arg Thr Pro Leu His Pro Ala Ala Tyr
100 105 110

His Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Phe Gly Lys Thr Ala Phe Asp Ile Ser Ile
130 135 140

Asp Asn Gly Asn Glu Asp Leu Ala Glu Ile Leu Gln Lys Leu Asn
145 150 155

<210> 4
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<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 4

Gly Ser Asp Leu Gly His Lys Leu Leu Glu Ala Ala Thr Gln Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
            20   25   30

Lys Asp Glu His Gly Lys Thr Pro Leu His Leu Ala Ala Lys Lys Gly
        35   40   45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50   55   60

Ala Lys Asp Asp Trp Gly Val Thr Pro Leu His Leu Ala Ala Tyr Trp
65   70   75   80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85   90   95

Asn Ala Gln Asp Asn Asp Gly Tyr Thr Pro Ala Asp Leu Ala Ala Thr
            100   105   110

Phe Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
        115   120   125

<210> 5
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<220>
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<400> 5

Gly Ser Asp Leu Gly Tyr Thr Leu Leu Glu Ala Ala Arg Arg Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

Lys Asp Thr Ile Gly Tyr Thr Pro Leu His Tyr Ala Ala Gln Val Gly
        35   40   45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50   55   60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85   90   95

Asn Ala Gln Asp Ser Lys Gly Arg Thr Pro Ala Asp Leu Ala Ala Glu
            100   105   110

Gln Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
        115   120   125

<210> 6
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<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 6

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

Lys Asp Glu Trp Gly Lys Thr Pro Leu His Tyr Ala Ala Ala Leu Gly
        35   40   45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50   55   60

Ala Lys Asp Gln Tyr Gly Ala Thr Pro Leu His Ile Ala Ala Phe Ala
65   70   75   80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp Ala Trp Gly Phe Thr Pro Leu His Leu Ala Ala Thr
100 105 110

Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Val Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 7
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<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 7

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Glu Trp Gly Lys Thr Pro Leu His Leu Ala Ala Ala Leu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Ala Trp Gly Ala Thr Pro Leu His Val Ala Ala Phe Ala
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

```
Asn Ala Lys Asp Thr Ile Gly Phe Thr Pro Leu His Leu Ala Ala His
            100                 105                 110


Ser Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
        115                 120                 125


Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
    130                 135                 140


Asp Ala Gly His Glu Asp Ile Val Glu Val Leu Gln Lys Leu Asn
145                 150                 155


<210>  8
<211>  159
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<213>  Artificial Sequence

<220>
<223>  ankyrin repeat domain

<400>  8

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1               5                   10                  15


Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20                  25                  30


Lys Asp Gln His Gly Lys Thr Pro Leu His Tyr Ala Ala Ala Leu Gly
        35                  40                  45


His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50                  55                  60


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


Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85                  90                  95


Asn Ala Lys Asp Glu Val Gly Trp Thr Pro Leu His Leu Ala Ala Arg
            100                 105                 110
```

Phe Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
        115   120   125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
    130   135   140

Asp Ala Gly His Glu Asp Ile Val Glu Val Leu Gln Lys Leu Asn
145   150   155

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

<220>
<223> ankyrin repeat domain

<400> 9

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Ile Leu Met Ala Asn Gly Ala Asp Val Asn Ala
            20   25   30

Phe Asp Thr Thr Gly Arg Thr Pro Leu His Leu Ala Ala Leu Trp Gly
        35   40   45

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val Asn
    50   55   60

Ala Ser Asp Trp Phe Ser Ile Thr Pro Leu His Leu Ala Ala Phe Met
65   70   75   80

Gly His Leu Glu Ile Val Glu Val Leu Leu Asn His Gly Ala Asp Val
                85   90   95

Asn Ala Gln Asp Lys Phe Gly Lys Thr Ala Phe Asp Ile Ser Ile Asp
            100   105   110

His Gly Asn Glu Asp Leu Ala Glu Ile Leu Gln Lys Leu Asn
        115   120   125

<210> 10
<211> 126
<212> PRT
<213> Artificial Sequence

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<223> ankyrin repeat domain

<400> 10

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Thr Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Glu Tyr Gly Ile Thr Pro Leu His Leu Ala Ala Phe Arg Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val Asn
50 55 60

Ala Ile Asp Tyr Asn Gly Arg Thr Pro Leu His Pro Ala Ala Tyr Ser
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val
85 90 95

Asn Ala Gln Asp Lys Phe Gly Lys Thr Ala Phe Asp Ile Ser Ile Asp
100 105 110

Asn Gly Asn Glu Asp Leu Ala Glu Ile Leu Gln Lys Leu Asn
115 120 125

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

<220>
<223> ankyrin repeat domain

<400> 11

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln

1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Thr Trp Gly Trp Thr Pro Leu His Leu Ala Ala Lys Ser Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Tyr His Gly Val Thr Pro Leu His Leu Ala Thr Phe Trp
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp Trp Tyr Gly Glu Thr Pro Leu His Leu Ala Ala Ile
100 105 110

Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 12
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 12

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Ser Ala

20 25 30

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

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Val Arg Gly Val Thr Pro Leu His Leu Ala Ala Phe His
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp Tyr Ala Gly His Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Leu Glu Ile Ile Glu Asp Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 13
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 13

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Asp Trp Gly Trp Thr Pro Leu His Leu Ala Ala Arg His Gly

```
        35                  40                  45

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

Ala Lys Asp Lys Arg Gly Val Thr Pro Leu His Leu Ala Ala Tyr Ile
65                  70                  75                  80

Gly His Leu Glu Ile Ala Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85                  90                  95

Asn Ala Lys Asp Phe Gln Gly Trp Thr Pro Leu His Leu Ala Ala Val
            100                 105                 110

Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
        115                 120                 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
    130                 135                 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145                 150                 155
```

<210> 14
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 14

```
Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1               5                   10                  15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
            20                  25                  30

Lys Asp Tyr Ser Gly Arg Thr Pro Leu His Leu Ala Ala Leu Thr Gly
        35                  40                  45

His Leu Glu Ile Val Lys Val Leu Leu Lys His Gly Ala Asp Val Asn
```

```
    50                  55                  60

Ala Ser Asp Asp Tyr Gly Ile Thr Pro Leu His Leu Asp Ala Phe Ile
65                  70                  75                  80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp Val
                85                  90                  95

Asn Ala Met Asp Tyr Gln Gly Arg Thr Pro Leu His Pro Ala Ala Tyr
            100                 105                 110

Thr Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp
        115                 120                 125

Val Asn Ala Gln Asp Lys Phe Gly Lys Thr Ala Phe Asp Ile Ser Ile
    130                 135                 140

Asp Asn Gly Asn Glu Asp Leu Ala Glu Ile Leu Gln Lys Leu Asn
145                 150                 155
```

<210> 15
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
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<400> 15

```
Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1               5                   10                  15

Asp Asp Glu Val Arg Ile Leu Met Ala Asn Gly Ala Asp Val Asn Ala
            20                  25                  30

Phe Asp Ala Ile Gly Arg Thr Pro Leu His Leu Ala Ala Leu Tyr Gly
        35                  40                  45

His Leu Glu Ile Val Glu Val Leu Leu Lys His Val Ala Asp Val Asn
    50                  55                  60

Ala Thr Asp Glu Tyr Gly Ile Thr Pro Leu His Leu Ala Ala Phe Met
```

65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val
85 90 95

Asn Ala Ile Asp Phe Asp Gly Arg Thr Pro Leu His Pro Ala Ala Tyr
100 105 110

Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Phe Gly Lys Thr Ala Phe Asp Ile Ser Ile
130 135 140

Asp Asn Gly Asn Glu Asp Leu Ala Glu Ile Leu Gln Lys Leu Asn
145 150 155

<210> 16
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 16

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Met Ala Asn Gly Thr Asp Val Asn Ala
20 25 30

Thr Asp Met Thr Gly Arg Thr Pro Leu His Leu Ala Ala Leu Tyr Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val Asn
50 55 60

Ala Leu Asp Lys Phe Gly Ile Thr Pro Leu His Leu Ala Ala Phe Met
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val

85 90 95

Asn Ala Ala Asp Leu Asp Gly Arg Thr Pro Leu His Pro Thr Ala Tyr
100 105 110

Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Phe Gly Lys Thr Ala Phe Asp Ile Ser Ile
130 135 140

Asp Asn Gly Asn Glu Asp Leu Ala Glu Ile Leu Gln Lys Leu Asn
145 150 155

<210> 17
<211> 159
<212> PRT
<213> Artificial Sequence

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<400> 17

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Met Ala Asn Gly Ala Asp Val Asn Ala
20 25 30

Thr Asp Leu Met Gly Arg Thr Pro Leu His Leu Ala Ala Ser Arg Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp Val Asn
50 55 60

Ala Asp Asp Lys Tyr Gly Ile Thr Ser Leu His Leu Ala Ala Phe Leu
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val
85 90 95

Asn Ala Ile Asp Phe Asp Gly Arg Thr Pro Leu His Pro Ala Ala Tyr

100 105 110

Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Phe Gly Gln Thr Ala Phe Asp Ile Ser Ile
130 135 140

Asp Asn Gly Asn Glu Asp Leu Ala Glu Ile Leu Gln Lys Leu Asn
145 150 155

<210> 18
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
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<400> 18

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp

115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 19
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
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<400> 19

Gly Ser Asp Leu Gly Glu Lys Leu Leu Val Ala Ala Leu Tyr Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Gln Trp Gly Leu Thr Pro Leu His Lys Ala Ala Leu Gln Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Gln Asp Gln Lys Gly Tyr Thr Pro Ala Asp Leu Ala Ala Leu
100 105 110

Trp Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
115 120 125

<210> 20

<211> 126
<212> PRT
<213> Artificial Sequence

<220>
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<400> 20

Gly Ser Asp Leu Gly Glu Lys Leu Leu Ile Ala Ala Leu Phe Gly Gln
1 5 10 15

Asp Glu Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Glu Trp Gly His Thr Pro Leu His Lys Ala Ala Leu Ser Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Gln Asp His Ile Gly Arg Thr Pro Ala Asp Leu Ala Ala Asn
100 105 110

Phe Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
115 120 125

<210> 21
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 21

Gly Ser Asp Leu Gly Gln Lys Leu Leu Asn Ala Ala Phe Ile Gly Gln
1 5 10 15

```
Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Gly Val Asn Ala
            20                  25                  30

Lys Asp Arg His Gly His Thr Pro Leu His Val Thr Ala His His Gly
        35                  40                  45

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

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

Asp His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85                  90                  95

Asn Ala Gln Asp Ala His Gly Arg Thr Pro Ala Asp Leu Ala Ala Gln
            100                 105                 110

Leu Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
        115                 120                 125


<210>  22
<211>  126
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  ankyrin repeat domain

<400>  22

Gly Ser Asp Leu Gly Asp Lys Leu Leu Thr Ala Ala Asn Tyr Gly Gln
1               5                   10                  15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
            20                  25                  30

Lys Asp Arg Phe Gly His Thr Pro Leu His Val Ala Ala His Phe Gly
        35                  40                  45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50                  55                  60
```

```
Ala Lys Asp Ser Leu Gly His Thr Pro Leu His Leu Ala Ala Glu Ala
65                  70                  75                  80


Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85                  90                  95


Asn Ala Gln Asp Phe His Gly Ile Thr Pro Ala Asp Leu Ala Ala His
            100                 105                 110


Gln Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
        115                 120                 125


<210>  23
<211>  126
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  ankyrin repeat domain

<400>  23

Gly Ser Asp Leu Gly Leu Lys Leu Leu Ser Ala Ala Gln Val Gly Gln
1               5                   10                  15


Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Val
            20                  25                  30


Lys Asp Gln Phe Gly His Thr Pro Leu His Val Ala Thr His Phe Gly
        35                  40                  45


His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50                  55                  60


Ala Lys Asp Ala Leu Gly His Thr Pro Leu His Leu Ala Ala Glu Ala
65                  70                  75                  80


Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85                  90                  95


Asn Ala Gln Asp Ala His Gly Arg Thr Pro Ala Asp Leu Ala Ala Gln
            100                 105                 110
```

Leu Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
        115   120   125

<210> 24
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 24

Gly Ser Asp Leu Gly Glu Lys Leu Leu Glu Ala Ala Arg Arg Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

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

His Leu Glu Ile Val Glu Val Leu Leu Lys Asp Gly Ala Asp Val Asn
    50   55   60

Ala Lys Asp Glu Trp Gly Ala Thr Pro Leu His Val Ala Ala Tyr Lys
65   70   75   80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85   90   95

Asn Ala Gln Asp Leu Tyr Gly Lys Thr Pro Ala Asp Leu Ala Ala Glu
            100   105   110

Gln Gly His Glu Asp Ile Glu Glu Val Leu Gln Lys Leu Asn
        115   120   125

<210> 25
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 25

Gly Ser Asp Leu Gly Tyr Lys Leu Leu Glu Ala Ala Arg Arg Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

Lys Asp Val Ile Gly Tyr Thr Pro Leu His Tyr Ala Ala Ser Glu Gly
        35   40   45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50   55   60

Ala Lys Asp Thr Lys Gly Ile Thr Pro Leu His Val Ala Ala Ser Thr
65   70   75   80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85   90   95

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

Gln Gly His Glu Asp Ile Gly Glu Val Leu Gln Lys Leu Asn
        115   120   125

<210> 26
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 26

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

Lys Asp Glu Val Gly Arg Thr Pro Leu His Leu Ala Ala Gln Ile Gly

```
        35                  40                  45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50                  55                  60

Ala Lys Asn Arg Trp Gly Val Thr Pro Leu His Val Ala Ala Trp Val
65                  70                  75                  80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85                  90                  95

Asn Ala Lys Asp Gln Gln Gly Ala Thr Pro Leu His Leu Ala Ala Ile
            100                 105                 110

Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
        115                 120                 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
    130                 135                 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145                 150                 155


<210>  27
<211>  159
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  ankyrin repeat domain

<400>  27

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1               5                   10                  15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20                  25                  30

Lys Asp Glu Trp Asp Lys Thr Pro Leu His Tyr Ala Ala Ala Leu Gly
        35                  40                  45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
```

```
    50                  55                  60

Ala Lys Asp Val Trp Gly Ala Thr Pro Leu His Ile Ala Ala Phe Ala
65                  70                  75                  80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85                  90                  95

Asn Ala Lys Asp Thr Leu Gly Tyr Thr Pro Leu His Leu Ala Ala Thr
            100                 105                 110

Arg Gly His Leu Glu Ile Val Glu Ala Leu Leu Lys Ala Gly Ala Asp
        115                 120                 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
    130                 135                 140

Asp Val Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145                 150                 155


<210>  28
<211>  159
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  ankyrin repeat domain

<400>  28

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1               5                   10                  15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20                  25                  30

Lys Asp Glu Trp Gly Lys Thr Pro Leu His Tyr Ala Ala Ala Leu Gly
        35                  40                  45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50                  55                  60

Ala Lys Asp Arg Trp Gly Ala Thr Pro Leu His Ile Ala Ala Phe Ala
```

65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp Glu Val Gly Trp Thr Pro Leu His Leu Ala Ala Arg
100 105 110

Ser Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Val Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Val Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 29
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 29

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Thr Ile Gly Arg Thr Pro Leu His Ile Ala Ala Arg Tyr Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val

85 90 95

Asn Ala Lys Asp Tyr Glu Gly Thr Thr Pro Leu His Val Ala Ala Trp
100 105 110

His Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 30
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 30

Gly Ser Asp Met Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

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

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Lys His Gly Val Thr Pro Leu His Leu Ala Ala Trp Arg
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp Ile Gln Gly Leu Thr Pro Leu His Ile Ala Ala His

100 105 110

Gln Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 31
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 31

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Glu Phe Gly Lys Thr Pro Leu His Leu Ala Ala Ala Leu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Gly Leu Trp Gly Glu Thr Pro Leu His Val Ala Ala Phe Ala
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp Thr Tyr Gly Tyr Thr Pro Leu His Leu Ala Ala Ser
100 105 110

Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp

115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 32
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 32

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Glu Trp Asp Lys Thr Pro Leu His Leu Ala Ala Ala Leu Asp
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Gln Tyr Gly Ala Thr Pro Leu His Val Ala Ala Phe Ala
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp Leu Phe Gly Trp Thr Pro Leu His Leu Ala Ala Leu
100 105 110

Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala

```
    130                 135                 140

Asp Ala Gly His Glu Asp Ile Val Glu Val Leu Gln Lys Leu Asn
145                 150                 155


<210>  33
<211>  159
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  ankyrin repeat domain

<400>  33

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1               5                   10                  15


Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20                  25                  30


Lys Asp Glu Trp Gly Lys Thr Pro Leu His Leu Ala Ala Ile Arg Gly
        35                  40                  45


His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50                  55                  60


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


Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85                  90                  95


Asn Ala Lys Asp Tyr Leu Gly Arg Thr Pro Leu His Ile Ala Ala Ala
            100                 105                 110


Lys Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
        115                 120                 125


Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
    130                 135                 140


Asp Ala Gly His Glu Asp Ile Val Glu Val Leu Gln Lys Leu Asn
```

145 150 155

<210> 34
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 34

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
145 150 155

<210> 35

<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 35

Gly Ser Asp Leu Gly Glu Lys Leu Leu Val Ala Ala Leu Tyr Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Gln Trp Gly Leu Thr Pro Leu His Lys Ala Ala Leu Gln Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Gln Asp Gln Lys Gly Tyr Thr Pro Ala Asp Leu Ala Ala Leu
100 105 110

Trp Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
115 120 125

<210> 36
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> His-tag

<400> 36

Met Arg Gly Ser His His His His His His
1 5 10

<210> 37
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> His-HA-tag

<400> 37

Met Arg Gly Ser His His His His His His Gly Ser Tyr Pro Tyr Asp
1 5 10 15

Val Pro Asp Tyr Ala
20

<210> 38
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 38

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
35 40 45

His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Asn Glu
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp

100 105 110

Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
115 120 125

<210> 39
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> PT-linker

<400> 39

Gly Ser Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr Pro Thr Thr
1 5 10 15

Pro Thr Pro Thr Pro Thr Gly Ser
20

<210> 40
<211> 307
<212> PRT
<213> Artificial Sequence

<220>
<223> protein comprising two ankyrin repeat domains

<400> 40

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
35 40 45

His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Asn Glu
65 70 75 80

```
Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
               85                  90                  95

Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
            100                 105                 110

Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala Gly Ser
        115                 120                 125

Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr Pro Thr Thr Pro Thr
    130                 135                 140

Pro Thr Pro Thr Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala
145                 150                 155                 160

Arg Ala Gly Gln Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala
               165                 170                 175

Asp Val Asn Ala Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala
            180                 185                 190

Ala Phe Glu Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly
        195                 200                 205

Ala Asp Val Asn Ala Lys Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu
    210                 215                 220

Ala Ala Arg Thr Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala
225                 230                 235                 240

Gly Ala Asp Val Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His
               245                 250                 255

Leu Ala Ala Trp Gln Gly His Pro Glu Ile Val Glu Val Leu Leu Lys
            260                 265                 270

Ala Gly Ala Asp Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala
        275                 280                 285

Asp Leu Ala Ala Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln
```

290 295 300

Lys Ala Ala
305

<210> 41
<211> 274
<212> PRT
<213> Artificial Sequence

<220>
<223> protein comprising two ankyrin repeat domains

<400> 41

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
35 40 45

His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Asn Glu
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
100 105 110

Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala Gly Ser
115 120 125

Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr Pro Thr Thr Pro Thr
130 135 140

Pro Thr Pro Thr Gly Ser Asp Leu Gly Glu Lys Leu Leu Val Ala Ala

145 150 155 160

Leu Tyr Gly Gln Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala
165 170 175

Asp Val Asn Ala Lys Asp Gln Trp Gly Leu Thr Pro Leu His Lys Ala
180 185 190

Ala Leu Gln Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly
195 200 205

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

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

Gly Ala Asp Val Asn Ala Gln Asp Gln Lys Gly Tyr Thr Pro Ala Asp
245 250 255

Leu Ala Ala Leu Trp Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys
260 265 270

Ala Ala

<210> 42
<211> 307
<212> PRT
<213> Artificial Sequence

<220>
<223> protein comprising two ankyrin repeat domains

<400> 42

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly

```
        35                  40                  45

His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50                  55                  60

Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Asn Glu
65                  70                  75                  80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85                  90                  95

Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
            100                 105                 110

Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala Gly Ser
        115                 120                 125

Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr Pro Thr Thr Pro Thr
    130                 135                 140

Pro Thr Pro Thr Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala
145                 150                 155                 160

Arg Ala Gly Gln Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala
                165                 170                 175

Asp Val Asn Ala Lys Asp Glu Val Gly Arg Thr Pro Leu His Leu Ala
            180                 185                 190

Ala Gln Ile Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly
        195                 200                 205

Ala Asp Val Asn Ala Lys Asn Arg Trp Gly Val Thr Pro Leu His Val
    210                 215                 220

Ala Ala Trp Val Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala
225                 230                 235                 240

Gly Ala Asp Val Asn Ala Lys Asp Gln Gln Gly Ala Thr Pro Leu His
                245                 250                 255
```

Leu Ala Ala Ile Arg Gly His Leu Glu Ile Val Glu Val Leu Leu Lys
260 265 270

Ala Gly Ala Asp Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala
275 280 285

Asp Leu Ala Ala Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln
290 295 300

Lys Ala Ala
305

<210> 43
<211> 274
<212> PRT
<213> Artificial Sequence

<220>
<223> protein comprising two ankyrin repeat domains

<400> 43

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
35 40 45

His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Asn Glu
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
100 105 110

```
Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala Gly Ser
        115                 120                 125

Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr Pro Thr Thr Pro Thr
    130                 135                 140

Pro Thr Pro Thr Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala
145                 150                 155                 160

Arg Ala Gly Gln Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala
                165                 170                 175

Asp Val Asn Ala Lys Asp Lys Asp Gly Tyr Thr Pro Leu His Leu Ala
            180                 185                 190

Ala Arg Glu Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly
        195                 200                 205

Ala Asp Val Asn Ala Lys Asp Lys Asp Gly Tyr Thr Pro Leu His Leu
    210                 215                 220

Ala Ala Arg Glu Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala
225                 230                 235                 240

Gly Ala Asp Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp
                245                 250                 255

Leu Ala Ala Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys
            260                 265                 270

Ala Ala
```

<210> 44
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 44

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Lys Asp Gly Tyr Thr Pro Leu His Leu Ala Ala Arg Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Lys Asp Gly Tyr Thr Pro Leu His Leu Ala Ala Arg Glu
65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Asp
100 105 110

Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
115 120 125

<210> 45
<211> 741
<212> PRT
<213> Artificial Sequence

<220>
<223> His-tagged extracellular domain of human FAP

<400> 45

His His His His His His Leu Arg Pro Ser Arg Val His Asn Ser Glu
1 5 10 15

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

Phe Ser Tyr Lys Thr Phe Phe Pro Asn Trp Ile Ser Gly Gln Glu Tyr
35 40 45

```
Leu His Gln Ser Ala Asp Asn Asn Ile Val Leu Tyr Asn Ile Glu Thr
    50                  55                  60

Gly Gln Ser Tyr Thr Ile Leu Ser Asn Arg Thr Met Lys Ser Val Asn
65                  70                  75                  80

Ala Ser Asn Tyr Gly Leu Ser Pro Asp Arg Gln Phe Val Tyr Leu Glu
                85                  90                  95

Ser Asp Tyr Ser Lys Leu Trp Arg Tyr Ser Tyr Thr Ala Thr Tyr Tyr
            100                 105                 110

Ile Tyr Asp Leu Ser Asn Gly Glu Phe Val Arg Gly Asn Glu Leu Pro
        115                 120                 125

Arg Pro Ile Gln Tyr Leu Cys Trp Ser Pro Val Gly Ser Lys Leu Ala
    130                 135                 140

Tyr Val Tyr Gln Asn Asn Ile Tyr Leu Lys Gln Arg Pro Gly Asp Pro
145                 150                 155                 160

Pro Phe Gln Ile Thr Phe Asn Gly Arg Glu Asn Lys Ile Phe Asn Gly
                165                 170                 175

Ile Pro Asp Trp Val Tyr Glu Glu Glu Met Leu Ala Thr Lys Tyr Ala
            180                 185                 190

Leu Trp Trp Ser Pro Asn Gly Lys Phe Leu Ala Tyr Ala Glu Phe Asn
        195                 200                 205

Asp Thr Asp Ile Pro Val Ile Ala Tyr Ser Tyr Tyr Gly Asp Glu Gln
    210                 215                 220

Tyr Pro Arg Thr Ile Asn Ile Pro Tyr Pro Lys Ala Gly Ala Lys Asn
225                 230                 235                 240

Pro Val Val Arg Ile Phe Ile Ile Asp Thr Thr Tyr Pro Ala Tyr Val
                245                 250                 255

Gly Pro Gln Glu Val Pro Val Pro Ala Met Ile Ala Ser Ser Asp Tyr
```

```
            260                 265                 270

Tyr Phe Ser Trp Leu Thr Trp Val Thr Asp Glu Arg Val Cys Leu Gln
        275                 280                 285

Trp Leu Lys Arg Val Gln Asn Val Ser Val Leu Ser Ile Cys Asp Phe
    290                 295                 300

Arg Glu Asp Trp Gln Thr Trp Asp Cys Pro Lys Thr Gln Glu His Ile
305                 310                 315                 320

Glu Glu Ser Arg Thr Gly Trp Ala Gly Gly Phe Phe Val Ser Thr Pro
                325                 330                 335

Val Phe Ser Tyr Asp Ala Ile Ser Tyr Tyr Lys Ile Phe Ser Asp Lys
            340                 345                 350

Asp Gly Tyr Lys His Ile His Tyr Ile Lys Asp Thr Val Glu Asn Ala
        355                 360                 365

Ile Gln Ile Thr Ser Gly Lys Trp Glu Ala Ile Asn Ile Phe Arg Val
    370                 375                 380

Thr Gln Asp Ser Leu Phe Tyr Ser Ser Asn Glu Phe Glu Glu Tyr Pro
385                 390                 395                 400

Gly Arg Arg Asn Ile Tyr Arg Ile Ser Ile Gly Ser Tyr Pro Pro Ser
                405                 410                 415

Lys Lys Cys Val Thr Cys His Leu Arg Lys Glu Arg Cys Gln Tyr Tyr
            420                 425                 430

Thr Ala Ser Phe Ser Asp Tyr Ala Lys Tyr Tyr Ala Leu Val Cys Tyr
        435                 440                 445

Gly Pro Gly Ile Pro Ile Ser Thr Leu His Asp Gly Arg Thr Asp Gln
    450                 455                 460

Glu Ile Lys Ile Leu Glu Glu Asn Lys Glu Leu Glu Asn Ala Leu Lys
465                 470                 475                 480
```

```
Asn Ile Gln Leu Pro Lys Glu Glu Ile Lys Lys Leu Glu Val Asp Glu
                485                 490                 495

Ile Thr Leu Trp Tyr Lys Met Ile Leu Pro Pro Gln Phe Asp Arg Ser
            500                 505                 510

Lys Lys Tyr Pro Leu Leu Ile Gln Val Tyr Gly Gly Pro Cys Ser Gln
        515                 520                 525

Ser Val Arg Ser Val Phe Ala Val Asn Trp Ile Ser Tyr Leu Ala Ser
    530                 535                 540

Lys Glu Gly Met Val Ile Ala Leu Val Asp Gly Arg Gly Thr Ala Phe
545                 550                 555                 560

Gln Gly Asp Lys Leu Leu Tyr Ala Val Tyr Arg Lys Leu Gly Val Tyr
                565                 570                 575

Glu Val Glu Asp Gln Ile Thr Ala Val Arg Lys Phe Ile Glu Met Gly
            580                 585                 590

Phe Ile Asp Glu Lys Arg Ile Ala Ile Trp Gly Trp Ser Tyr Gly Gly
        595                 600                 605

Tyr Val Ser Ser Leu Ala Leu Ala Ser Gly Thr Gly Leu Phe Lys Cys
    610                 615                 620

Gly Ile Ala Val Ala Pro Val Ser Ser Trp Glu Tyr Tyr Ala Ser Val
625                 630                 635                 640

Tyr Thr Glu Arg Phe Met Gly Leu Pro Thr Lys Asp Asp Asn Leu Glu
                645                 650                 655

His Tyr Lys Asn Ser Thr Val Met Ala Arg Ala Glu Tyr Phe Arg Asn
            660                 665                 670

Val Asp Tyr Leu Leu Ile His Gly Thr Ala Asp Asp Asn Val His Phe
        675                 680                 685

Gln Asn Ser Ala Gln Ile Ala Lys Ala Leu Val Asn Ala Gln Val Asp
```

690 695 700

Phe Gln Ala Met Trp Tyr Ser Asp Gln Asn His Gly Leu Ser Gly Leu
705 710 715 720

Ser Thr Asn His Leu Tyr Thr His Met Thr His Phe Leu Lys Gln Cys
725 730 735

Phe Ser Leu Ser Asp
740

<210> 46
<211> 741
<212> PRT
<213> Artificial Sequence

<220>
<223> His-tagged extracellular domain of cynomolgus FAP

<400> 46

His His His His His His Leu Arg Pro Pro Arg Val His Asn Ser Glu
1 5 10 15

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

Phe Ser Tyr Lys Thr Phe Phe Pro Asn Trp Ile Ser Gly Gln Glu Tyr
35 40 45

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

Gly Gln Ser Tyr Thr Ile Leu Ser Asn Arg Thr Met Lys Ser Val Asn
65 70 75 80

Ala Ser Asn Tyr Gly Leu Ser Pro Asp Arg Gln Phe Val Tyr Leu Glu
85 90 95

Ser Asp Tyr Ser Lys Leu Trp Arg Tyr Ser Tyr Thr Ala Thr Tyr Tyr
100 105 110

Ile Tyr Asp Leu Ser Asn Gly Glu Phe Val Arg Gly Asn Glu Leu Pro

```
        115                 120                 125

Arg Pro Ile Gln Tyr Leu Cys Trp Ser Pro Val Gly Ser Lys Leu Ala
    130                 135                 140

Tyr Val Tyr Gln Asn Asn Ile Tyr Leu Lys Gln Arg Pro Gly Asp Pro
145                 150                 155                 160

Pro Phe Gln Ile Thr Phe Asn Gly Arg Glu Asn Lys Ile Phe Asn Gly
                165                 170                 175

Ile Pro Asp Trp Val Tyr Glu Glu Glu Met Leu Ala Thr Lys Tyr Ala
            180                 185                 190

Leu Trp Trp Ser Pro Asn Gly Lys Phe Leu Ala Tyr Ala Glu Phe Asn
        195                 200                 205

Asp Thr Asp Ile Pro Val Ile Ala Tyr Ser Tyr Tyr Gly Asp Glu Gln
    210                 215                 220

Tyr Pro Arg Thr Ile Asn Ile Pro Tyr Pro Lys Ala Gly Ala Lys Asn
225                 230                 235                 240

Pro Phe Val Arg Ile Phe Ile Ile Asp Thr Thr Tyr Pro Ala Tyr Val
                245                 250                 255

Gly Pro Gln Glu Val Pro Val Pro Ala Met Ile Ala Ser Ser Asp Tyr
            260                 265                 270

Tyr Phe Ser Trp Leu Thr Trp Val Thr Asp Glu Arg Val Cys Leu Gln
        275                 280                 285

Trp Leu Lys Arg Val Gln Asn Val Ser Val Leu Ser Ile Cys Asp Phe
    290                 295                 300

Arg Glu Asp Trp Gln Thr Trp Asp Cys Pro Lys Thr Gln Glu His Ile
305                 310                 315                 320

Glu Glu Ser Arg Thr Gly Trp Ala Gly Gly Phe Phe Val Ser Thr Pro
                325                 330                 335
```

```
Val Phe Ser Tyr Asp Ala Ile Ser Tyr Tyr Lys Ile Phe Ser Asp Lys
            340                 345                 350

Asp Gly Tyr Lys His Ile His Tyr Ile Lys Asp Thr Val Glu Asn Ala
        355                 360                 365

Ile Gln Ile Thr Ser Gly Lys Trp Glu Ala Ile Asn Ile Phe Arg Val
    370                 375                 380

Thr Gln Asp Ser Leu Phe Tyr Ser Ser Asn Glu Phe Glu Asp Tyr Pro
385                 390                 395                 400

Gly Arg Arg Asn Ile Tyr Arg Ile Ser Ile Gly Ser Tyr Pro Pro Ser
                405                 410                 415

Lys Lys Cys Val Thr Cys His Leu Arg Lys Glu Arg Cys Gln Tyr Tyr
            420                 425                 430

Thr Ala Ser Phe Ser Asp Tyr Ala Lys Tyr Tyr Ala Leu Val Cys Tyr
        435                 440                 445

Gly Pro Gly Ile Pro Ile Ser Thr Leu His Asp Gly Arg Thr Asp Gln
    450                 455                 460

Glu Ile Lys Ile Leu Glu Glu Asn Lys Glu Leu Glu Asn Ala Leu Lys
465                 470                 475                 480

Asn Ile Gln Leu Pro Lys Glu Glu Ile Lys Lys Leu Glu Val Asp Glu
                485                 490                 495

Ile Thr Leu Trp Tyr Lys Met Ile Leu Pro Pro Gln Phe Asp Arg Ser
            500                 505                 510

Lys Lys Tyr Pro Leu Leu Ile Gln Val Tyr Gly Gly Pro Cys Ser Gln
        515                 520                 525

Ser Val Arg Ser Val Phe Ala Val Asn Trp Ile Ser Tyr Leu Ala Ser
    530                 535                 540

Lys Glu Gly Met Val Ile Ala Leu Val Asp Gly Arg Gly Thr Ala Phe
```

```
545                 550                 555                 560

Gln Gly Asp Lys Leu Leu Tyr Ala Val Tyr Arg Lys Leu Gly Val Tyr
                565                 570                 575

Glu Val Glu Asp Gln Ile Thr Ala Val Arg Lys Phe Ile Glu Met Gly
            580                 585                 590

Phe Ile Asp Glu Lys Arg Ile Ala Ile Trp Gly Trp Ser Tyr Gly Gly
        595                 600                 605

Tyr Val Ser Ser Leu Ala Leu Ala Ser Gly Thr Gly Leu Phe Lys Cys
    610                 615                 620

Gly Ile Ala Val Ala Pro Val Ser Ser Trp Glu Tyr Tyr Ala Ser Val
625                 630                 635                 640

Tyr Thr Glu Arg Phe Met Gly Leu Pro Thr Lys Asp Asp Asn Leu Glu
                645                 650                 655

His Tyr Lys Asn Ser Thr Val Met Ala Arg Ala Glu Tyr Phe Arg Asn
            660                 665                 670

Val Asp Tyr Leu Leu Ile His Gly Thr Ala Asp Asp Asn Val His Phe
        675                 680                 685

Gln Asn Ser Ala Gln Ile Ala Lys Ala Leu Val Asn Ala Gln Val Asp
    690                 695                 700

Phe Gln Ala Met Trp Tyr Ser Asp Gln Asn His Gly Leu Ser Gly Leu
705                 710                 715                 720

Ser Thr Asn His Leu Tyr Thr His Met Thr His Phe Leu Lys Gln Cys
                725                 730                 735

Phe Ser Leu Ser Asp
            740
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<210> 47
<211> 736
<212> PRT

<213> Artificial Sequence

<220>
<223> extracellular domain of mouse FAP

<400> 47

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Leu Arg Pro Ser Arg Val Tyr Lys Pro Glu Gly Asn Thr Lys Arg Ala
1               5                  10                  15


Leu Thr Leu Lys Asp Ile Leu Asn Gly Thr Phe Ser Tyr Lys Thr Tyr
            20                  25                  30


Phe Pro Asn Trp Ile Ser Glu Gln Glu Tyr Leu His Gln Ser Glu Asp
        35                  40                  45


Asp Asn Ile Val Phe Tyr Asn Ile Glu Thr Arg Glu Ser Tyr Ile Ile
    50                  55                  60


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


Ser Pro Asp Arg Gln Phe Val Tyr Leu Glu Ser Asp Tyr Ser Lys Leu
                85                  90                  95


Trp Arg Tyr Ser Tyr Thr Ala Thr Tyr Tyr Ile Tyr Asp Leu Gln Asn
            100                 105                 110


Gly Glu Phe Val Arg Gly Tyr Glu Leu Pro Arg Pro Ile Gln Tyr Leu
        115                 120                 125


Cys Trp Ser Pro Val Gly Ser Lys Leu Ala Tyr Val Tyr Gln Asn Asn
    130                 135                 140


Ile Tyr Leu Lys Gln Arg Pro Gly Asp Pro Pro Phe Gln Ile Thr Tyr
145                 150                 155                 160


Thr Gly Arg Glu Asn Arg Ile Phe Asn Gly Ile Pro Asp Trp Val Tyr
                165                 170                 175


Glu Glu Glu Met Leu Ala Thr Lys Tyr Ala Leu Trp Trp Ser Pro Asp
            180                 185                 190
```

```
Gly Lys Phe Leu Ala Tyr Val Glu Phe Asn Asp Ser Asp Ile Pro Ile
        195                 200                 205

Ile Ala Tyr Ser Tyr Tyr Gly Asp Gly Gln Tyr Pro Arg Thr Ile Asn
    210                 215                 220

Ile Pro Tyr Pro Lys Ala Gly Ala Lys Asn Pro Val Val Arg Val Phe
225                 230                 235                 240

Ile Val Asp Thr Thr Tyr Pro His His Val Gly Pro Met Glu Val Pro
                245                 250                 255

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

Trp Val Ser Ser Glu Arg Val Cys Leu Gln Trp Leu Lys Arg Val Gln
        275                 280                 285

Asn Val Ser Val Leu Ser Ile Cys Asp Phe Arg Glu Asp Trp His Ala
    290                 295                 300

Trp Glu Cys Pro Lys Asn Gln Glu His Val Glu Glu Ser Arg Thr Gly
305                 310                 315                 320

Trp Ala Gly Gly Phe Phe Val Ser Thr Pro Ala Phe Ser Gln Asp Ala
                325                 330                 335

Thr Ser Tyr Tyr Lys Ile Phe Ser Asp Lys Asp Gly Tyr Lys His Ile
            340                 345                 350

His Tyr Ile Lys Asp Thr Val Glu Asn Ala Ile Gln Ile Thr Ser Gly
        355                 360                 365

Lys Trp Glu Ala Ile Tyr Ile Phe Arg Val Thr Gln Asp Ser Leu Phe
    370                 375                 380

Tyr Ser Ser Asn Glu Phe Glu Gly Tyr Pro Gly Arg Arg Asn Ile Tyr
385                 390                 395                 400

Arg Ile Ser Ile Gly Asn Ser Pro Pro Ser Lys Lys Cys Val Thr Cys
```

```
               405                 410                 415

His Leu Arg Lys Glu Arg Cys Gln Tyr Tyr Thr Ala Ser Phe Ser Tyr
            420                 425                 430

Lys Ala Lys Tyr Tyr Ala Leu Val Cys Tyr Gly Pro Gly Leu Pro Ile
        435                 440                 445

Ser Thr Leu His Asp Gly Arg Thr Asp Gln Glu Ile Gln Val Leu Glu
    450                 455                 460

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

Val Glu Ile Lys Lys Leu Lys Asp Gly Gly Leu Thr Phe Trp Tyr Lys
               485                 490                 495

Met Ile Leu Pro Pro Gln Phe Asp Arg Ser Lys Lys Tyr Pro Leu Leu
            500                 505                 510

Ile Gln Val Tyr Gly Gly Pro Cys Ser Gln Ser Val Lys Ser Val Phe
        515                 520                 525

Ala Val Asn Trp Ile Thr Tyr Leu Ala Ser Lys Glu Gly Ile Val Ile
    530                 535                 540

Ala Leu Val Asp Gly Arg Gly Thr Ala Phe Gln Gly Asp Lys Phe Leu
545                 550                 555                 560

His Ala Val Tyr Arg Lys Leu Gly Val Tyr Glu Val Glu Asp Gln Leu
               565                 570                 575

Thr Ala Val Arg Lys Phe Ile Glu Met Gly Phe Ile Asp Glu Glu Arg
            580                 585                 590

Ile Ala Ile Trp Gly Trp Ser Tyr Gly Gly Tyr Val Ser Ser Leu Ala
        595                 600                 605

Leu Ala Ser Gly Thr Gly Leu Phe Lys Cys Gly Ile Ala Val Ala Pro
    610                 615                 620
```

Val Ser Ser Trp Glu Tyr Tyr Ala Ser Ile Tyr Ser Glu Arg Phe Met
625 630 635 640

Gly Leu Pro Thr Lys Asp Asp Asn Leu Glu His Tyr Lys Asn Ser Thr
645 650 655

Val Met Ala Arg Ala Glu Tyr Phe Arg Asn Val Asp Tyr Leu Leu Ile
660 665 670

His Gly Thr Ala Asp Asp Asn Val His Phe Gln Asn Ser Ala Gln Ile
675 680 685

Ala Lys Ala Leu Val Asn Ala Gln Val Asp Phe Gln Ala Met Trp Tyr
690 695 700

Ser Asp Gln Asn His Gly Ile Ser Ser Gly Arg Ser Gln Asn His Leu
705 710 715 720

Tyr Thr His Met Thr His Phe Leu Lys Gln Cys Phe Ser Leu Ser Asp
725 730 735

<210> 48
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 48

Lys Asp Gln Tyr Gly Ile Thr Pro Leu His Leu Ala Ala Phe Arg Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Gly Val Asn
20 25 30

Ala

<210> 49
<211> 33
<212> PRT

<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 49

Asp Asp Met Asp Gly Arg Thr Pro Leu His Pro Ala Ala Tyr Lys Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp Val Asn
20 25 30

Ala

<210> 50
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 50

Lys Asp Lys Tyr Gly Val Thr Pro Leu His Leu Ala Ala Trp Ala Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 51
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 51

Lys Asp Gln Ser Gly Phe Thr Pro Leu His Leu Ala Ala His Arg Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 52
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 52

Lys Asp Tyr Arg Gly Phe Thr Pro Leu His Leu Ala Ala Glu Asp Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 53
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 53

Phe Asp Gln Val Gly Arg Thr Pro Leu His Leu Asp Ala Leu Ala Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 54

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

<220>
<223> ankyrin repeat module

<400> 54

Ala Asp Met Phe Gly Ile Thr Pro Leu His Leu Ala Ala Phe Ile Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val Asn
20 25 30

Ala

<210> 55
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 55

Tyr Asp Leu Asp Gly Arg Thr Pro Leu His Pro Ala Ala Tyr His Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp Val Asn
20 25 30

Ala

<210> 56
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 56

Lys Asp Glu His Gly Lys Thr Pro Leu His Leu Ala Ala Lys Lys Gly

1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 57
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 57

Lys Asp Asp Trp Gly Val Thr Pro Leu His Leu Ala Ala Tyr Trp Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 58
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 58

Lys Asp Thr Ile Gly Tyr Thr Pro Leu His Tyr Ala Ala Gln Val Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 59
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 59

Lys Asp Thr Gln Gly Ile Thr Pro Leu His Val Ala Ala Ala Thr Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 60
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 60

Lys Asp Glu Trp Gly Lys Thr Pro Leu His Tyr Ala Ala Ala Leu Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 61
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 61

Lys Asp Gln Tyr Gly Ala Thr Pro Leu His Ile Ala Ala Phe Ala Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 62
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 62

Lys Asp Ala Trp Gly Phe Thr Pro Leu His Leu Ala Ala Thr Arg Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 63
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 63

Cys Lys Asp Glu Trp Gly Lys Thr Pro Leu His Leu Ala Ala Ala Leu
1 5 10 15

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
20 25 30

Asn Ala

<210> 64
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 64

Lys Asp Ala Trp Gly Ala Thr Pro Leu His Val Ala Ala Phe Ala Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 65
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 65

Lys Asp Thr Ile Gly Phe Thr Pro Leu His Leu Ala Ala His Ser Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 66
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 66

Lys Asp Gln His Gly Lys Thr Pro Leu His Tyr Ala Ala Ala Leu Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 67
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 67

Lys Asp Arg Trp Gly Ala Thr Pro Leu His Ile Ala Ala Phe Ala Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 68
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 68

Lys Asp Glu Val Gly Trp Thr Pro Leu His Leu Ala Ala Arg Phe Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 69
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 69

Phe Asp Thr Thr Gly Arg Thr Pro Leu His Leu Ala Ala Leu Trp Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 70
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 70

Ser Asp Trp Phe Ser Ile Thr Pro Leu His Leu Ala Ala Phe Met Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Asn His Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 71
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 71

Lys Asp Glu Tyr Gly Ile Thr Pro Leu His Leu Ala Ala Phe Arg Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 72
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 72

Ile Asp Tyr Asn Gly Arg Thr Pro Leu His Pro Ala Ala Tyr Ser Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 73
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 73

Lys Asp Thr Trp Gly Trp Thr Pro Leu His Leu Ala Ala Lys Ser Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn

20 25 30

Ala

<210> 74
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 74

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

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 75
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 75

Lys Asp Trp Tyr Gly Glu Thr Pro Leu His Leu Ala Ala Ile Arg Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 76
<211> 33
<212> PRT

<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 76

Lys Asp Gln Trp Gly Trp Thr Pro Leu His Leu Ala Ala Arg Val Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 77
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 77

Lys Asp Val Arg Gly Val Thr Pro Leu His Leu Ala Ala Phe His Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 78
<211> 158
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 78

Cys Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln Asp
1 5 10 15

Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Ser Ala Lys
            20   25   30

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

Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
    50   55   60

Lys Asp Val Arg Gly Val Thr Pro Leu His Leu Ala Ala Phe His Gly
65   70   75   80

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
                85   90   95

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

Gly His Leu Glu Ile Ile Glu Asp Leu Leu Lys Ala Gly Ala Asp Val
        115   120   125

Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Asp
    130   135   140

Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145   150   155

<210> 79
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 79

Lys Asp Asp Trp Gly Trp Thr Pro Leu His Leu Ala Ala Arg His Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Thr Asp Val Asn
            20   25   30

Ala

<210> 80
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 80

Lys Asp Lys Arg Gly Val Thr Pro Leu His Leu Ala Ala Tyr Ile Gly
1   5   10   15

His Leu Glu Ile Ala Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 81
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 81

Lys Asp Phe Gln Gly Trp Thr Pro Leu His Leu Ala Ala Val Arg Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 82
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 82

Lys Asp Tyr Ser Gly Arg Thr Pro Leu His Leu Ala Ala Leu Thr Gly
1   5   10   15

His Leu Glu Ile Val Lys Val Leu Leu Lys His Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 83
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 83

Ser Asp Asp Tyr Gly Ile Thr Pro Leu His Leu Asp Ala Phe Ile Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 84
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 84

Met Asp Tyr Gln Gly Arg Thr Pro Leu His Pro Ala Ala Tyr Thr Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val Asn

20 25 30

Ala

<210> 85
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 85

Phe Asp Ala Ile Gly Arg Thr Pro Leu His Leu Ala Ala Leu Tyr Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys His Val Ala Asp Val Asn
20 25 30

Ala

<210> 86
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 86

Thr Asp Glu Tyr Gly Ile Thr Pro Leu His Leu Ala Ala Phe Met Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val Asn
20 25 30

Ala

<210> 87
<211> 33
<212> PRT

<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 87

Ile Asp Phe Asp Gly Arg Thr Pro Leu His Pro Ala Ala Tyr Arg Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 88
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 88

Thr Asp Met Thr Gly Arg Thr Pro Leu His Leu Ala Ala Leu Tyr Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 89
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 89

Leu Asp Lys Phe Gly Ile Thr Pro Leu His Leu Ala Ala Phe Met Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 90
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 90

Ala Asp Leu Asp Gly Arg Thr Pro Leu His Pro Thr Ala Tyr Arg Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 91
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 91

Thr Asp Leu Met Gly Arg Thr Pro Leu His Leu Ala Ala Ser Arg Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Asn Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 92

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

<220>
<223> ankyrin repeat module

<400> 92

Asp Asp Lys Tyr Gly Ile Thr Ser Leu His Leu Ala Ala Phe Leu Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Tyr Gly Ala Asp Val Asn
20 25 30

Ala

<210> 93
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 93

Ile Asp Phe Asp Gly Arg Thr Pro Leu His Pro Ala Ala Tyr Arg Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys His Gly Ala Asp Val Asn
20 25 30

Ala

<210> 94
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 94

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly

1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 95
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 95

Lys Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu Ala Ala Arg Thr Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 96
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 96

Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp Gln Gly
1 5 10 15

His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 97
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 97

Lys Asp Gln Trp Gly Leu Thr Pro Leu His Lys Ala Ala Leu Gln Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 98
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 98

Lys Asp Glu Arg Gly His Thr Pro Leu His Trp Ala Ala Arg Phe Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 99
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 99

Lys Asp Glu Trp Gly His Thr Pro Leu His Lys Ala Ala Leu Ser Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 100
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 100

Lys Asp Gln Lys Gly Ser Thr Pro Leu His Trp Ala Ala Thr Arg Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 101
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 101

Lys Asp Arg His Gly His Thr Pro Leu His Val Thr Ala His His Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Thr Asp Val Asn
            20   25   30

Ala

<210> 102
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 102

Lys Asp Asn Gln Gly Asn Thr Pro Leu His Val Ala Ala Glu Ala Asp
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 103
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 103

Lys Asp Arg Phe Gly His Thr Pro Leu His Val Ala Ala His Phe Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 104
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 104

Lys Asp Ser Leu Gly His Thr Pro Leu His Leu Ala Ala Glu Ala Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 105
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 105

Lys Asp Gln Phe Gly His Thr Pro Leu His Val Ala Thr His Phe Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 106
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 106

Lys Asp Ala Leu Gly His Thr Pro Leu His Leu Ala Ala Glu Ala Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 107
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 107

Lys Asp Arg Tyr Gly Ile Thr Pro Leu His Leu Ala Ala Phe Leu Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Asp Gly Ala Asp Val Asn
20 25 30

Ala

<210> 108
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 108

Lys Asp Glu Trp Gly Ala Thr Pro Leu His Val Ala Ala Tyr Lys Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 109
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 109

Lys Asp Val Ile Gly Tyr Thr Pro Leu His Tyr Ala Ala Ser Glu Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 110
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 110

Lys Asp Thr Lys Gly Ile Thr Pro Leu His Val Ala Ala Ser Thr Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 111
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 111

Lys Asp Glu Val Gly Arg Thr Pro Leu His Leu Ala Ala Gln Ile Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn

20 25 30

Ala

<210> 112
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 112

Lys Asn Arg Trp Gly Val Thr Pro Leu His Val Ala Ala Trp Val Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 113
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 113

Lys Asp Gln Gln Gly Ala Thr Pro Leu His Leu Ala Ala Ile Arg Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 114
<211> 33
<212> PRT

<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 114

Lys Asp Glu Trp Asp Lys Thr Pro Leu His Tyr Ala Ala Ala Leu Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 115
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 115

Lys Asp Val Trp Gly Ala Thr Pro Leu His Ile Ala Ala Phe Ala Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 116
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 116

Lys Asp Thr Leu Gly Tyr Thr Pro Leu His Leu Ala Ala Thr Arg Gly
1   5   10   15

His Leu Glu Ile Val Glu Ala Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 117
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 117

Lys Asp Glu Trp Gly Lys Thr Pro Leu His Tyr Ala Ala Ala Leu Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 118
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 118

Lys Asp Arg Trp Gly Ala Thr Pro Leu His Ile Ala Ala Phe Ala Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 119

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

<220>
<223> ankyrin repeat module

<400> 119

Lys Asp Glu Val Gly Trp Thr Pro Leu His Leu Ala Ala Arg Ser Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Val Gly Ala Asp Val Asn
20 25 30

Ala

<210> 120
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 120

Lys Asp Thr Ile Gly Arg Thr Pro Leu His Ile Ala Ala Arg Tyr Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 121
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 121

Lys Asp Val Tyr Asp Ile Thr Pro Leu His Leu Ala Ala Phe Leu Gly

1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 122
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 122

Lys Asp Tyr Glu Gly Thr Thr Pro Leu His Val Ala Ala Trp His Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 123
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 123

Lys Asp Glu Trp Gly Trp Thr Pro Leu His Val Ala Ala Glu Arg Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 124
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 124

Lys Asp Lys His Gly Val Thr Pro Leu His Leu Ala Ala Trp Arg Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 125
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 125

Lys Asp Ile Gln Gly Leu Thr Pro Leu His Ile Ala Ala His Gln Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 126
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 126

Lys Asp Glu Phe Gly Lys Thr Pro Leu His Leu Ala Ala Ala Leu Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 127
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 127

Lys Gly Leu Trp Gly Glu Thr Pro Leu His Val Ala Ala Phe Ala Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 128
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 128

Lys Asp Thr Tyr Gly Tyr Thr Pro Leu His Leu Ala Ala Ser Arg Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 129
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 129

Lys Asp Glu Trp Asp Lys Thr Pro Leu His Leu Ala Ala Ala Leu Asp
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 130
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 130

Lys Asp Gln Tyr Gly Ala Thr Pro Leu His Val Ala Ala Phe Ala Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 131
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 131

Lys Asp Leu Phe Gly Trp Thr Pro Leu His Leu Ala Ala Leu Arg Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

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

<220>
<223> ankyrin repeat module

<400> 132

Lys Asp Glu Trp Gly Lys Thr Pro Leu His Leu Ala Ala Ile Arg Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 133
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 133

Lys Asp Thr His Gly Ile Thr Pro Leu His Leu Ala Ala Phe Val Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 134
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat module

<400> 134

Lys Asp Tyr Leu Gly Arg Thr Pro Leu His Ile Ala Ala Ala Lys Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 135
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> N-cap

<400> 135

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

<210> 136
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> N-cap

<400> 136

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

<210> 137
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> N-cap

<400> 137

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

<210> 138
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (6)..(6)
<223> Xaa can be any naturally occurring amino acid

<220>
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<222> (10)..(10)
<223> Xaa can be any naturally occurring amino acid

<220>
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<222> (13)..(14)
<223> Xaa can be any naturally occurring amino acid

<400> 138

Gly Ser Asp Leu Gly Xaa Lys Leu Leu Xaa Ala Ala Xaa Xaa Gly Gln

1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

<210> 139
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> AR sequence motif

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<220>
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<223> Xaa can be any naturally occurring amino acid

<220>
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<223> Xaa can be any naturally occurring amino acid

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<222> (14)..(15)
<223> Xaa can be any naturally occurring amino acid

<220>
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<222> (27)..(27)
<223> Xaa can be any naturally occurring amino acid

<400> 139

Xaa Asp Xaa Xaa Gly Xaa Thr Pro Leu His Leu Ala Ala Xaa Xaa Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Xaa Gly Ala Asp Val Asn
20 25 30

Ala

<210> 140
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<222> (3)..(4)
<223> Xaa can be any naturally occurring amino acid

<220>
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<222> (6)..(6)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> MISC_FEATURE
<222> (14)..(15)
<223> Xaa can be any naturally occurring amino acid

<400> 140

Lys Asp Xaa Xaa Gly Xaa Thr Pro Leu His Leu Ala Ala Xaa Xaa Gly
1   5   10   15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
            20   25   30

Ala

<210> 141
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (3)..(4)
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<223> Xaa can be any naturally occurring amino acid

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<222> (14)..(14)
<223> Xaa can be any naturally occurring amino acid

<220>
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<222> (15)..(15)
<223> Xaa can be any naturally occurring amino acid

<400> 141

Lys Asp Xaa Xaa Gly Xaa Thr Pro Leu His Xaa Ala Ala Xaa Xaa Gly
1 5 10 15

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
20 25 30

Ala

<210> 142
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> capping module

<400> 142

Gln Asp Lys Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp Asn Gly
1 5 10 15

His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
20 25

<210> 143
<211> 28
<212> PRT

<213> Artificial Sequence

<220>
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<220>
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<222> (3)..(4)
<223> Xaa can be any naturally occurring amino acid

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<223> Xaa can be any naturally occurring amino acid

<220>
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<222> (14)..(15)
<223> Xaa can be any naturally occurring amino acid

<400> 143

Gln Asp Xaa Xaa Gly Xaa Thr Pro Ala Asp Leu Ala Ala Xaa Xaa Gly
1 5 10 15

His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
20 25

<210> 144
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 144

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn

50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 145
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 145

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

Ala Lys Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu Ala Ala Arg Thr

65 70 75 80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 146
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 146

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val

85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
145 150 155

<210> 147
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 147

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp

100 105 110

Gln Gly His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
145 150 155

<210> 148
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 148

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp

115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 149
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 149

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala

130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
145 150 155

<210> 150
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 150

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn

145 150 155

<210> 151
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 151

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
145 150 155

<210> 152

<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 152

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15

Asp Asp Glu Val Arg Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
35 40 45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
100 105 110

Gln Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
115 120 125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
130 135 140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
145 150 155

<210> 153
<211> 159
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 153

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly
        35   40   45

His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50   55   60

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

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85   90   95

Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp
            100   105   110

Gln Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp
        115   120   125

Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala
    130   135   140

Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
145   150   155

<210> 154
<211> 585
<212> PRT
<213> Homo sapiens

<400> 154

Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
1   5   10   15

```
Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
            20                  25                  30

Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
        35                  40                  45

Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
    50                  55                  60

Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
65                  70                  75                  80

Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
                85                  90                  95

Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
            100                 105                 110

Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
        115                 120                 125

Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
    130                 135                 140

Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
145                 150                 155                 160

Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
                165                 170                 175

Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
            180                 185                 190

Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
        195                 200                 205

Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
    210                 215                 220
```

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Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
225                 230                 235                 240


Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
                245                 250                 255


Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
            260                 265                 270


Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
        275                 280                 285


Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
    290                 295                 300


Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
305                 310                 315                 320


Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
                325                 330                 335


Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
            340                 345                 350


Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
        355                 360                 365


Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
    370                 375                 380


Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
385                 390                 395                 400


Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
                405                 410                 415


Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
            420                 425                 430


Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
        435                 440                 445
```

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Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
    450                 455                 460


Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
465                 470                 475                 480


Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
                485                 490                 495


Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
            500                 505                 510


Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
        515                 520                 525


Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
    530                 535                 540


Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
545                 550                 555                 560


Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val
                565                 570                 575


Ala Ala Ser Gln Ala Ala Leu Gly Leu
            580                 585


<210>  155
<211>  5
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Consensus GS-linker


<220>
<221>  REPEAT
<222>  (1)..(5)
<223>  [Gly-Gly-Gly-Gly-Ser]n, wherein n is 1, 2, 3, 4, 5, or 6

<400>  155
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Gly Gly Gly Gly Ser
1   5

<210> 156
<211> 477
<212> DNA
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 156
ggttctgatt taggcaagaa gctgttggag gcggcccgtg ctggccagga cgacgaagtc   60

cgtgagctgc tgaaagcggg tgcggacgtg aatgccaaag acgtgttggg ctggacccct   120

ctgcatctgg ctgccttcga gggccacctg gagattgtgg aagtccttct caaggctggc   180

gctgatgtga acgcaaagga caaaaagggt tggactccgc tgcagctggc ggcgcgtacc   240

ggtcacctcg aaattgtaga ggtcctgttg aaggcgggcg cagatgtaaa tgctaaagac   300

catattggcg caactccgct ccacctggcg gcatggcagg gccacccaga gatcgtggag   360

gtcctcctga aggcaggcgc cgacgtgaac gcccaagaca aatccggtaa gactccggcg   420

gacctggctg ccgacgcagg ccatgaggac atcgcggaag tcttgcagaa ggcggct   477

<210> 157
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> C-cap

<400> 157

Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Asp Ala Gly
1   5   10   15

His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
            20   25

<210> 158
<211> 28
<212> PRT
<213> Artificial Sequence

<220>

<223> C-cap

<400> 158

Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Asp Ala Gly
1   5   10   15

His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
            20   25

<210> 159
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 159

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
        35   40   45

His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50   55   60

Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Ala Asp
65   70   75   80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85   90   95

Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
            100   105   110

Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
        115   120   125

<210> 160
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> ankyrin repeat domain

<400> 160

Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1   5   10   15

Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
            20   25   30

Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
        35   40   45

His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
    50   55   60

Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Asp Ala
65   70   75   80

Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
                85   90   95

Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
            100   105   110

Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
        115   120   125