

# SEQUENCE LISTING

<110> Ablynx NV

<120> Improved serum albumin binders

<130> P16-017-PCT-1

<150> US 62/430,972

<151> 2016-12-07

<160> 102

<170> PatentIn version 3.5

<210> 1

<211> 115

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 1

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Asn  
1 5 10 15

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

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

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

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

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

Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr

100

105

110

Val Ser Ser  
115

<210> 2  
<211> 116  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 2

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr  
100 105 110

Val Ser Ser Ala  
115

<210> 3

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

<220>  
<223> CDR1

<400> 3

Ser Phe Gly Met Ser  
1 5

<210> 4  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> CDR2

<400> 4

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

Gly

<210> 5  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> CDR3

<400> 5

Gly Gly Ser Leu Ser Arg  
1 5

<210> 6  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>

<223> CDR1

<400> 6

Gly Phe Thr Phe Arg Ser Phe Gly Met Ser  
1 5 10

<210> 7

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR2

<400> 7

Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu  
1 5 10

<210> 8

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR3

<400> 8

Gly Gly Ser Leu Ser Arg  
1 5

<210> 9

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR1

<400> 9

Ser Tyr Ala Met Gly  
1 5

<210> 10  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> CDR2

<400> 10

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

Gly

<210> 11  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> CDR3

<400> 11

Ala Arg Tyr Trp Ala Thr Gly Ser Glu Tyr Glu Phe Asp Tyr  
1 5 10

<210> 12  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> CDR1

<400> 12

Gly Leu Thr Phe Ser Ser Tyr Ala Met Gly  
1 5 10

<210> 13  
<211> 10  
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<213> Artificial Sequence

<220>

<223> CDR2

<400> 13

Ser Ile Ser Arg Gly Gly Gly Tyr Thr Tyr  
1 5 10

<210> 14

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR3

<400> 14

Ala Arg Tyr Trp Ala Thr Gly Ser Glu Tyr Glu Phe Asp Tyr  
1 5 10

<210> 15

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 15

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly  
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
65 70 75 80

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

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

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

<210> 16  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 16

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Ala Gly Gly  
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
65 70 75 80

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

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

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

<210> 17  
<211> 123  
<212> PRT  
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<220>  
<223> Nanobody Sequence

<400> 17

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Ala Gly Gly  
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
65 70 75 80

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

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

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

<210> 18  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 18

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Ala Gly Gly  
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
65 70 75 80

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

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

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

<210> 19  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 19

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 20

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 20

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Leu Thr Phe Ser Ser Tyr

20

25

30

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

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

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

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

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

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

&lt;210&gt; 21

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nanobody Sequence

&lt;400&gt; 21

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

Ala Ser Ile Ser Arg Gly Gly Gly Tyr Thr Tyr Tyr Ala Asp Ser Val

50

55

60

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

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

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

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

<210> 22

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 22

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys

85

90

95

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

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

<210> 23  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 23

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

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

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

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

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

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser

115

120

<210> 24  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 24

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

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

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

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

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

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

<210> 25  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 25

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 26

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 26

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 27  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 27

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Ala Gly Gly  
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
65 70 75 80

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

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

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

<210> 28  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 28

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 29  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 29

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 30  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 30

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 31  
<211> 123  
<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 31

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 32

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 32

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly

|     |     |     |     |
|-----|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Ser | Leu | Arg | Leu |
|     | 20  |     |     |
| Ser | Cys | Ala | Ala |
|     |     | 25  |     |
| Ser | Gly | Leu | Thr |
|     |     |     | 30  |
| Phe | Ser | Ser | Tyr |
|     |     |     |     |
| Ala | Met | Gly | Trp |
|     | 35  |     |     |
| Phe | Arg | Gln | Ala |
|     |     | 40  |     |
| Pro | Gly | Lys | Glu |
|     |     |     | 45  |
| Arg | Glu | Phe | Val |
|     |     |     |     |
| Ala | Ser | Ile | Ser |
|     | 50  |     |     |
| Arg | Gly | Gly | Gly |
|     |     | 55  |     |
| Tyr | Thr | Tyr | Tyr |
|     |     |     | 60  |
| Ala | Asp | Ser | Val |
|     |     |     |     |
| Lys | Gly | Arg | Phe |
|     | 65  |     |     |
| Thr | Ile | Ser | Arg |
|     | 70  |     |     |
| Asp | Asn | Ser | Glu |
|     |     | 75  |     |
| Asn | Thr | Val | Tyr |
|     |     |     | 80  |
| Leu | Gln | Met | Asn |
|     |     |     | 85  |
| Ser | Leu | Arg | Pro |
|     |     |     |     |
| Glu | Asp | Thr | Ala |
|     | 90  |     |     |
| Thr | Tyr | Tyr | Cys |
|     |     |     | 95  |
| Ala | Ala | Ala | Arg |
|     |     |     | 100 |
| Tyr | Trp | Ala | Thr |
|     |     |     |     |
| Gly | Ser | Glu | Tyr |
|     |     |     |     |
| Glu | Phe | Asp | Tyr |
|     |     |     | 110 |
| Trp | Gly | Gln | Gly |
|     |     |     | 115 |
| Thr | Leu | Val | Thr |
|     |     |     |     |
| Val | Ser | Ser |     |
|     |     |     | 120 |

<210> 33  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 33

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Gln | Leu | Val | Glu | Ser | Gly | Gly | Gly | Val | Val | Gln | Pro | Gly | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Met | Gly | Trp | Phe | Arg | Gln | Ala | Pro | Gly | Lys | Glu | Arg | Glu | Phe | Val |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

35

40

45

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

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

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

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

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

<210> 34  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 34

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr

|                           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65                        |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Leu                       | Gln | Met | Asn | Ser | Leu | Arg | Pro | Glu | Asp | Thr | Ala | Thr | Tyr | Tyr | Cys |
|                           |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ala                       | Ala | Ala | Arg | Tyr | Trp | Ala | Thr | Gly | Ser | Glu | Tyr | Glu | Phe | Asp | Tyr |
|                           |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Trp                       | Gly | Gln | Gly | Thr | Leu | Val | Thr | Val | Ser | Ser |     |     |     |     |     |
|                           |     | 115 |     |     |     |     | 120 |     |     |     |     |     |     |     |     |
| <210> 35                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <211> 123                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <212> PRT                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <213> Artificial Sequence |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <220>                     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <223> Nanobody Sequence   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <400> 35                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Glu                       | Val | Gln | Leu | Val | Glu | Ser | Gly | Gly | Gly | Val | Val | Gln | Pro | Gly | Gly |
| 1                         |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ser                       | Leu | Arg | Leu | Ser | Cys | Ala | Ala | Ser | Gly | Leu | Thr | Phe | Ser | Ser | Tyr |
|                           |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala                       | Met | Gly | Trp | Phe | Arg | Gln | Ala | Pro | Gly | Lys | Glu | Arg | Glu | Phe | Val |
|                           |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala                       | Ser | Ile | Ser | Arg | Gly | Gly | Gly | Tyr | Thr | Tyr | Tyr | Ala | Asp | Ser | Val |
|                           | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Lys                       | Gly | Arg | Phe | Thr | Ile | Ser | Arg | Asp | Asn | Ser | Lys | Asn | Thr | Val | Tyr |
| 65                        |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Leu                       | Gln | Met | Asn | Ser | Leu | Arg | Pro | Glu | Asp | Thr | Ala | Thr | Tyr | Tyr | Cys |
|                           |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ala                       | Ala | Ala | Arg | Tyr | Trp | Ala | Thr | Gly | Ser | Glu | Tyr | Glu | Phe | Asp | Tyr |

100

105

110

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

&lt;210&gt; 36

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nanobody Sequence

&lt;400&gt; 36

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly  
 1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
 65 70 75 80

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

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

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

&lt;210&gt; 37

<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 37

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Ala Gly Gly  
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
65 70 75 80

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

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

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

<210> 38  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 38

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Ala Gly Gly  
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
65 70 75 80

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

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

Trp Gly Gln Gly Thr Leu Val Lys Val Ser Ser Ala  
115 120

<210> 39  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 39

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Ala Gly Gly  
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
65 70 75 80

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

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

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

<210> 40

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 40

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 41

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 41

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 42  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 42

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 43  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 43

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 44  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 44

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 45

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 45

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Leu Thr Phe Ser Ser Tyr

20

25

30

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

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

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

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

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

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

&lt;210&gt; 46

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nanobody Sequence

&lt;400&gt; 46

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

Ala Ser Ile Ser Arg Gly Gly Gly Tyr Thr Tyr Tyr Ala Asp Ser Val

50

55

60

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

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

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

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

<210> 47

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 47

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys

85

90

95

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

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

<210> 48

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 48

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Ala Gly Gly  
 1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
 65 70 75 80

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

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

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala

115

120

<210> 49  
 <211> 124  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 49

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

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

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

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

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

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

<210> 50  
 <211> 124  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 50

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 51

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 51

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 52  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 52

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 53  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 53

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 54  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 54

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 55  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 55

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 56  
<211> 124  
<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 56

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 57

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 57

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly

|     |     |     |     |
|-----|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Ser | Leu | Arg | Leu |
|     | 20  |     |     |
| Ser | Cys | Ala | Ala |
|     |     | 25  |     |
| Ser | Gly | Leu | Thr |
|     |     |     | 30  |
| Phe | Ser | Ser | Tyr |
|     |     |     |     |
| Ala | Met | Gly | Trp |
|     | 35  |     |     |
| Phe | Arg | Gln | Ala |
|     |     | 40  |     |
| Pro | Gly | Lys | Glu |
|     |     |     | 45  |
| Arg | Glu | Arg | Val |
|     |     |     |     |
| Val | Ser | Ile | Ser |
|     | 50  |     |     |
| Arg | Gly | Gly | Gly |
|     |     | 55  |     |
| Tyr | Thr | Tyr | Tyr |
|     |     |     | 60  |
| Ala | Asp | Ser | Val |
|     |     |     |     |
| Lys | Gly | Arg | Phe |
|     | 65  |     |     |
| Thr | Ile | Ser | Arg |
|     | 70  |     |     |
| Asp | Asn | Ala | Glu |
|     |     | 75  |     |
| Asn | Thr | Val | Tyr |
|     |     |     | 80  |
| Leu | Gln | Met | Asn |
|     |     | 85  |     |
| Ser | Leu | Lys | Pro |
|     |     |     | 90  |
| Glu | Asp | Thr | Ala |
|     |     |     | 95  |
| Val | Tyr | Tyr | Cys |
|     |     |     |     |
| Ala | Ala | Ala | Arg |
|     |     | 100 |     |
| Tyr | Trp | Ala | Thr |
|     |     | 105 |     |
| Gly | Ser | Glu | Tyr |
|     |     |     | 110 |
| Glu | Phe | Asp | Tyr |
|     |     |     |     |
| Trp | Gly | Gln | Gly |
|     | 115 |     |     |
| Thr | Leu | Val | Thr |
|     |     | 120 |     |
| Val | Ser | Ser |     |

<210> 58  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 58

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Val | Gln | Leu | Val | Glu | Ser | Gly | Gly | Gly | Val | Val | Gln | Ala | Gly | Gly |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     |     | 15  |     |

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Met | Gly | Trp | Phe | Arg | Gln | Ala | Pro | Gly | Lys | Glu | Arg | Glu | Arg | Val |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

35

40

45

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
 65 70 75 80

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

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

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

<210> 59

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 59

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

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr

|                           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65                        |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Leu                       | Gln | Met | Asn | Ser | Leu | Lys | Pro | Glu | Asp | Thr | Ala | Leu | Tyr | Tyr | Cys |
|                           |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala                       | Ala | Ala | Arg | Tyr | Trp | Ala | Thr | Gly | Ser | Glu | Tyr | Glu | Phe | Asp | Tyr |
|                           |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Trp                       | Gly | Gln | Gly | Thr | Leu | Val | Lys | Val | Ser | Ser |     |     |     |     |     |
|                           |     | 115 |     |     |     |     | 120 |     |     |     |     |     |     |     |     |
| <210> 60                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <211> 123                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <212> PRT                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <213> Artificial Sequence |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <220>                     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <223> Nanobody Sequence   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <400> 60                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Asp                       | Val | Gln | Leu | Val | Glu | Ser | Gly | Gly | Gly | Val | Val | Gln | Ala | Gly | Gly |
| 1                         |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser                       | Leu | Arg | Leu | Ser | Cys | Ala | Ala | Ser | Gly | Leu | Thr | Phe | Ser | Ser | Tyr |
|                           |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala                       | Met | Gly | Trp | Phe | Arg | Gln | Ala | Pro | Gly | Lys | Glu | Arg | Glu | Arg | Val |
|                           |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val                       | Ser | Ile | Ser | Arg | Gly | Gly | Gly | Tyr | Thr | Tyr | Tyr | Ala | Asp | Ser | Val |
|                           | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Lys                       | Gly | Arg | Phe | Thr | Ile | Ser | Arg | Asp | Asn | Ala | Glu | Asn | Thr | Val | Tyr |
| 65                        |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Leu                       | Gln | Met | Asn | Ser | Leu | Lys | Pro | Glu | Asp | Thr | Ala | Leu | Tyr | Tyr | Cys |
|                           |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala                       | Ala | Ala | Arg | Tyr | Trp | Ala | Thr | Gly | Ser | Glu | Tyr | Glu | Phe | Asp | Tyr |

100

105

110

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

&lt;210&gt; 61

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nanobody Sequence

&lt;400&gt; 61

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

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

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

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

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

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

&lt;210&gt; 62

<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 62

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 63  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 63

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 64  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 64

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 65  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 65

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 66  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 66

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 67  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 67

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 68  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 68

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 69  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 69

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

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu Asn Thr Val Tyr  
65 70 75 80

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

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

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

<210> 70

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 70

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Leu Thr Phe Ser Ser Tyr

20

25

30

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

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

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

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

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

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

&lt;210&gt; 71

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nanobody Sequence

&lt;400&gt; 71

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

Val Ser Ile Ser Arg Gly Gly Gly Tyr Thr Tyr Tyr Ala Asp Ser Val

50

55

60

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

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

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

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

&lt;210&gt; 72

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nanobody Sequence

&lt;400&gt; 72

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Thr Tyr Tyr Cys

85

90

95

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

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

<210> 73  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 73

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

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

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

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

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

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser

115

120

<210> 74  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 74

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

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

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

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

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

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

<210> 75  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 75

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 76

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 76

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 77  
<211> 123  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 77

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

<210> 78  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 78

Val Thr Val Ser Ser  
1 5

<210> 79  
<211> 115  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 79

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Asn  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe

20

25

30

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

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

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

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

Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr  
 100 105 110

Val Ser Ser  
 115

<210> 80  
 <211> 115  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 80

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
 1 5 10 15

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

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

Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val

50

55

60

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

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

Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr  
100 105 110

Val Ser Ser  
115

<210> 81  
<211> 118  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 81

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly  
1 5 10 15

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

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

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

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

Gln Met Asn Ser Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys Lys

85

90

95

Arg Phe Arg Thr Ala Ala Gln Gly Thr Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110

Leu Val Thr Val Ser Ser  
 115

<210> 82

<211> 277

<212> PRT

<213> Artificial Sequence

<220>

<223> Nanobody Sequence

<400> 82

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

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

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

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

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

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

Arg Phe Arg Thr Ala Ala Gln Gly Thr Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

115

120

125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly  
 130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser  
 145 150 155 160

Gly Gly Gly Val Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala  
 165 170 175

Ala Ser Gly Leu Thr Phe Ser Ser Tyr Ala Met Gly Trp Phe Arg Gln  
 180 185 190

Ala Pro Gly Lys Glu Arg Glu Arg Val Val Ser Ile Ser Arg Gly Gly  
 195 200 205

Gly Tyr Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser  
 210 215 220

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

Pro Glu Asp Thr Ala Leu Tyr Tyr Cys Ala Ala Ala Arg Tyr Trp Ala  
 245 250 255

Thr Gly Ser Glu Tyr Glu Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val  
 260 265 270

Thr Val Ser Ser Ala  
 275

<210> 83  
 <211> 257  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 83

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

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

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

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

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

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

Arg Phe Arg Thr Ala Ala Gln Gly Thr Asp Tyr Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
115 120 125

Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val  
130 135 140

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Leu  
145 150 155 160

Thr Phe Ser Ser Tyr Ala Met Gly Trp Phe Arg Gln Ala Pro Gly Lys  
165 170 175

Glu Arg Glu Arg Val Val Ser Ile Ser Arg Gly Gly Gly Tyr Thr Tyr  
180 185 190

Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser  
195 200 205

Glu Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr  
210 215 220

Ala Leu Tyr Tyr Cys Ala Ala Ala Arg Tyr Trp Ala Thr Gly Ser Glu  
225 230 235 240

Tyr Glu Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
245 250 255

Ala

<210> 84  
<211> 277  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 84

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

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

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

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

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

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

Arg Phe Arg Thr Ala Ala Gln Gly Thr Asp Tyr Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly  
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser  
145 150 155 160

Gly Gly Gly Val Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala  
165 170 175

Ala Ser Gly Leu Thr Phe Ser Ser Tyr Ala Met Gly Trp Phe Arg Gln  
180 185 190

Ala Pro Gly Lys Glu Arg Glu Arg Val Val Ser Ile Ser Arg Gly Gly  
195 200 205

Gly Tyr Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser  
210 215 220

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

Pro Glu Asp Thr Ala Leu Tyr Tyr Cys Ala Ala Ala Arg Tyr Trp Ala  
245 250 255

Thr Gly Ser Glu Tyr Glu Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val  
260 265 270

Thr Val Ser Ser Ala

275

<210> 85  
<211> 277  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 85

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly  
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val



20

25

30

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

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

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

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

Arg Phe Arg Thr Ala Ala Gln Gly Thr Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
 115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly  
 130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser  
 145 150 155 160

Gly Gly Gly Leu Val Gln Ala Gly Gly Ser Leu Arg Leu Ser Cys Ala  
 165 170 175

Ala Ser Gly Ile Thr Phe Ser Ile Asn Thr Met Gly Trp Tyr Arg Gln  
 180 185 190

Ala Pro Gly Lys Gln Arg Glu Leu Val Ala Leu Ile Ser Ser Ile Gly  
 195 200 205

Asp Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg  
 210 215 220

Asp Asn Ala Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Lys Pro  
225 230 235 240

Glu Asp Thr Ala Val Tyr Tyr Cys Lys Arg Phe Arg Thr Ala Ala Gln  
245 250 255

Gly Thr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly  
260 265 270

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly  
275 280 285

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly  
290 295 300

Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro  
305 310 315 320

Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Leu Thr Phe Ser  
325 330 335

Ser Tyr Ala Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu  
340 345 350

Arg Val Val Ser Ile Ser Arg Gly Gly Gly Tyr Thr Tyr Tyr Ala Asp  
355 360 365

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Glu Asn Thr  
370 375 380

Val Tyr Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr  
385 390 395 400

Tyr Cys Ala Ala Ala Arg Tyr Trp Ala Thr Gly Ser Glu Tyr Glu Phe  
405 410 415

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala

420

425

430

<210> 87  
 <211> 430  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 87

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

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

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

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

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

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

Arg Phe Arg Thr Ala Ala Gln Gly Thr Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
 115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly  
 130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 145 |     | 150 |     | 155 |     | 160 |     |     |     |     |     |     |     |     |     |
| Gly | Gly | Gly | Val | Val | Gln | Pro | Gly | Gly | Ser | Leu | Arg | Leu | Ser | Cys | Ala |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ala | Ser | Gly | Leu | Thr | Phe | Ser | Ser | Tyr | Ala | Met | Gly | Trp | Phe | Arg | Gln |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ala | Pro | Gly | Lys | Glu | Arg | Glu | Arg | Val | Val | Ser | Ile | Ser | Arg | Gly | Gly |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Gly | Tyr | Thr | Tyr | Tyr | Ala | Asp | Ser | Val | Lys | Gly | Arg | Phe | Thr | Ile | Ser |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Arg | Asp | Asn | Ser | Glu | Asn | Thr | Val | Tyr | Leu | Gln | Met | Asn | Ser | Leu | Arg |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Pro | Glu | Asp | Thr | Ala | Leu | Tyr | Tyr | Cys | Ala | Ala | Ala | Arg | Tyr | Trp | Ala |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Thr | Gly | Ser | Glu | Tyr | Glu | Phe | Asp | Tyr | Trp | Gly | Gln | Gly | Thr | Leu | Val |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Thr | Val | Ser | Ser | Gly | Gly | Gly | Gly | Ser | Gly | Gly | Gly | Gly | Ser | Gly | Gly |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Gly | Gly | Ser | Gly | Gly | Gly | Gly | Ser | Gly | Gly | Gly | Gly | Ser | Gly | Gly | Gly |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Gly | Ser | Gly | Gly | Gly | Gly | Ser | Glu | Val | Gln | Leu | Val | Glu | Ser | Gly | Gly |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| Gly | Leu | Val | Gln | Ala | Gly | Gly | Ser | Leu | Arg | Leu | Ser | Cys | Ala | Ala | Ser |
|     |     |     |     | 325 |     |     |     |     | 330 |     |     |     |     | 335 |     |
| Gly | Ile | Thr | Phe | Ser | Ile | Asn | Thr | Met | Gly | Trp | Tyr | Arg | Gln | Ala | Pro |
|     |     |     | 340 |     |     |     |     | 345 |     |     |     |     | 350 |     |     |

Gly Lys Gln Arg Glu Leu Val Ala Leu Ile Ser Ser Ile Gly Asp Thr  
355 360 365

Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn  
370 375 380

Ala Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Lys Pro Glu Asp  
385 390 395 400

Thr Ala Val Tyr Tyr Cys Lys Arg Phe Arg Thr Ala Ala Gln Gly Thr  
405 410 415

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala  
420 425 430

<210> 88  
<211> 430  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Nanobody Sequence

<400> 88

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly  
1 5 10 15

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

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

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

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

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

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

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

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly  
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val  
145 150 155 160

Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly Ser Leu  
165 170 175

Arg Leu Ser Cys Ala Ala Ser Gly Ile Thr Phe Ser Ile Asn Thr Met  
180 185 190

Gly Trp Tyr Arg Gln Ala Pro Gly Lys Gln Arg Glu Leu Val Ala Leu  
195 200 205

Ile Ser Ser Ile Gly Asp Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg  
210 215 220

Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Val Tyr Leu Gln Met  
225 230 235 240

Asn Ser Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys Lys Arg Phe  
245 250 255

Arg Thr Ala Ala Gln Gly Thr Asp Tyr Trp Gly Gln Gly Thr Leu Val  
260 265 270

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly

275

280

285

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly  
 290 295 300

Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly  
 305 310 315 320

Gly Leu Val Gln Ala Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser  
 325 330 335

Gly Ile Thr Phe Ser Ile Asn Thr Met Gly Trp Tyr Arg Gln Ala Pro  
 340 345 350

Gly Lys Gln Arg Glu Leu Val Ala Leu Ile Ser Ser Ile Gly Asp Thr  
 355 360 365

Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn  
 370 375 380

Ala Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Lys Pro Glu Asp  
 385 390 395 400

Thr Ala Val Tyr Tyr Cys Lys Arg Phe Arg Thr Ala Ala Gln Gly Thr  
 405 410 415

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala  
 420 425 430

&lt;210&gt; 89

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nanobody Sequence

&lt;400&gt; 89

Asp Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly

|     |     |     |     |
|-----|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Ser | Leu | Arg | Leu |
|     | 20  |     |     |
| Ser | Cys | Ala | Ala |
|     |     | 25  |     |
| Ser | Gly | Ile | Thr |
|     |     |     | 30  |
| Phe | Ser | Ile | Asn |
|     |     |     |     |
| Thr | Met | Gly | Trp |
|     | 35  |     |     |
| Tyr | Arg | Gln | Ala |
|     |     | 40  |     |
| Pro | Gly | Lys | Gln |
|     |     |     | 45  |
| Arg | Glu | Leu | Val |
|     |     |     |     |
| Ala | Leu | Ile | Ser |
|     | 50  |     |     |
| Ser | Ser | Ile | Gly |
|     |     |     | 55  |
| Asp | Thr | Tyr | Tyr |
|     |     |     | 60  |
| Ala | Asp | Ser | Val |
|     |     |     | Lys |
|     |     |     |     |
| Gly | Arg | Phe | Thr |
|     | 65  |     |     |
| Ile | Ser | Arg | Asp |
|     | 70  |     |     |
| Asn | Ala | Lys | Asn |
|     |     | 75  |     |
| Thr | Val | Tyr | Leu |
|     |     |     | 80  |
|     |     |     |     |
| Gln | Met | Asn | Ser |
|     |     |     | 85  |
| Leu | Lys | Pro | Glu |
|     |     |     | 90  |
| Asp | Thr | Ala | Val |
|     |     |     | Tyr |
|     |     |     | 95  |
| Tyr | Tyr | Cys | Lys |
|     |     |     |     |
| Arg | Phe | Arg | Thr |
|     |     | 100 |     |
| Ala | Ala | Gln | Gly |
|     |     |     | 105 |
| Thr | Asp | Tyr | Trp |
|     |     |     | Gly |
|     |     |     | 110 |
| Gln | Gly | Gly | Thr |
|     |     |     |     |
| Leu | Val | Thr | Val |
|     |     | 115 |     |
| Ser | Ser | Gly | Gly |
|     |     | 120 |     |
| Gly | Gly | Gly | Gly |
|     |     |     | 125 |
| Ser | Gly | Gly | Gly |
|     |     |     |     |
| Gly | Gly | Gly | Gly |
|     | 130 |     |     |
| Ser | Gly | Gly | Gly |
|     |     | 135 |     |
| Gly | Gly | Gly | Gly |
|     |     |     | 140 |
| Ser | Gly | Gly | Gly |
|     |     |     |     |
| Gly | Gly | Gly | Ser |
|     | 145 |     |     |
| Ser | Gly | Gly | Gly |
|     |     | 150 |     |
| Glu | Val | Gln | Leu |
|     |     |     | 155 |
| Val | Glu | Val | Glu |
|     |     |     | 160 |
|     |     |     |     |
| Gly | Gly | Gly | Val |
|     |     |     | 165 |
| Val | Gln | Pro | Gly |
|     |     |     | 170 |
| Asn | Ser | Leu | Arg |
|     |     |     | 175 |
| Leu | Ser | Cys | Ala |
|     |     |     |     |
| Ala | Ser | Gly | Phe |
|     |     |     | 180 |
| Thr | Phe | Ser | Ser |
|     |     |     | 185 |
| Phe | Gly | Met | Ser |
|     |     |     | 190 |
| Trp | Val | Arg | Gln |
|     |     |     |     |
| Ala | Pro | Gly | Lys |
|     |     |     | 195 |
| Gly | Leu | Glu | Trp |
|     |     |     | 200 |
| Val | Ser | Ser | Ile |
|     |     |     | 205 |
| Ser | Gly | Ser | Gly |
|     |     |     |     |

Ser Asp Thr Leu Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser  
 210 215 220

Arg Asp Asn Ala Lys Thr Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg  
 225 230 235 240

Pro Glu Asp Thr Ala Leu Tyr Tyr Cys Thr Ile Gly Gly Ser Leu Ser  
 245 250 255

Arg Ser Ser Gln Gly Thr Leu Val Thr Val Ser Ser Ala  
 260 265

<210> 90  
 <211> 269  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Nanobody Sequence

<400> 90

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

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

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

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

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

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

Arg Phe Arg Thr Ala Ala Gln Gly Thr Asp Tyr Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly  
130 135 140

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser  
145 150 155 160

Gly Gly Gly Val Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala  
165 170 175

Ala Ser Gly Phe Thr Phe Arg Ser Phe Gly Met Ser Trp Val Arg Gln  
180 185 190

Ala Pro Gly Lys Gly Pro Glu Trp Val Ser Ser Ile Ser Gly Ser Gly  
195 200 205

Ser Asp Thr Leu Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser  
210 215 220

Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg  
225 230 235 240

Pro Glu Asp Thr Ala Leu Tyr Tyr Cys Thr Ile Gly Gly Ser Leu Ser  
245 250 255

Arg Ser Ser Gln Gly Thr Leu Val Thr Val Ser Ser Ala  
260 265

<210> 91  
<211> 609  
<212> PRT  
<213> Homo sapiens

<400> 91

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala  
1 5 10 15

Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala  
20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu  
35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val  
50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp  
65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp  
85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala  
100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln  
115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val  
130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys  
145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro  
165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys  
180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu  
195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys  
210 215 220

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

Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser  
245 250 255

Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly  
260 265 270

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile  
275 280 285

Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu  
290 295 300

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

Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser  
325 330 335

Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly  
340 345 350

Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val  
355 360 365

Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys  
370 375 380

Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu  
385 390 395 400

Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys  
405 410 415

Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu  
420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val  
435 440 445

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His  
450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val  
465 470 475 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg  
485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe  
500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala  
515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu  
530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys  
545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala  
565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe  
580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly  
595 600 605

Leu

<210> 92  
<211> 607  
<212> PRT  
<213> Mus musculus

<400> 92

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

Phe Ser Arg Gly Phe Arg Arg Glu Ala His Lys Ser Glu Ile Ala His  
20 25 30

Arg Tyr Asn Asp Leu Gly Glu Gln His Phe Lys Gly Leu Val Leu Ile  
35 40 45

Ala Phe Ser Gln Tyr Leu Gln Lys Cys Ser Tyr Asp Glu His Ala Lys  
50 55 60

Leu Val Gln Glu Val Thr Asp Phe Ala Lys Thr Cys Val Ala Asp Glu  
65 70 75 80

Ser Ala Ala Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys  
85 90 95

Leu Cys Ala Ile Pro Asn Leu Arg Glu Asn Tyr Gly Glu Leu Ala Asp  
100 105 110

Cys Cys Thr Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His  
115 120 125

Lys Asp Asp Asn Pro Ser Leu Pro Pro Phe Glu Arg Pro Glu Ala Glu  
130 135 140

Ala Met Cys Thr Ser Phe Lys Glu Asn Pro Thr Thr Phe Met Gly His  
 145 150 155 160

Tyr Leu His Glu Val Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu  
 165 170 175

Leu Leu Tyr Tyr Ala Glu Gln Tyr Asn Glu Ile Leu Thr Gln Cys Cys  
 180 185 190

Ala Glu Ala Asp Lys Glu Ser Cys Leu Thr Pro Lys Leu Asp Gly Val  
 195 200 205

Lys Glu Lys Ala Leu Val Ser Ser Val Arg Gln Arg Met Lys Cys Ser  
 210 215 220

Ser Met Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala  
 225 230 235 240

Arg Leu Ser Gln Thr Phe Pro Asn Ala Asp Phe Ala Glu Ile Thr Lys  
 245 250 255

Leu Ala Thr Asp Leu Thr Lys Val Asn Lys Glu Cys Cys His Gly Asp  
 260 265 270

Leu Leu Glu Cys Ala Asp Asp Arg Ala Glu Leu Ala Lys Tyr Met Cys  
 275 280 285

Glu Asn Gln Ala Thr Ile Ser Ser Lys Leu Gln Thr Cys Cys Asp Lys  
 290 295 300

Pro Leu Leu Lys Lys Ala His Cys Leu Ser Glu Val Glu His Asp Thr  
 305 310 315 320

Met Pro Ala Asp Leu Pro Ala Ile Ala Ala Asp Phe Val Glu Asp Gln  
 325 330 335

Glu Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Thr

|                                                                 |     |     |
|-----------------------------------------------------------------|-----|-----|
| 340                                                             | 345 | 350 |
| Phe Leu Tyr Glu Tyr Ser Arg Arg His Pro Asp Tyr Ser Val Ser Leu |     |     |
| 355                                                             | 360 | 365 |
| Leu Leu Arg Leu Ala Lys Lys Tyr Glu Ala Thr Leu Glu Lys Cys Cys |     |     |
| 370                                                             | 375 | 380 |
| Ala Glu Ala Asn Pro Pro Ala Cys Tyr Gly Thr Val Leu Ala Glu Phe |     |     |
| 385                                                             | 390 | 395 |
| Gln Pro Leu Val Glu Glu Pro Lys Asn Leu Val Lys Thr Asn Cys Asp |     |     |
| 405                                                             | 410 | 415 |
| Leu Tyr Glu Lys Leu Gly Glu Tyr Gly Phe Gln Asn Ala Ile Leu Val |     |     |
| 420                                                             | 425 | 430 |
| Arg Tyr Thr Gln Lys Ala Pro Gln Val Ser Thr Pro Thr Leu Val Glu |     |     |
| 435                                                             | 440 | 445 |
| Ala Ala Arg Asn Leu Gly Arg Val Gly Thr Lys Cys Cys Thr Leu Pro |     |     |
| 450                                                             | 455 | 460 |
| Glu Asp Gln Arg Leu Pro Cys Val Glu Asp Tyr Leu Ser Ala Ile Leu |     |     |
| 465                                                             | 470 | 475 |
| Asn Arg Val Cys Leu Leu His Glu Lys Thr Pro Val Ser Glu His Val |     |     |
| 485                                                             | 490 | 495 |
| Thr Lys Cys Cys Ser Gly Ser Leu Val Glu Arg Arg Pro Cys Phe Ser |     |     |
| 500                                                             | 505 | 510 |
| Ala Leu Thr Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Lys Ala Glu |     |     |
| 515                                                             | 520 | 525 |
| Thr Phe Thr Phe His Ser Asp Ile Cys Thr Leu Pro Glu Lys Glu Lys |     |     |
| 530                                                             | 535 | 540 |

Gln Ile Lys Lys Gln Thr Ala Leu Ala Glu Leu Val Lys His Lys Pro  
 545 550 555 560

Lys Ala Thr Ala Glu Gln Leu Lys Thr Val Met Asp Asp Phe Ala Gln  
 565 570 575

Phe Leu Asp Thr Cys Cys Lys Ala Ala Asp Lys Asp Thr Cys Phe Ser  
 580 585 590

Thr Glu Gly Pro Asn Leu Val Thr Arg Cys Lys Asp Ala Leu Ala  
 595 600 605

<210> 93  
 <211> 608  
 <212> PRT  
 <213> Rattus norvegicus

<400> 93

Met Lys Trp Val Thr Phe Leu Leu Leu Leu Phe Ile Ser Gly Ser Ala  
 1 5 10 15

Phe Ser Arg Gly Val Phe Arg Arg Glu Ala His Lys Ser Glu Ile Ala  
 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Gln His Phe Lys Gly Leu Val Leu  
 35 40 45

Ile Ala Phe Ser Gln Tyr Leu Gln Lys Cys Pro Tyr Glu Glu His Ile  
 50 55 60

Lys Leu Val Gln Glu Val Thr Asp Phe Ala Lys Thr Cys Val Ala Asp  
 65 70 75 80

Glu Asn Ala Glu Asn Cys Asp Lys Ser Ile His Thr Leu Phe Gly Asp  
 85 90 95

Lys Leu Cys Ala Ile Pro Lys Leu Arg Asp Asn Tyr Gly Glu Leu Ala  
 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln  
115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Pro Phe Gln Arg Pro Glu Ala  
130 135 140

Glu Ala Met Cys Thr Ser Phe Gln Glu Asn Pro Thr Ser Phe Leu Gly  
145 150 155 160

His Tyr Leu His Glu Val Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro  
165 170 175

Glu Leu Leu Tyr Tyr Ala Glu Lys Tyr Asn Glu Val Leu Thr Gln Cys  
180 185 190

Cys Thr Glu Ser Asp Lys Ala Ala Cys Leu Thr Pro Lys Leu Asp Ala  
195 200 205

Val Lys Glu Lys Ala Leu Val Ala Ala Val Arg Gln Arg Met Lys Cys  
210 215 220

Ser Ser Met Gln Arg Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val  
225 230 235 240

Ala Arg Met Ser Gln Arg Phe Pro Asn Ala Glu Phe Ala Glu Ile Thr  
245 250 255

Lys Leu Ala Thr Asp Leu Thr Lys Ile Asn Lys Glu Cys Cys His Gly  
260 265 270

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Glu Leu Ala Lys Tyr Met  
275 280 285

Cys Glu Asn Gln Ala Thr Ile Ser Ser Lys Leu Gln Ala Cys Cys Asp  
290 295 300

Lys Pro Val Leu Gln Lys Ser Gln Cys Leu Ala Glu Ile Glu His Asp  
305 310 315 320

Asn Ile Pro Ala Asp Leu Pro Ser Ile Ala Ala Asp Phe Val Glu Asp  
325 330 335

Lys Glu Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly  
340 345 350

Thr Phe Leu Tyr Glu Tyr Ser Arg Arg His Pro Asp Tyr Ser Val Ser  
355 360 365

Leu Leu Leu Arg Leu Ala Lys Lys Tyr Glu Ala Thr Leu Glu Lys Cys  
370 375 380

Cys Ala Glu Gly Asp Pro Pro Ala Cys Tyr Gly Thr Val Leu Ala Glu  
385 390 395 400

Phe Gln Pro Leu Val Glu Glu Pro Lys Asn Leu Val Lys Thr Asn Cys  
405 410 415

Glu Leu Tyr Glu Lys Leu Gly Glu Tyr Gly Phe Gln Asn Ala Ile Leu  
420 425 430

Val Arg Tyr Thr Gln Lys Ala Pro Gln Val Ser Thr Pro Thr Leu Val  
435 440 445

Glu Ala Ala Arg Asn Leu Gly Arg Val Gly Thr Lys Cys Cys Thr Leu  
450 455 460

Pro Glu Ala Gln Arg Leu Pro Cys Val Glu Asp Tyr Leu Ser Ala Ile  
465 470 475 480

Leu Asn Arg Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Glu Lys  
485 490 495

Val Thr Lys Cys Cys Ser Gly Ser Leu Val Glu Arg Arg Pro Cys Phe  
500 505 510

Ser Ala Leu Thr Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Lys Ala  
515 520 525

Glu Thr Phe Thr Phe His Ser Asp Ile Cys Thr Leu Pro Asp Lys Glu  
530 535 540

Lys Gln Ile Lys Lys Gln Thr Ala Leu Ala Glu Leu Val Lys His Lys  
545 550 555 560

Pro Lys Ala Thr Glu Asp Gln Leu Lys Thr Val Met Gly Asp Phe Ala  
565 570 575

Gln Phe Val Asp Lys Cys Cys Lys Ala Ala Asp Lys Asp Asn Cys Phe  
580 585 590

Ala Thr Glu Gly Pro Asn Leu Val Ala Arg Ser Lys Glu Ala Leu Ala  
595 600 605

<210> 94  
<211> 607  
<212> PRT  
<213> Bos taurus

<400> 94

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Leu Leu Phe Ser Ser Ala  
1 5 10 15

Tyr Ser Arg Gly Val Phe Arg Arg Asp Thr His Lys Ser Glu Ile Ala  
20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu His Phe Lys Gly Leu Val Leu  
35 40 45

Ile Ala Phe Ser Gln Tyr Leu Gln Gln Cys Pro Phe Asp Glu His Val  
50 55 60

Lys Leu Val Asn Glu Leu Thr Glu Phe Ala Lys Thr Cys Val Ala Asp

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Glu | Ser | His | Ala | Gly | Cys | Glu | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Glu | Leu | Cys | Lys | Val | Ala | Ser | Leu | Arg | Glu | Thr | Tyr | Gly | Asp | Met | Ala |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     | 110 |     |     |
| Asp | Cys | Cys | Glu | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Ser |
|     |     |     | 115 |     |     |     |     |     | 120 |     |     | 125 |     |     |     |
| His | Lys | Asp | Asp | Ser | Pro | Asp | Leu | Pro | Lys | Leu | Lys | Pro | Asp | Pro | Asn |
|     | 130 |     |     |     |     |     | 135 |     |     |     | 140 |     |     |     |     |
| Thr | Leu | Cys | Asp | Glu | Phe | Lys | Ala | Asp | Glu | Lys | Lys | Phe | Trp | Gly | Lys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | Glu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Leu | Leu | Tyr | Tyr | Ala | Asn | Lys | Tyr | Asn | Gly | Val | Phe | Gln | Glu | Cys | Cys |
|     |     |     | 180 |     |     |     |     |     | 185 |     |     |     | 190 |     |     |
| Gln | Ala | Glu | Asp | Lys | Gly | Ala | Cys | Leu | Leu | Pro | Lys | Ile | Glu | Thr | Met |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Arg | Glu | Lys | Val | Leu | Thr | Ser | Ser | Ala | Arg | Gln | Arg | Leu | Arg | Cys | Ala |
|     | 210 |     |     |     |     |     | 215 |     |     |     | 220 |     |     |     |     |
| Ser | Ile | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Leu | Lys | Ala | Trp | Ser | Val | Ala |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Arg | Leu | Ser | Gln | Lys | Phe | Pro | Lys | Ala | Glu | Phe | Val | Glu | Val | Thr | Lys |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Lys | Glu | Cys | Cys | His | Gly | Asp |
|     |     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |

Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys  
275 280 285

Asp Asn Gln Asp Thr Ile Ser Ser Lys Leu Lys Glu Cys Cys Asp Lys  
290 295 300

Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Lys Asp Ala  
305 310 315 320

Ile Pro Glu Asn Leu Pro Pro Leu Thr Ala Asp Phe Ala Glu Asp Lys  
325 330 335

Asp Val Cys Lys Asn Tyr Gln Glu Ala Lys Asp Ala Phe Leu Gly Ser  
340 345 350

Phe Leu Tyr Glu Tyr Ser Arg Arg His Pro Glu Tyr Ala Val Ser Val  
355 360 365

Leu Leu Arg Leu Ala Lys Glu Tyr Glu Ala Thr Leu Glu Glu Cys Cys  
370 375 380

Ala Lys Asp Asp Pro His Ala Cys Tyr Ser Thr Val Phe Asp Lys Leu  
385 390 395 400

Lys His Leu Val Asp Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Asp  
405 410 415

Gln Phe Glu Lys Leu Gly Glu Tyr Gly Phe Gln Asn Ala Leu Ile Val  
420 425 430

Arg Tyr Thr Arg Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu  
435 440 445

Val Ser Arg Ser Leu Gly Lys Val Gly Thr Arg Cys Cys Thr Lys Pro  
450 455 460

Glu Ser Glu Arg Met Pro Cys Thr Glu Asp Tyr Leu Ser Leu Ile Leu

465                      470                      475                      480

Asn Arg Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Glu Lys Val  
                                  485                                   490                                   495

Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser  
                                  500                                   505                                   510

Ala Leu Thr Pro Asp Glu Thr Tyr Val Pro Lys Ala Phe Asp Glu Lys  
                                  515                                   520                                   525

Leu Phe Thr Phe His Ala Asp Ile Cys Thr Leu Pro Asp Thr Glu Lys  
                                  530                                   535                                   540

Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Leu Lys His Lys Pro  
 545                                   550                                   555                                   560

Lys Ala Thr Glu Glu Gln Leu Lys Thr Val Met Glu Asn Phe Val Ala  
                                  565                                   570                                   575

Phe Val Asp Lys Cys Cys Ala Ala Asp Asp Lys Glu Ala Cys Phe Ala  
                                  580                                   585                                   590

Val Glu Gly Pro Lys Leu Val Val Ser Thr Gln Thr Ala Leu Ala  
                                  595                                   600                                   605

<210> 95  
 <211> 607  
 <212> PRT  
 <213> Sus scrofa

<400> 95

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala  
 1                                   5                                   10                                   15

Tyr Ser Arg Gly Val Phe Arg Arg Asp Thr Tyr Lys Ser Glu Ile Ala  
                                  20                                   25                                   30

His Arg Phe Lys Asp Leu Gly Glu Gln Tyr Phe Lys Gly Leu Val Leu  
35 40 45

Ile Ala Phe Ser Gln His Leu Gln Gln Cys Pro Tyr Glu Glu His Val  
50 55 60

Lys Leu Val Arg Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp  
65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Ile His Thr Leu Phe Gly Asp  
85 90 95

Lys Leu Cys Ala Ile Pro Ser Leu Arg Glu His Tyr Gly Asp Leu Ala  
100 105 110

Asp Cys Cys Glu Lys Glu Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln  
115 120 125

His Lys Asn Asp Asn Pro Asp Ile Pro Lys Leu Lys Pro Asp Pro Val  
130 135 140

Ala Leu Cys Ala Asp Phe Gln Glu Asp Glu Gln Lys Phe Trp Gly Lys  
145 150 155 160

Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu  
165 170 175

Leu Leu Tyr Tyr Ala Ile Ile Tyr Lys Asp Val Phe Ser Glu Cys Cys  
180 185 190

Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Ile Glu His Leu  
195 200 205

Arg Glu Lys Val Leu Thr Ser Ala Ala Lys Gln Arg Leu Lys Cys Ala  
210 215 220

Ser Ile Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ser Leu Ala  
225 230 235 240

Arg Leu Ser Gln Arg Phe Pro Lys Ala Asp Phe Thr Glu Ile Ser Lys  
245 250 255

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

Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys  
275 280 285

Glu Asn Gln Asp Thr Ile Ser Thr Lys Leu Lys Glu Cys Cys Asp Lys  
290 295 300

Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Ala Lys Arg Asp Glu  
305 310 315 320

Leu Pro Ala Asp Leu Asn Pro Leu Glu His Asp Phe Val Glu Asp Lys  
325 330 335

Glu Val Cys Lys Asn Tyr Lys Glu Ala Lys His Val Phe Leu Gly Thr  
340 345 350

Phe Leu Tyr Glu Tyr Ser Arg Arg His Pro Asp Tyr Ser Val Ser Leu  
355 360 365

Leu Leu Arg Ile Ala Lys Ile Tyr Glu Ala Thr Leu Glu Asp Cys Cys  
370 375 380

Ala Lys Glu Asp Pro Pro Ala Cys Tyr Ala Thr Val Phe Asp Lys Phe  
385 390 395 400

Gln Pro Leu Val Asp Glu Pro Lys Asn Leu Ile Lys Gln Asn Cys Glu  
405 410 415

Leu Phe Glu Lys Leu Gly Glu Tyr Gly Phe Gln Asn Ala Leu Ile Val  
420 425 430

Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu  
 435 440 445

Val Ala Arg Lys Leu Gly Leu Val Gly Ser Arg Cys Cys Lys Arg Pro  
 450 455 460

Glu Glu Glu Arg Leu Ser Cys Ala Glu Asp Tyr Leu Ser Leu Val Leu  
 465 470 475 480

Asn Arg Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Glu Lys Val  
 485 490 495

Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser  
 500 505 510

Ala Leu Thr Pro Asp Glu Thr Tyr Lys Pro Lys Glu Phe Val Glu Gly  
 515 520 525

Thr Phe Thr Phe His Ala Asp Leu Cys Thr Leu Pro Glu Asp Glu Lys  
 530 535 540

Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Leu Lys His Lys Pro  
 545 550 555 560

His Ala Thr Glu Glu Gln Leu Arg Thr Val Leu Gly Asn Phe Ala Ala  
 565 570 575

Phe Val Gln Lys Cys Cys Ala Ala Pro Asp His Glu Ala Cys Phe Ala  
 580 585 590

Val Glu Gly Pro Lys Phe Val Ile Glu Ile Arg Gly Ile Leu Ala  
 595 600 605

<210> 96  
 <211> 608  
 <212> PRT  
 <213> Canis lupus

<400> 96

Met Lys Trp Val Thr Phe Ile Ser Leu Phe Phe Leu Phe Ser Ser Ala  
1 5 10 15

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

His Arg Tyr Asn Asp Leu Gly Glu Glu His Phe Arg Gly Leu Val Leu  
35 40 45

Val Ala Phe Ser Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val  
50 55 60

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

Glu Ser Gly Ala Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp  
85 90 95

Lys Leu Cys Thr Val Ala Ser Leu Arg Asp Lys Tyr Gly Asp Met Ala  
100 105 110

Asp Cys Cys Glu Lys Gln Glu Pro Asp Arg Asn Glu Cys Phe Leu Ala  
115 120 125

His Lys Asp Asp Asn Pro Gly Phe Pro Pro Leu Val Ala Pro Glu Pro  
130 135 140

Asp Ala Leu Cys Ala Ala Phe Gln Asp Asn Glu Gln Leu Phe Leu Gly  
145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro  
165 170 175

Glu Leu Leu Tyr Tyr Ala Gln Gln Tyr Lys Gly Val Phe Ala Glu Cys  
180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Gly Pro Lys Ile Glu Ala

195

200

205

Leu Arg Glu Lys Val Leu Leu Ser Ser Ala Lys Glu Arg Phe Lys Cys  
 210 215 220

Ala Ser Leu Gln Lys Phe Gly Asp Arg Ala Phe Lys Ala Trp Ser Val  
 225 230 235 240

Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Asp Phe Ala Glu Ile Ser  
 245 250 255

Lys Val Val Thr Asp Leu Thr Lys Val His Lys Glu Cys Cys His Gly  
 260 265 270

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Met  
 275 280 285

Cys Glu Asn Gln Asp Ser Ile Ser Thr Lys Leu Lys Glu Cys Cys Asp  
 290 295 300

Lys Pro Val Leu Glu Lys Ser Gln Cys Leu Ala Glu Val Glu Arg Asp  
 305 310 315 320

Glu Leu Pro Gly Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Asp  
 325 330 335

Lys Glu Val Cys Lys Asn Tyr Gln Glu Ala Lys Asp Val Phe Leu Gly  
 340 345 350

Thr Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Glu Tyr Ser Val Ser  
 355 360 365

Leu Leu Leu Arg Leu Ala Lys Glu Tyr Glu Ala Thr Leu Glu Lys Cys  
 370 375 380

Cys Ala Thr Asp Asp Pro Pro Thr Cys Tyr Ala Lys Val Leu Asp Glu  
 385 390 395 400

Phe Lys Pro Leu Val Asp Glu Pro Gln Asn Leu Val Lys Thr Asn Cys  
405 410 415

Glu Leu Phe Glu Lys Leu Gly Glu Tyr Gly Phe Gln Asn Ala Leu Leu  
420 425 430

Val Arg Tyr Thr Lys Lys Ala Pro Gln Val Ser Thr Pro Thr Leu Val  
435 440 445

Glu Val Ser Arg Lys Leu Gly Lys Val Gly Thr Lys Cys Cys Lys Lys  
450 455 460

Pro Glu Ser Glu Arg Met Ser Cys Ala Glu Asp Phe Leu Ser Val Val  
465 470 475 480

Leu Asn Arg Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Glu Arg  
485 490 495

Val Thr Lys Cys Cys Ser Glu Ser Leu Val Asn Arg Arg Pro Cys Phe  
500 505 510

Ser Gly Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala  
515 520 525

Glu Thr Phe Thr Phe His Ala Asp Leu Cys Thr Leu Pro Glu Ala Glu  
530 535 540

Lys Gln Val Lys Lys Gln Thr Ala Leu Val Glu Leu Leu Lys His Lys  
545 550 555 560

Pro Lys Ala Thr Asp Glu Gln Leu Lys Thr Val Met Gly Asp Phe Gly  
565 570 575

Ala Phe Val Glu Lys Cys Cys Ala Ala Glu Asn Lys Glu Gly Cys Phe  
580 585 590

Ser Glu Glu Gly Pro Lys Leu Val Ala Ala Ala Gln Ala Ala Leu Val

595

600

605

<210> 97  
 <211> 608  
 <212> PRT  
 <213> Felis catus

<400> 97

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Leu Leu Phe Ser Ser Ala  
 1 5 10 15

Tyr Ser Arg Gly Val Thr Arg Arg Glu Ala His Gln Ser Glu Ile Ala  
 20 25 30

His Arg Phe Asn Asp Leu Gly Glu Glu His Phe Arg Gly Leu Val Leu  
 35 40 45

Val Ala Phe Ser Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val  
 50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Gly Cys Val Ala Asp  
 65 70 75 80

Gln Ser Ala Ala Asn Cys Glu Lys Ser Leu His Glu Leu Leu Gly Asp  
 85 90 95

Lys Leu Cys Thr Val Ala Ser Leu Arg Asp Lys Tyr Gly Glu Met Ala  
 100 105 110

Asp Cys Cys Glu Lys Lys Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln  
 115 120 125

His Lys Asp Asp Asn Pro Gly Phe Gly Gln Leu Val Thr Pro Glu Ala  
 130 135 140

Asp Ala Met Cys Thr Ala Phe His Glu Asn Glu Gln Arg Phe Leu Gly  
 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro  
165 170 175

Glu Leu Leu Tyr Tyr Ala Glu Glu Tyr Lys Gly Val Phe Thr Glu Cys  
180 185 190

Cys Glu Ala Ala Asp Lys Ala Ala Cys Leu Thr Pro Lys Val Asp Ala  
195 200 205

Leu Arg Glu Lys Val Leu Ala Ser Ser Ala Lys Glu Arg Leu Lys Cys  
210 215 220

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

Ala Arg Leu Ser Gln Lys Phe Pro Lys Ala Glu Phe Ala Glu Ile Ser  
245 250 255

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

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile  
275 280 285

Cys Glu Asn Gln Asp Ser Ile Ser Thr Lys Leu Lys Glu Cys Cys Gly  
290 295 300

Lys Pro Val Leu Glu Lys Ser His Cys Ile Ser Glu Val Glu Arg Asp  
305 310 315 320

Glu Leu Pro Ala Asp Leu Pro Pro Leu Ala Val Asp Phe Val Glu Asp  
325 330 335

Lys Glu Val Cys Lys Asn Tyr Gln Glu Ala Lys Asp Val Phe Leu Gly  
340 345 350

Thr Phe Leu Tyr Glu Tyr Ser Arg Arg His Pro Glu Tyr Ser Val Ser  
355 360 365

Leu Leu Leu Arg Leu Ala Lys Glu Tyr Glu Ala Thr Leu Glu Lys Cys  
370 375 380

Cys Ala Thr Asp Asp Pro Pro Ala Cys Tyr Ala His Val Phe Asp Glu  
385 390 395 400

Phe Lys Pro Leu Val Glu Glu Pro His Asn Leu Val Lys Thr Asn Cys  
405 410 415

Glu Leu Phe Glu Lys Leu Gly Glu Tyr Gly Phe Gln Asn Ala Leu Leu  
420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val  
435 440 445

Glu Val Ser Arg Ser Leu Gly Lys Val Gly Ser Lys Cys Cys Thr His  
450 455 460

Pro Glu Ala Glu Arg Leu Ser Cys Ala Glu Asp Tyr Leu Ser Val Val  
465 470 475 480

Leu Asn Arg Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Glu Arg  
485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe  
500 505 510

Ser Ala Leu Gln Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Ser Ala  
515 520 525

Glu Thr Phe Thr Phe His Ala Asp Leu Cys Thr Leu Pro Glu Ala Glu  
530 535 540

Lys Gln Ile Lys Lys Gln Ser Ala Leu Val Glu Leu Leu Lys His Lys  
545 550 555 560

Pro Lys Ala Thr Glu Glu Gln Leu Lys Thr Val Met Gly Asp Phe Gly  
565 570 575

Ser Phe Val Asp Lys Cys Cys Ala Ala Glu Asp Lys Glu Ala Cys Phe  
580 585 590

Ala Glu Glu Gly Pro Lys Leu Val Ala Ala Ala Gln Ala Ala Leu Ala  
595 600 605

<210> 98  
<211> 607  
<212> PRT  
<213> Ovis aries

<400> 98

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Leu Leu Phe Ser Ser Ala  
1 5 10 15

Tyr Ser Arg Gly Val Phe Arg Arg Asp Thr His Lys Ser Glu Ile Ala  
20 25 30

His Arg Phe Asn Asp Leu Gly Glu Glu Asn Phe Gln Gly Leu Val Leu  
35 40 45

Ile Ala Phe Ser Gln Tyr Leu Gln Gln Cys Pro Phe Asp Glu His Val  
50 55 60

Lys Leu Val Lys Glu Leu Thr Glu Phe Ala Lys Thr Cys Val Ala Asp  
65 70 75 80

Glu Ser His Ala Gly Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp  
85 90 95

Glu Leu Cys Lys Val Ala Thr Leu Arg Glu Thr Tyr Gly Asp Met Ala  
100 105 110

Asp Cys Cys Glu Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Asn  
115 120 125

His Lys Asp Asp Ser Pro Asp Leu Pro Lys Leu Lys Pro Glu Pro Asp  
130 135 140

Thr Leu Cys Ala Glu Phe Lys Ala Asp Glu Lys Lys Phe Trp Gly Lys  
145 150 155 160

Tyr Leu Tyr Glu Val Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu  
165 170 175

Leu Leu Tyr Tyr Ala Asn Lys Tyr Asn Gly Val Phe Gln Glu Cys Cys  
180 185 190

Gln Ala Glu Asp Lys Gly Ala Cys Leu Leu Pro Lys Ile Asp Ala Met  
195 200 205

Arg Glu Lys Val Leu Ala Ser Ser Ala Arg Gln Arg Leu Arg Cys Ala  
210 215 220

Ser Ile Gln Lys Phe Gly Glu Arg Ala Leu Lys Ala Trp Ser Val Ala  
225 230 235 240

Arg Leu Ser Gln Lys Phe Pro Lys Ala Asp Phe Thr Asp Val Thr Lys  
245 250 255

Ile Val Thr Asp Leu Thr Lys Val His Lys Glu Cys Cys His Gly Asp  
260 265 270

Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys  
275 280 285

Asp His Gln Asp Ala Leu Ser Ser Lys Leu Lys Glu Cys Cys Asp Lys  
290 295 300

Pro Val Leu Glu Lys Ser His Cys Ile Ala Glu Val Asp Lys Asp Ala  
305 310 315 320

Val Pro Glu Asn Leu Pro Pro Leu Thr Ala Asp Phe Ala Glu Asp Lys

325

330

335

Glu Val Cys Lys Asn Tyr Gln Glu Ala Lys Asp Val Phe Leu Gly Ser  
 340 345 350

Phe Leu Tyr Glu Tyr Ser Arg Arg His Pro Glu Tyr Ala Val Ser Val  
 355 360 365

Leu Leu Arg Leu Ala Lys Glu Tyr Glu Ala Thr Leu Glu Asp Cys Cys  
 370 375 380

Ala Lys Glu Asp Pro His Ala Cys Tyr Ala Thr Val Phe Asp Lys Leu  
 385 390 395 400

Lys His Leu Val Asp Glu Pro Gln Asn Leu Ile Lys Lys Asn Cys Glu  
 405 410 415

Leu Phe Glu Lys His Gly Glu Tyr Gly Phe Gln Asn Ala Leu Ile Val  
 420 425 430

Arg Tyr Thr Arg Lys Ala Pro Gln Val Ser Thr Pro Thr Leu Val Glu  
 435 440 445

Ile Ser Arg Ser Leu Gly Lys Val Gly Thr Lys Cys Cys Ala Lys Pro  
 450 455 460

Glu Ser Glu Arg Met Pro Cys Thr Glu Asp Tyr Leu Ser Leu Ile Leu  
 465 470 475 480

Asn Arg Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Glu Lys Val  
 485 490 495

Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser  
 500 505 510

Asp Leu Thr Leu Asp Glu Thr Tyr Val Pro Lys Pro Phe Asp Glu Lys  
 515 520 525

Phe Phe Thr Phe His Ala Asp Ile Cys Thr Leu Pro Asp Thr Glu Lys  
 530 535 540

Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Leu Lys His Lys Pro  
 545 550 555 560

Lys Ala Thr Asp Glu Gln Leu Lys Thr Val Met Glu Asn Phe Val Ala  
 565 570 575

Phe Val Asp Lys Cys Cys Ala Ala Asp Asp Lys Glu Gly Cys Phe Val  
 580 585 590

Leu Glu Gly Pro Lys Leu Val Ala Ser Thr Gln Ala Ala Leu Ala  
 595 600 605

<210> 99  
 <211> 607  
 <212> PRT  
 <213> Equus caballus

<400> 99

Met Lys Trp Val Thr Phe Val Ser Leu Leu Phe Leu Phe Ser Ser Ala  
 1 5 10 15

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

His Arg Phe Asn Asp Leu Gly Glu Lys His Phe Lys Gly Leu Val Leu  
 35 40 45

Val Ala Phe Ser Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val  
 50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Lys Cys Ala Ala Asp  
 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp  
 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Ala Thr Tyr Gly Glu Leu Ala  
100 105 110

Asp Cys Cys Glu Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Thr  
115 120 125

His Lys Asp Asp His Pro Asn Leu Pro Lys Leu Lys Pro Glu Pro Asp  
130 135 140

Ala Gln Cys Ala Ala Phe Gln Glu Asp Pro Asp Lys Phe Leu Gly Lys  
145 150 155 160

Tyr Leu Tyr Glu Val Ala Arg Arg His Pro Tyr Phe Tyr Gly Pro Glu  
165 170 175

Leu Leu Phe His Ala Glu Glu Tyr Lys Ala Asp Phe Thr Glu Cys Cys  
180 185 190

Pro Ala Asp Asp Lys Leu Ala Cys Leu Ile Pro Lys Leu Asp Ala Leu  
195 200 205

Lys Glu Arg Ile Leu Leu Ser Ser Ala Lys Glu Arg Leu Lys Cys Ser  
210 215 220

Ser Phe Gln Asn Phe Gly Glu Arg Ala Val Lys Ala Trp Ser Val Ala  
225 230 235 240

Arg Leu Ser Gln Lys Phe Pro Lys Ala Asp Phe Ala Glu Val Ser Lys  
245 250 255

Ile Val Thr Asp Leu Thr Lys Val His Lys Glu Cys Cys His Gly Asp  
260 265 270

Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys  
275 280 285

Glu His Gln Asp Ser Ile Ser Gly Lys Leu Lys Ala Cys Cys Asp Lys  
 290 295 300

Pro Leu Leu Gln Lys Ser His Cys Ile Ala Glu Val Lys Glu Asp Asp  
 305 310 315 320

Leu Pro Ser Asp Leu Pro Ala Leu Ala Ala Asp Phe Ala Glu Asp Lys  
 325 330 335

Glu Ile Cys Lys His Tyr Lys Asp Ala Lys Asp Val Phe Leu Gly Thr  
 340 345 350

Phe Leu Tyr Glu Tyr Ser Arg Arg His Pro Asp Tyr Ser Val Ser Leu  
 355 360 365

Leu Leu Arg Ile Ala Lys Thr Tyr Glu Ala Thr Leu Glu Lys Cys Cys  
 370 375 380

Ala Glu Ala Asp Pro Pro Ala Cys Tyr Arg Thr Val Phe Asp Gln Phe  
 385 390 395 400

Thr Pro Leu Val Glu Glu Pro Lys Ser Leu Val Lys Lys Asn Cys Asp  
 405 410 415

Leu Phe Glu Glu Val Gly Glu Tyr Asp Phe Gln Asn Ala Leu Ile Val  
 420 425 430

Arg Tyr Thr Lys Lys Ala Pro Gln Val Ser Thr Pro Thr Leu Val Glu  
 435 440 445

Ile Gly Arg Thr Leu Gly Lys Val Gly Ser Arg Cys Cys Lys Leu Pro  
 450 455 460

Glu Ser Glu Arg Leu Pro Cys Ser Glu Asn His Leu Ala Leu Ala Leu  
 465 470 475 480

Asn Arg Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Glu Lys Ile  
 485 490 495

Thr Lys Cys Cys Thr Asp Ser Leu Ala Glu Arg Arg Pro Cys Phe Ser  
500 505 510

Ala Leu Glu Leu Asp Glu Gly Tyr Val Pro Lys Glu Phe Lys Ala Glu  
515 520 525

Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Pro Glu Asp Glu Lys  
530 535 540

Gln Ile Lys Lys Gln Ser Ala Leu Ala Glu Leu Val Lys His Lys Pro  
545 550 555 560

Lys Ala Thr Lys Glu Gln Leu Lys Thr Val Leu Gly Asn Phe Ser Ala  
565 570 575

Phe Val Ala Lys Cys Cys Gly Arg Glu Asp Lys Glu Ala Cys Phe Ala  
580 585 590

Glu Glu Gly Pro Lys Leu Val Ala Ser Ser Gln Leu Ala Leu Ala  
595 600 605

<210> 100  
<211> 608  
<212> PRT  
<213> Oryctolagus cuniculus  
<400> 100

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala  
1 5 10 15

Tyr Ser Arg Gly Val Phe Arg Arg Glu Ala His Lys Ser Glu Ile Ala  
20 25 30

His Arg Phe Asn Asp Val Gly Glu Glu His Phe Ile Gly Leu Val Leu  
35 40 45

Ile Thr Phe Ser Gln Tyr Leu Gln Lys Cys Pro Tyr Glu Glu His Ala

50

55

60

Lys Leu Val Lys Glu Val Thr Asp Leu Ala Lys Ala Cys Val Ala Asp  
65 70 75 80

Glu Ser Ala Ala Asn Cys Asp Lys Ser Leu His Asp Ile Phe Gly Asp  
85 90 95

Lys Ile Cys Ala Leu Pro Ser Leu Arg Asp Thr Tyr Gly Asp Val Ala  
100 105 110

Asp Cys Cys Glu Lys Lys Glu Pro Glu Arg Asn Glu Cys Phe Leu His  
115 120 125

His Lys Asp Asp Lys Pro Asp Leu Pro Pro Phe Ala Arg Pro Glu Ala  
130 135 140

Asp Val Leu Cys Lys Ala Phe His Asp Asp Glu Lys Ala Phe Phe Gly  
145 150 155 160

His Tyr Leu Tyr Glu Val Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro  
165 170 175

Glu Leu Leu Tyr Tyr Ala Gln Lys Tyr Lys Ala Ile Leu Thr Glu Cys  
180 185 190

Cys Glu Ala Ala Asp Lys Gly Ala Cys Leu Thr Pro Lys Leu Asp Ala  
195 200 205

Leu Glu Gly Lys Ser Leu Ile Ser Ala Ala Gln Glu Arg Leu Arg Cys  
210 215 220

Ala Ser Ile Gln Lys Phe Gly Asp Arg Ala Tyr Lys Ala Trp Ala Leu  
225 230 235 240

Val Arg Leu Ser Gln Arg Phe Pro Lys Ala Asp Phe Thr Asp Ile Ser  
245 250 255

Lys Ile Val Thr Asp Leu Thr Lys Val His Lys Glu Cys Cys His Gly  
260 265 270

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Met  
275 280 285

Cys Glu His Gln Glu Thr Ile Ser Ser His Leu Lys Glu Cys Cys Asp  
290 295 300

Lys Pro Ile Leu Glu Lys Ala His Cys Ile Tyr Gly Leu His Asn Asp  
305 310 315 320

Glu Thr Pro Ala Gly Leu Pro Ala Val Ala Glu Glu Phe Val Glu Asp  
325 330 335

Lys Asp Val Cys Lys Asn Tyr Glu Glu Ala Lys Asp Leu Phe Leu Gly  
340 345 350

Lys Phe Leu Tyr Glu Tyr Ser Arg Arg His Pro Asp Tyr Ser Val Val  
355 360 365

Leu Leu Leu Arg Leu Gly Lys Ala Tyr Glu Ala Thr Leu Lys Lys Cys  
370 375 380

Cys Ala Thr Asp Asp Pro His Ala Cys Tyr Ala Lys Val Leu Asp Glu  
385 390 395 400

Phe Gln Pro Leu Val Asp Glu Pro Lys Asn Leu Val Lys Gln Asn Cys  
405 410 415

Glu Leu Tyr Glu Gln Leu Gly Asp Tyr Asn Phe Gln Asn Ala Leu Leu  
420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val  
435 440 445

Glu Ile Ser Arg Ser Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His

450

455

460

Pro Glu Ala Glu Arg Leu Pro Cys Val Glu Asp Tyr Leu Ser Val Val  
 465 470 475 480

Leu Asn Arg Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Glu Lys  
 485 490 495

Val Thr Lys Cys Cys Ser Glu Ser Leu Val Asp Arg Arg Pro Cys Phe  
 500 505 510

Ser Ala Leu Gly Pro Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala  
 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Pro Glu Thr Glu  
 530 535 540

Arg Lys Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys  
 545 550 555 560

Pro His Ala Thr Asn Asp Gln Leu Lys Thr Val Val Gly Glu Phe Thr  
 565 570 575

Ala Leu Leu Asp Lys Cys Cys Ser Ala Glu Asp Lys Glu Ala Cys Phe  
 580 585 590

Ala Val Glu Gly Pro Lys Leu Val Glu Ser Ser Lys Ala Thr Leu Gly  
 595 600 605

&lt;210&gt; 101

&lt;211&gt; 615

&lt;212&gt; PRT

&lt;213&gt; Gallus gallus

&lt;400&gt; 101

Met Lys Trp Val Thr Leu Ile Ser Phe Ile Phe Leu Phe Ser Ser Ala  
 1 5 10 15

Thr Ser Arg Asn Leu Gln Arg Phe Ala Arg Asp Ala Glu His Lys Ser  
20 25 30

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

Val Ala Met Ile Thr Phe Ala Gln Tyr Leu Gln Arg Cys Ser Tyr Glu  
50 55 60

Gly Leu Ser Lys Leu Val Lys Asp Val Val Asp Leu Ala Gln Lys Cys  
65 70 75 80

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

Ile Leu Asp Glu Ile Cys Gln Val Glu Lys Leu Arg Asp Ser Tyr Gly  
100 105 110

Ala Met Ala Asp Cys Cys Ser Lys Ala Asp Pro Glu Arg Asn Glu Cys  
115 120 125

Phe Leu Ser Phe Lys Val Ser Gln Pro Asp Phe Val Gln Pro Tyr Gln  
130 135 140

Arg Pro Ala Ser Asp Val Ile Cys Gln Glu Tyr Gln Asp Asn Arg Val  
145 150 155 160

Ser Phe Leu Gly His Phe Ile Tyr Ser Val Ala Arg Arg His Pro Phe  
165 170 175

Leu Tyr Ala Pro Ala Ile Leu Ser Phe Ala Val Asp Phe Glu His Ala  
180 185 190

Leu Gln Ser Cys Cys Lys Glu Ser Asp Val Gly Ala Cys Leu Asp Thr  
195 200 205

Lys Glu Ile Val Met Arg Glu Lys Ala Lys Gly Val Ser Val Lys Gln  
210 215 220

Gln Tyr Phe Cys Gly Ile Leu Lys Gln Phe Gly Asp Arg Val Phe Gln  
225 230 235 240

Ala Arg Gln Leu Ile Tyr Leu Ser Gln Lys Tyr Pro Lys Ala Pro Phe  
245 250 255

Ser Glu Val Ser Lys Phe Val His Asp Ser Ile Gly Val His Lys Glu  
260 265 270

Cys Cys Glu Gly Asp Met Val Glu Cys Met Asp Asp Met Ala Arg Met  
275 280 285

Met Ser Asn Leu Cys Ser Gln Gln Asp Val Phe Ser Gly Lys Ile Lys  
290 295 300

Asp Cys Cys Glu Lys Pro Ile Val Glu Arg Ser Gln Cys Ile Met Glu  
305 310 315 320

Ala Glu Phe Asp Glu Lys Pro Ala Asp Leu Pro Ser Leu Val Glu Lys  
325 330 335

Tyr Ile Glu Asp Lys Glu Val Cys Lys Ser Phe Glu Ala Gly His Asp  
340 345 350

Ala Phe Met Ala Glu Phe Val Tyr Glu Tyr Ser Arg Arg His Pro Glu  
355 360 365

Phe Ser Ile Gln Leu Ile Met Arg Ile Ala Lys Gly Tyr Glu Ser Leu  
370 375 380

Leu Glu Lys Cys Cys Lys Thr Asp Asn Pro Ala Glu Cys Tyr Ala Asn  
385 390 395 400

Ala Gln Glu Gln Leu Asn Gln His Ile Lys Glu Thr Gln Asp Val Val  
405 410 415

Lys Thr Asn Cys Asp Leu Leu His Asp His Gly Glu Ala Asp Phe Leu  
420 425 430

Lys Ser Ile Leu Ile Arg Tyr Thr Lys Lys Met Pro Gln Val Pro Thr  
435 440 445

Asp Leu Leu Leu Glu Thr Gly Lys Lys Met Thr Thr Ile Gly Thr Lys  
450 455 460

Cys Cys Gln Leu Pro Glu Asp Arg Arg Met Ala Cys Ser Glu Gly Tyr  
465 470 475 480

Leu Ser Ile Val Ile His Asp Thr Cys Arg Lys Gln Glu Thr Thr Pro  
485 490 495

Ile Asn Asp Asn Val Ser Gln Cys Cys Ser Ser Ser Tyr Ala Asn Arg  
500 505 510

Arg Pro Cys Phe Thr Ala Met Gly Val Asp Thr Lys Tyr Val Pro Pro  
515 520 525

Pro Phe Asn Pro Asp Met Phe Ser Phe Asp Glu Lys Leu Cys Ser Ala  
530 535 540

Pro Ala Glu Glu Arg Glu Val Gly Gln Met Lys Leu Leu Ile Asn Leu  
545 550 555 560

Ile Lys Arg Lys Pro Gln Met Thr Glu Glu Gln Ile Lys Thr Ile Ala  
565 570 575

Asp Gly Phe Thr Ala Met Val Asp Lys Cys Cys Lys Gln Ser Asp Ile  
580 585 590

Asn Thr Cys Phe Gly Glu Glu Gly Ala Asn Leu Ile Val Gln Ser Arg  
595 600 605

Ala Thr Leu Gly Ile Gly Ala  
610 615

<210> 102

<211> 606

<212> PRT

<213> *Xenopus laevis*

<400> 102

Met Lys Trp Ile Thr Leu Ile Cys Leu Leu Ile Ser Ser Thr Leu Ile  
1 5 10 15

Glu Ser Arg Ile Ile Phe Lys Arg Asp Thr Asp Val Asp His His Lys  
20 25 30

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

Leu Thr Leu Ala Ile Val Ser Gln Asn Leu Gln Lys Cys Ser Leu Glu  
50 55 60

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

Thr Gly Asn Asp Lys Thr Pro Glu Cys Glu Lys Pro Ile Gly Thr Leu  
85 90 95

Phe Tyr Asp Lys Leu Cys Ala Asp Pro Lys Val Gly Val Asn Tyr Glu  
100 105 110

Trp Ser Lys Glu Cys Cys Ser Lys Gln Asp Pro Glu Arg Ala Gln Cys  
115 120 125

Phe Arg Ala His Arg Val Phe Glu His Asn Pro Val Arg Pro Lys Pro  
130 135 140

Glu Glu Thr Cys Ala Leu Phe Lys Glu His Pro Asp Asp Leu Leu Ser  
145 150 155 160

Ala Phe Ile His Glu Glu Ala Arg Asn His Pro Asp Leu Tyr Pro Pro

165

170

175

Ala Val Leu Leu Leu Thr Gln Gln Tyr Gly Lys Leu Val Glu His Cys  
 180 185 190

Cys Glu Glu Glu Asp Lys Asp Lys Cys Phe Ala Glu Lys Met Lys Glu  
 195 200 205

Leu Met Lys His Ser His Ser Ile Glu Asp Lys Gln Lys His Phe Cys  
 210 215 220

Trp Ile Val Asn Asn Tyr Pro Glu Arg Val Ile Lys Ala Leu Asn Leu  
 225 230 235 240

Ala Arg Val Ser His Arg Tyr Pro Lys Pro Asp Phe Lys Leu Ala His  
 245 250 255

Lys Phe Thr Glu Glu Thr Thr His Phe Ile Lys Asp Cys Cys His Gly  
 260 265 270

Asp Met Phe Glu Cys Met Thr Glu Arg Leu Glu Leu Ser Glu His Thr  
 275 280 285

Cys Gln His Lys Asp Glu Leu Ser Thr Lys Leu Glu Lys Cys Cys Asn  
 290 295 300

Leu Pro Leu Leu Glu Arg Thr Tyr Cys Ile Val Thr Leu Glu Asn Asp  
 305 310 315 320

Asp Val Pro Ala Glu Leu Ser Lys Pro Ile Thr Glu Phe Thr Glu Asp  
 325 330 335

Pro His Val Cys Glu Lys Tyr Ala Glu Asn Lys Ser Phe Leu Glu Ile  
 340 345 350

Ser Pro Trp Gln Ser Gln Glu Thr Pro Glu Leu Ser Glu Gln Phe Leu  
 355 360 365

Leu Gln Ser Ala Lys Glu Tyr Glu Ser Leu Leu Asn Lys Cys Cys Phe  
370 375 380

Ser Asp Asn Pro Pro Glu Cys Tyr Lys Asp Gly Ala Asp Arg Phe Met  
385 390 395 400

Asn Glu Ala Lys Glu Arg Phe Ala Tyr Leu Lys Gln Asn Cys Asp Ile  
405 410 415

Leu His Glu His Gly Glu Tyr Leu Phe Glu Asn Glu Leu Leu Ile Arg  
420 425 430

Tyr Thr Lys Lys Met Pro Gln Val Ser Asp Glu Thr Leu Ile Gly Ile  
435 440 445

Ala His Gln Met Ala Asp Ile Gly Glu His Cys Cys Ala Val Pro Glu  
450 455 460

Asn Gln Arg Met Pro Cys Ala Glu Gly Asp Leu Thr Ile Leu Ile Gly  
465 470 475 480

Lys Met Cys Glu Arg Gln Lys Lys Thr Phe Ile Asn Asn His Val Ala  
485 490 495

His Cys Cys Thr Asp Ser Tyr Ser Gly Met Arg Ser Cys Phe Thr Ala  
500 505 510

Leu Gly Pro Asp Glu Asp Tyr Val Pro Pro Pro Val Thr Asp Asp Thr  
515 520 525

Phe His Phe Asp Asp Lys Ile Cys Thr Ala Asn Asp Lys Glu Lys Gln  
530 535 540

His Ile Lys Gln Lys Phe Leu Val Lys Leu Ile Lys Val Ser Pro Lys  
545 550 555 560

Leu Glu Lys Asn His Ile Asp Glu Trp Leu Leu Glu Phe Leu Lys Met

565

570

575

Val Gln Lys Cys Cys Thr Ala Asp Glu His Gln Pro Cys Phe Asp Thr  
580 585 590

Glu Lys Pro Val Leu Ile Glu His Cys Gln Lys Leu His Pro  
595 600 605