

SEQUENCE LISTING

<110> INHIBRX, INC.

<120> CD33-BINDING POLYPEPTIDES AND USES THEREOF

<130> 01202-0022-00PCT

<150> US 62/843,408

<151> 2019-05-04

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<151> 2019-05-07

<160> 131

<170> PatentIn version 3.5

<210> 1

<211> 347

<212> PRT

<213> Homo sapiens

<400> 1

Asp Pro Asn Phe Trp Leu Gln Val Gln Glu Ser Val Thr Val Gln Glu
1 5 10 15

Gly Leu Cys Val Leu Val Pro Cys Thr Phe Phe His Pro Ile Pro Tyr
20 25 30

Tyr Asp Lys Asn Ser Pro Val His Gly Tyr Trp Phe Arg Glu Gly Ala
35 40 45

Ile Ile Ser Arg Asp Ser Pro Val Ala Thr Asn Lys Leu Asp Gln Glu
50 55 60

Val Gln Glu Glu Thr Gln Gly Arg Phe Arg Leu Leu Gly Asp Pro Ser
65 70 75 80

Arg Asn Asn Cys Ser Leu Ser Ile Val Asp Ala Arg Arg Arg Asp Asn
85 90 95

Gly Ser Tyr Phe Phe Arg Met Glu Arg Gly Ser Thr Lys Tyr Ser Tyr

100

105

110

Lys Ser Pro Gln Leu Ser Val His Val Thr Asp Leu Thr His Arg Pro
 115 120 125

Lys Ile Leu Ile Pro Gly Thr Leu Glu Pro Gly His Ser Lys Asn Leu
 130 135 140

Thr Cys Ser Val Ser Trp Ala Cys Glu Gln Gly Thr Pro Pro Ile Phe
 145 150 155 160

Ser Trp Leu Ser Ala Ala Pro Thr Ser Leu Gly Pro Arg Thr Thr His
 165 170 175

Ser Ser Val Leu Ile Ile Thr Pro Arg Pro Gln Asp His Gly Thr Asn
 180 185 190

Leu Thr Cys Gln Val Lys Phe Ala Gly Ala Gly Val Thr Thr Glu Arg
 195 200 205

Thr Ile Gln Leu Asn Val Thr Tyr Val Pro Gln Asn Pro Thr Thr Gly
 210 215 220

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

Val His Gly Ala Ile Gly Gly Ala Gly Val Thr Ala Leu Leu Ala Leu
 245 250 255

Cys Leu Cys Leu Ile Phe Phe Ile Val Lys Thr His Arg Arg Lys Ala
 260 265 270

Ala Arg Thr Ala Val Gly Arg Asn Asp Thr His Pro Thr Thr Gly Ser
 275 280 285

Ala Ser Pro Lys His Gln Lys Lys Ser Lys Leu His Gly Pro Thr Glu
 290 295 300

Thr Ser Ser Cys Ser Gly Ala Ala Pro Thr Val Glu Met Asp Glu Glu
305 310 315 320

Leu His Tyr Ala Ser Leu Asn Phe His Gly Met Asn Pro Ser Lys Asp
325 330 335

Thr Ser Thr Glu Tyr Ser Glu Val Arg Thr Gln
340 345

<210> 2
<211> 114
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<213> Artificial Sequence

<220>
<223> A07

<400> 2

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

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

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

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

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

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

His Ser Phe Leu Asp Leu Val Gly Ala Trp Gly Gln Gly Thr Gln Val
100 105 110

Thr Val

<210> 3
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<213> Artificial Sequence

<220>
<223> A07 CDR1

<400> 3

Arg Ser Ser Gly Ile Asp Val Met Gly
1 5

<210> 4
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> A07 CDR2

<400> 4

Glu Ile Ser Gly Val Gly Asp Thr Asn
1 5

<210> 5
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<220>
<223> A07 CDR3

<400> 5

His Ser Phe Leu Asp Leu Val Gly Ala
1 5

<210> 6
<211> 115
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<213> Artificial Sequence

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<223> 401-A9

<400> 6

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

Ser Leu Arg Leu Ser Cys Ala Ala Pro Gly Ser Ile Asn Ser Ile Asn
20 25 30

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

Ala Gly Ile Thr Ser Asp Gly Asp Thr Asn Tyr Val Asp Ser Val Pro
50 55 60

Gly Arg Phe Thr Ile Thr Arg Asp Asn Thr Met Arg Thr Val Asp Leu
65 70 75 80

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

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

Val Thr Val
115

<210> 7

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> 401-A9 CDR1

<400> 7

Gly Ser Ile Asn Ser Ile Asn Val Met Glu

1 5 10

<210> 8
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> 401-A9 CDR2

<400> 8

Gly Ile Thr Ser Asp Gly Asp Thr Asn
1 5

<210> 9
<211> 9
<212> PRT
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<220>
<223> 401-A9 CDR3

<400> 9

Arg Asp Trp Gly Ser Leu Thr Asp Tyr
1 5

<210> 10
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<212> PRT
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<220>
<223> B07

<400> 10

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

Ser Leu Arg Leu Ser Cys Gly Ala Ser Gly Arg Thr Ile Ser Asp Tyr
20 25 30

Val Val Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Ala Phe Val

35

40

45

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

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

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

Ala Leu Gln Asn Asp Val Arg Asn Asn His Ser Pro Thr Ser Tyr Asp
 100 105 110

Tyr Trp Gly Gln Gly Thr Gln Val Thr Val
 115 120

<210> 11
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 <212> PRT
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<220>
 <223> B07 CDR1

<400> 11

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

<210> 12
 <211> 9
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<220>
 <223> B07 CDR2

<400> 12

Ala Ile Ser Arg Tyr Gly Thr Thr Tyr
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<210> 13
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> B07 CDR3

<400> 13

Leu Gln Asn Asp Val Arg Asn Asn His Ser Pro Thr Ser Tyr Asp Tyr
1 5 10 15

<210> 14
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<220>
<223> 1C7

<400> 14

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

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

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

Ala Arg Ile Ser Gly Asn Asn Leu Ser Thr Glu Tyr Gly Gly Ser Val
50 55 60

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

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

Ala Ala Glu Tyr Asp Tyr Ser Ser Gly Asp Phe Val Tyr Trp Gly Gln

100

105

110

Gly Thr Gln Val Thr Val
115

<210> 15
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> 1C7 CDR1

<400> 15

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

<210> 16
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> 1C7 CDR2

<400> 16

Arg Ile Ser Gly Asn Asn Leu Ser Thr Glu
1 5 10

<210> 17
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> 1C7 CDR3

<400> 17

Glu Tyr Asp Tyr Ser Ser Gly Asp Phe Val Tyr
1 5 10

<210> 18

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

<220>
<223> 1E4

<400> 18

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

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

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

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

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

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

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

Gln Val Thr Val
115

<210> 19
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> 1E4 CDR1

<400> 19

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

<210> 20
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> 1E4 CDR2

<400> 20

Ser Ile Thr Arg Asp Gly Arg Ala Asn
1 5

<210> 21
<211> 10
<212> PRT
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<220>
<223> 1E4 CDR3

<400> 21

Tyr Ser Phe Asp Tyr Pro Ile Arg Ser Tyr
1 5 10

<210> 22
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> F02

<400> 22

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ser Ile Ser Ser Tyr Asn
20 25 30

Val Val Gly Trp Tyr Arg Gln Leu Ser Gly Asn Glu Arg Gly Gly Arg
35 40 45

Thr Met Val Ala Gln Ile Asn Ala Tyr Gly Asp Thr Asn Tyr Ala Asn
50 55 60

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

Val Tyr Leu His Met Ser Asn Leu Lys Pro Glu Asp Thr Gly Val Tyr
85 90 95

Tyr Cys Asn Gly Gln Arg Met Leu Glu Asn Tyr Thr Tyr Arg Asp Gln
100 105 110

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

<210> 23
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> F02 CDR1

<400> 23

Gly Ser Ile Ser Ser Tyr Asn Val Val Gly
1 5 10

<210> 24
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> F02 CDR2

<400> 24

Gln Ile Asn Ala Tyr Gly Asp Thr Asn

1 5

<210> 25
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> F02 CDR3

<400> 25

Gln Arg Met Leu Glu Asn Tyr Thr Tyr Arg Asp Gln Ser
1 5 10

<210> 26
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> 1G3

<400> 26

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

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

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

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

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

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

Ala Ala His Arg Gly Gly Gly Val Ile Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Gln Val Thr Val
115

<210> 27
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> 1G3 CDR1

<400> 27

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

<210> 28
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> 1G3 CDR2

<400> 28

Ala Ile Thr Thr Ser Gly Asp Thr Thr Tyr
1 5 10

<210> 29
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> 1G3 CDR3

<400> 29

His Arg Gly Gly Gly Val Ile Asp Tyr
1 5

<210> 30
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> G11

<400> 30

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

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

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

Gly Val Ile Ser Ser Gly Ala Gly Pro Asn 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 Asn Cys Asn
85 90 95

Ala Trp Ile Asp Tyr Gly Ser Gly Leu Pro Gln Asn Tyr Trp Gly Gln
100 105 110

Gly Thr Gln Val Thr Val
115

<210> 31
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> G11 CDR1

<400> 31

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

<210> 32

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> G11 CDR2

<400> 32

Val Ile Ser Ser Gly Ala Gly Pro Asn
1 5

<210> 33

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> G11 CDR3

<400> 33

Trp Ile Asp Tyr Gly Ser Gly Leu Pro Gln Asn Tyr
1 5 10

<210> 34

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> 1H9

<400> 34

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ser Ile Phe Ser Ile Ser

20

25

30

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

Ala Ser Thr Thr Ser Ser Gly Thr Thr Asn Tyr Val Asp Ser Val Lys
50 55 60

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

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

Ala Tyr Ile Ala Thr Thr Thr Asp Arg Gly Tyr Arg Gly Tyr Trp Gly
100 105 110

Gln Gly Thr Gln Val Thr Val
115

<210> 35
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> 1H9 CDR1

<400> 35

Gly Ser Ile Phe Ser Ile Ser Ile Met Gly
1 5 10

<210> 36
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> 1H9 CDR2

<400> 36

Ser Thr Thr Ser Ser Gly Thr Thr Asn
1 5

<210> 37
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> 1H9 CDR3

<400> 37

Tyr Ile Ala Thr Thr Thr Asp Arg Gly Tyr Arg Gly Tyr
1 5 10

<210> 38
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> hzA07v4

<400> 38

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Arg Ser Ser Gly Ile Asp Val
20 25 30

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

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

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

Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Asn Ala

85

90

95

His Ser Phe Leu Asp Leu Val Gly Ala Trp Gly Gln Gly Thr Leu Val
 100 105 110

Thr Val

<210> 39

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

<223> hzB07v7

<400> 39

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Ile Ser Asp Tyr
 20 25 30

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

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

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

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

Ala Leu Gln Asn Asp Val Arg Asn Asn His Ser Pro Thr Ser Tyr Asp
 100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val

115

120

<210> 40
 <211> 118
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> hz1C7v1

<400> 40

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

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

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

Ala Arg Ile Ser Gly Asn Asn Leu Ser Thr Glu Tyr Ala Glu Ser Val
 50 55 60

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

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

Ala Ala Glu Tyr Asp Tyr Ser Ser Gly Asp Phe Val Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val
 115

<210> 41
 <211> 118
 <212> PRT
 <213> Artificial Sequence

<220>

<223> hz1C7v11

<400> 41

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

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

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

Ala Arg Ile Ser Gly Asn Asn Leu Ala Thr Glu Tyr Ala Glu Ser Val
50 55 60

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

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

Ala Ala Glu Tyr Asp Tyr Ser Ser Gly Asp Phe Val Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val
115

<210> 42

<211> 116

<212> PRT

<213> Artificial Sequence

<220>

<223> hz1E4v2

<400> 42

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

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

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

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

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

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

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

Leu Val Thr Val
115

<210> 43
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> hzF02v18

<400> 43

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ser Ile Ser Ser Tyr Asn
20 25 30

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

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

Gly Gln Arg Met Leu Glu Asn Tyr Thr Tyr Arg Asp Gln Ser Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val
115

<210> 44
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> hz1G3v3

<400> 44

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

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

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

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

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

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

Ala Ala His Arg Gly Gly Gly Val Ile Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val
115

<210> 45
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> hzG11v2

<400> 45

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

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

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

Gly Val Ile Ser Ser Gly Ala Gly Pro Asn Tyr Ala Glu 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 Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Asn
85 90 95

Ala Trp Ile Asp Tyr Gly Ser Gly Leu Pro Gln Asn Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val
115

<210> 46
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> hz1H9v2

<400> 46

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

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

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

Ala Ser Thr Thr Ser Ser Gly Thr Thr Asn Tyr Val Glu Ser Val Lys
50 55 60

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

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

Ala Tyr Ile Ala Thr Thr Thr Asp Arg Gly Tyr Arg Gly Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val
115

<210> 47
<211> 9
<212> PRT

<213> Artificial Sequence

<220>

<223> CDR1 or hzA07v4

<400> 47

Arg Ser Ser Gly Ile Asp Val Met Gly
1 5

<210> 48

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR2 of hzA07v4

<400> 48

Glu Ile Ser Gly Val Gly Asp Thr Asn
1 5

<210> 49

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR3 of hzA07v4

<400> 49

His Ser Phe Leu Asp Leu Val Gly Ala
1 5

<210> 50

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR1 or hzB07v7

<400> 50

Gly Arg Thr Ile Ser Asp Tyr Val Val Gly

1 5 10

<210> 51
<211> 9
<212> PRT
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<220>
<223> CDR2 of hzB07v7

<400> 51

Ala Ile Ser Arg Tyr Gly Thr Thr Tyr
1 5

<210> 52
<211> 16
<212> PRT
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<220>
<223> CDR3 of hzB07v7

<400> 52

Leu Gln Asn Asp Val Arg Asn Asn His Ser Pro Thr Ser Tyr Asp Tyr
1 5 10 15

<210> 53
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR1 of hz1C7v1

<400> 53

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

<210> 54
<211> 10
<212> PRT
<213> Artificial Sequence

<220>

<223> CDR2 of hz1C7v1

<400> 54

Arg Ile Ser Gly Asn Asn Leu Ser Thr Glu
1 5 10

<210> 55

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR3 of hz1C7v1

<400> 55

Glu Tyr Asp Tyr Ser Ser Gly Asp Phe Val Tyr
1 5 10

<210> 56

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR1 of hz1C7v11

<400> 56

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

<210> 57

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR2 of hz1C7v11

<400> 57

Arg Ile Ser Gly Asn Asn Leu Ala Thr Glu
1 5 10

<210> 58
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR3 of hz1C7v11

<400> 58

Glu Tyr Asp Tyr Ser Ser Gly Asp Phe Val Tyr
1 5 10

<210> 59
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR1 of hz1E4v2

<400> 59

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

<210> 60
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR2 of hz1E4v2

<400> 60

Ser Ile Thr Arg Asp Gly Arg Ala Asn
1 5

<210> 61
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR3 of hz1E4v2

<400> 61

Tyr Ser Phe Asp Tyr Pro Ile Arg Ser Tyr
1 5 10

<210> 62

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR1 of hzF02v18

<400> 62

Gly Ser Ile Ser Ser Tyr Asn Val Met Gly
1 5 10

<210> 63

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR2 of hzF02v18

<400> 63

Gln Ile Asn Ala Tyr Gly Asp Thr Asn
1 5

<210> 64

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR3 of hzF02v18

<400> 64

Gln Arg Met Leu Glu Asn Tyr Thr Tyr Arg Asp Gln Ser
1 5 10

<210> 65

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

<220>
<223> CDR1 of hz1G3v3

<400> 65

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

<210> 66
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR2 of hz1G3v3

<400> 66

Ala Ile Thr Thr Ser Gly Asp Thr Thr Tyr
1 5 10

<210> 67
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR3 of hz1G3v3

<400> 67

His Arg Gly Gly Gly Val Ile Asp Tyr
1 5

<210> 68
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR1 of hzG11v2

<400> 68

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

<210> 69
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR2 of hzG11v2

<400> 69

Val Ile Ser Ser Gly Ala Gly Pro Asn
1 5

<210> 70
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR3 of hzG11v2

<400> 70

Trp Ile Asp Tyr Gly Ser Gly Leu Pro Gln Asn Tyr
1 5 10

<210> 71
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR1 of hz1H9v2

<400> 71

Gly Ser Ile Phe Ser Ile Ser Ile Met Gly
1 5 10

<210> 72
<211> 9
<212> PRT

<213> Artificial Sequence

<220>

<223> CDR2 of hz1H9v2

<400> 72

Ser Thr Thr Ser Ser Gly Thr Thr Asn
1 5

<210> 73

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR3 of hz1H9v2

<400> 73

Tyr Ile Ala Thr Thr Thr Asp Arg Gly Tyr Arg Gly Tyr
1 5 10

<210> 74

<211> 227

<212> PRT

<213> Homo sapiens

<400> 74

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 75
<211> 224
<212> PRT
<213> Artificial Sequence

<220>
<223> human IgG1 xELL Fc region

<400> 75

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 76
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y and M428V (YV) S354C T366W knob

<400> 76

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 77
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y, M428V, H435R (YVR) T366S, L368A, Y407V hole

<400> 77

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val
195 200 205

His Glu Ala Leu His Asn Arg Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 78
<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL H435R

<400> 78

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
195 200 205

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

<210> 79

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL M252Y and M428V (YV)

<400> 79

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 80
<211> 224
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region xELL M252Y and M428L (YL)

<400> 80

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 81
<211> 224
<212> PRT
<213> Artificial Sequence

<220>

<223> Fc region xELL M252Y, M428L, H435R (YLR)

<400> 81

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala
195 200 205

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

<210> 82

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL M252Y, M428V, H435R (YVR)

<400> 82

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val His Glu Ala
195 200 205

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

<210> 83
<211> 224
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region xELL S354C T366W knob

<400> 83

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 84

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL H435R S354C T366W knob

<400> 84

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
195 200 205

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

<210> 85
<211> 224
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region xELL M252Y and M428V (YV) S354C T366W knob

<400> 85

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 86

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL M252Y and M428L (YL) S354C T366W knob

<400> 86

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 87

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL M252Y, M428L, H435R (YLR) S354C T366W knob

<400> 87

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala
195 200 205

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

<210> 88

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL M252Y, M428V, H435R (YVR) S354C T366W knob

<400> 88

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val His Glu Ala
195 200 205

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

<210> 89
<211> 224
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region xELL T366S, L368A, Y407V hole

<400> 89

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys
130 135 140

Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 90

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL H435R, T366S, L368A, Y407V hole

<400> 90

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys
130 135 140

Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
195 200 205

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

<210> 91
<211> 224
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region xELL M252Y and M428V (YV) T366S, L368A, Y407V hole

<400> 91

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys
130 135 140

Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 92

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL M252Y and M428L (YL) T366S, L368A, Y407V hole

<400> 92

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys
130 135 140

Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 93

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL M252Y, M428L, H435R (YLR) T366S, L368A, Y407V hole

<400> 93

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys
130 135 140

Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala
195 200 205

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

<210> 94

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> Fc region xELL M252Y, M428V, H435R (YVR) T366S, L368A, Y407V hole

<400> 94

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

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu
115 120 125

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys
130 135 140

Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
165 170 175

Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val His Glu Ala
195 200 205

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

<210> 95
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region H435R

<400> 95

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn Arg Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 96
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y and M428V (YV)

<400> 96

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 97
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y and M428L (YL)

<400> 97

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 98
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y, M428L, H435R (YLR)

<400> 98

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu
195 200 205

His Glu Ala Leu His Asn Arg Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 99
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y, M428V, H435R (YVR)

<400> 99

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val
195 200 205

His Glu Ala Leu His Asn Arg Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 100
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region S354C T366W knob

<400> 100

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 101
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region H435R S354C T366W knob

<400> 101

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn Arg Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 102
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y and M428L (YL) S354C T366W knob

<400> 102

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 103
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y, M428L, H435R (YLR) S354C T366W knob

<400> 103

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu
195 200 205

His Glu Ala Leu His Asn Arg Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 104
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y, M428V, H435R (YVR) S354C T366W knob

<400> 104

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val
195 200 205

His Glu Ala Leu His Asn Arg Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 105
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region T366S, L368A, Y407V hole

<400> 105

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 106
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region H435R, T366S, L368A, Y407V hole

<400> 106

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn Arg Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 107
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y and M428V (YV) T366S, L368A, Y407V hole

<400> 107

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Val
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 108
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y and M428L (YL) T366S, L368A, Y407V hole

<400> 108

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 109
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Fc region M252Y, M428L, H435R (YLR) T366S, L368A, Y407V hole

<400> 109

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

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

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Leu
195 200 205

His Glu Ala Leu His Asn Arg Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 110
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<223> CD33 ECD

<400> 110

Asp Pro Asn Phe Trp Leu Gln Val Gln Glu Ser Val Thr Val Gln Glu
1 5 10 15

Gly Leu Cys Val Leu Val Pro Cys Thr Phe Phe His Pro Ile Pro Tyr
20 25 30

Tyr Asp Lys Asn Ser Pro Val His Gly Tyr Trp Phe Arg Glu Gly Ala
35 40 45

Ile Ile Ser Arg Asp Ser Pro Val Ala Thr Asn Lys Leu Asp Gln Glu
50 55 60

Val Gln Glu Glu Thr Gln Gly Arg Phe Arg Leu Leu Gly Asp Pro Ser
65 70 75 80

Arg Asn Asn Cys Ser Leu Ser Ile Val Asp Ala Arg Arg Arg Asp Asn
85 90 95

Gly Ser Tyr Phe Phe Arg Met Glu Arg Gly Ser Thr Lys Tyr Ser Tyr
100 105 110

Lys Ser Pro Gln Leu Ser Val His Val Thr Asp Leu Thr His Arg Pro
115 120 125

Lys Ile Leu Ile Pro Gly Thr Leu Glu Pro Gly His Ser Lys Asn Leu
130 135 140

Thr Cys Ser Val Ser Trp Ala Cys Glu Gln Gly Thr Pro Pro Ile Phe
145 150 155 160

Ser Trp Leu Ser Ala Ala Pro Thr Ser Leu Gly Pro Arg Thr Thr His
165 170 175

Ser Ser Val Leu Ile Ile Thr Pro Arg Pro Gln Asp His Gly Thr Asn
180 185 190

Leu Thr Cys Gln Val Lys Phe Ala Gly Ala Gly Val Thr Thr Glu Arg
195 200 205

Thr Ile Gln Leu Asn Val Thr Tyr Val Pro Gln Asn Pro Thr Thr Gly
210 215 220

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

Val His

<210> 111

<211> 269

<212> PRT

<213> Artificial Sequence

<220>

<223> CD33 ECD-AviTagTM-His

<400> 111

Asp Pro Asn Phe Trp Leu Gln Val Gln Glu Ser Val Thr Val Gln Glu
1 5 10 15

Gly Leu Cys Val Leu Val Pro Cys Thr Phe Phe His Pro Ile Pro Tyr
20 25 30

Tyr Asp Lys Asn Ser Pro Val His Gly Tyr Trp Phe Arg Glu Gly Ala
35 40 45

Ile Ile Ser Arg Asp Ser Pro Val Ala Thr Asn Lys Leu Asp Gln Glu
50 55 60

Val Gln Glu Glu Thr Gln Gly Arg Phe Arg Leu Leu Gly Asp Pro Ser
65 70 75 80

Arg Asn Asn Cys Ser Leu Ser Ile Val Asp Ala Arg Arg Arg Asp Asn
85 90 95

Gly Ser Tyr Phe Phe Arg Met Glu Arg Gly Ser Thr Lys Tyr Ser Tyr
100 105 110

Lys Ser Pro Gln Leu Ser Val His Val Thr Asp Leu Thr His Arg Pro
115 120 125

Lys Ile Leu Ile Pro Gly Thr Leu Glu Pro Gly His Ser Lys Asn Leu
130 135 140

Thr Cys Ser Val Ser Trp Ala Cys Glu Gln Gly Thr Pro Pro Ile Phe
145 150 155 160

Ser Trp Leu Ser Ala Ala Pro Thr Ser Leu Gly Pro Arg Thr Thr His
165 170 175

Ser Ser Val Leu Ile Ile Thr Pro Arg Pro Gln Asp His Gly Thr Asn
180 185 190

Leu Thr Cys Gln Val Lys Phe Ala Gly Ala Gly Val Thr Thr Glu Arg
195 200 205

Thr Ile Gln Leu Asn Val Thr Tyr Val Pro Gln Asn Pro Thr Thr Gly
210 215 220

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

Val His Gly Gly Thr Gly Gly Ser Gly Leu Asn Asp Ile Phe Glu Ala
245 250 255

Gln Lys Ile Glu Trp His Glu His His His His His His
260 265

<210> 112
<211> 286
<212> PRT
<213> Artificial Sequence

<220>
<223> CD33M

<400> 112

Asp Pro Asn Phe Trp Leu Gln Val Gln Glu Ser Val Thr Val Gln Glu
1 5 10 15

Gly Leu Cys Val Leu Val Pro Cys Thr Phe Phe His Pro Ile Pro Tyr
20 25 30

Tyr Asp Lys Asn Ser Pro Val His Gly Tyr Trp Phe Arg Glu Gly Ala
35 40 45

Ile Ile Ser Arg Asp Ser Pro Val Ala Thr Asn Lys Leu Asp Gln Glu
50 55 60

Val Gln Glu Glu Thr Gln Gly Arg Phe Arg Leu Leu Gly Asp Pro Ser
65 70 75 80

Arg Asn Asn Cys Ser Leu Ser Ile Val Asp Ala Arg Arg Arg Asp Asn
85 90 95

Gly Ser Tyr Phe Phe Arg Met Glu Arg Gly Ser Thr Lys Tyr Ser Tyr
100 105 110

Lys Ser Pro Gln Leu Ser Val His Val Thr Asp Leu Thr His Arg Pro
115 120 125

Lys Ile Leu Ile Pro Gly Thr Leu Glu Pro Gly His Ser Lys Asn Leu
130 135 140

Thr Cys Ser Val Ser Trp Ala Cys Glu Gln Gly Thr Pro Pro Ile Phe
145 150 155 160

Ser Trp Leu Ser Ala Ala Pro Thr Ser Leu Gly Pro Arg Thr Thr His
165 170 175

Ser Ser Val Leu Ile Ile Thr Pro Arg Pro Gln Asp His Gly Thr Asn
180 185 190

Leu Thr Cys Gln Val Lys Phe Ala Gly Ala Gly Val Thr Thr Glu Arg
195 200 205

Thr Ile Gln Leu Asn Val Thr Tyr Val Pro Gln Asn Pro Thr Thr Gly
210 215 220

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

Val His Gly Ala Ile Gly Gly Ala Gly Val Thr Ala Leu Leu Ala Leu
245 250 255

Cys Leu Cys Leu Ile Phe Phe Ile Val Lys Thr His Arg Arg Lys Ala
260 265 270

Ala Arg Thr Ala Val Gly Arg Asn Asp Thr His Pro Thr Thr
275 280 285

<210> 113
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> CD33m

<400> 113

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

Gly His Ser Lys Asn Leu Thr Cys Ser Val Ser Trp Ala Cys Glu Gln
20 25 30

Gly Thr Pro Pro Ile Phe Ser Trp Leu Ser Ala Ala Pro Thr Ser Leu
35 40 45

Gly Pro Arg Thr Thr His Ser Ser Val Leu Ile Ile Thr Pro Arg Pro
50 55 60

Gln Asp His Gly Thr Asn Leu Thr Cys Gln Val Lys Phe Ala Gly Ala
65 70 75 80

Gly Val Thr Thr Glu Arg Thr Ile Gln Leu Asn Val Thr Tyr Val Pro
85 90 95

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

Glu Thr Arg Ala Gly Val Val His
115 120

<210> 114
<211> 116
<212> PRT
<213> Artificial Sequence

<220>

<223> hzA07v4 KP

<400> 114

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Arg Ser Ser Gly Ile Asp Val
20 25 30

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

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

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

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

His Ser Phe Leu Asp Leu Val Gly Ala Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Lys Pro
115

<210> 115

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> hzB07v7 KP

<400> 115

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Ile Ser Asp Tyr
20 25 30

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

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

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

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

Ala Leu Gln Asn Asp Val Arg Asn Asn His Ser Pro Thr Ser Tyr Asp
100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Lys Pro
115 120

<210> 116
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> hz1C7v1 KP

<400> 116

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

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

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

Ala Arg Ile Ser Gly Asn Asn Leu Ser Thr Glu Tyr Ala Glu Ser Val
50 55 60

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

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

Ala Ala Glu Tyr Asp Tyr Ser Ser Gly Asp Phe Val Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Lys Pro
115 120

<210> 117
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> hz1C7v11 KP

<400> 117

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

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

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

Ala Arg Ile Ser Gly Asn Asn Leu Ala Thr Glu Tyr Ala Glu Ser Val
50 55 60

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

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

Ala Ala Glu Tyr Asp Tyr Ser Ser Gly Asp Phe Val Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Lys Pro
115 120

<210> 118

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> hz1E4v2 KP

<400> 118

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

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

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

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

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

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

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

Leu Val Thr Val Lys Pro
115

<210> 119
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> hzF02v18 KP

<400> 119

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ser Ile Ser Ser Tyr Asn
20 25 30

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

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

Gly Gln Arg Met Leu Glu Asn Tyr Thr Tyr Arg Asp Gln Ser Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Lys Pro
115 120

<210> 120
<211> 118

<212> PRT
<213> Artificial Sequence

<220>
<223> hz1G3v3

<400> 120

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

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

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

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

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

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

Ala Ala His Arg Gly Gly Gly Val Ile Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Lys Pro
115

<210> 121
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> hzG11v2 KP

<400> 121

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

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

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

Gly Val Ile Ser Ser Gly Ala Gly Pro Asn Tyr Ala Glu 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 Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Asn
85 90 95

Ala Trp Ile Asp Tyr Gly Ser Gly Leu Pro Gln Asn Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Lys Pro
115 120

<210> 122
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> hz1H9v2 KP

<400> 122

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

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

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

Ala Ser Thr Thr Ser Ser Gly Thr Thr Asn Tyr Val Glu Ser Val Lys
50 55 60

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

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

Ala Tyr Ile Ala Thr Thr Thr Asp Arg Gly Tyr Arg Gly Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Lys Pro
115 120

<210> 123
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> A07 KP

<400> 123

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

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

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

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

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

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

His Ser Phe Leu Asp Leu Val Gly Ala Trp Gly Gln Gly Thr Gln Val
100 105 110

Thr Val Lys Pro
115

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

<220>
<223> B07 KP

<400> 124

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

Ser Leu Arg Leu Ser Cys Gly Ala Ser Gly Arg Thr Ile Ser Asp Tyr
20 25 30

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

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

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

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

Ala Leu Gln Asn Asp Val Arg Asn Asn His Ser Pro Thr Ser Tyr Asp
100 105 110

Tyr Trp Gly Gln Gly Thr Gln Val Thr Val Lys Pro
115 120

<210> 125
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> 1C7 KP

<400> 125

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

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

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

Ala Arg Ile Ser Gly Asn Asn Leu Ser Thr Glu Tyr Gly Gly Ser Val
50 55 60

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

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

Ala Ala Glu Tyr Asp Tyr Ser Ser Gly Asp Phe Val Tyr Trp Gly Gln
100 105 110

Gly Thr Gln Val Thr Val Lys Pro
115 120

<210> 126
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> 1E4 KP

<400> 126

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

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

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

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

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

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

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

Gln Val Thr Val Lys Pro
115

<210> 127
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> F02 KP

<400> 127

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ser Ile Ser Ser Tyr Asn
20 25 30

Val Val Gly Trp Tyr Arg Gln Leu Ser Gly Asn Glu Arg Gly Gly Arg
35 40 45

Thr Met Val Ala Gln Ile Asn Ala Tyr Gly Asp Thr Asn Tyr Ala Asn
50 55 60

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

Val Tyr Leu His Met Ser Asn Leu Lys Pro Glu Asp Thr Gly Val Tyr
85 90 95

Tyr Cys Asn Gly Gln Arg Met Leu Glu Asn Tyr Thr Tyr Arg Asp Gln
100 105 110

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

<210> 128

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> 1G3 KP

<400> 128

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

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

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

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

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

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

Ala Ala His Arg Gly Gly Gly Val Ile Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Gln Val Thr Val Lys Pro
115

<210> 129
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> G11 KP

<400> 129

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

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

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

Gly Val Ile Ser Ser Gly Ala Gly Pro Asn 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 Asn Cys Asn
85 90 95

Ala Trp Ile Asp Tyr Gly Ser Gly Leu Pro Gln Asn Tyr Trp Gly Gln
100 105 110

Gly Thr Gln Val Thr Val Lys Pro
115 120

<210> 130
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> 1H9 KP

<400> 130

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

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

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

Ala Ser Thr Thr Ser Ser Gly Thr Thr Asn Tyr Val Asp Ser Val Lys
50 55 60

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

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

Ala Tyr Ile Ala Thr Thr Thr Asp Arg Gly Tyr Arg Gly Tyr Trp Gly
100 105 110

Gln Gly Thr Gln Val Thr Val Lys Pro
115 120

<210> 131
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> 401-A9 KP

<400> 131

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

Ser Leu Arg Leu Ser Cys Ala Ala Pro Gly Ser Ile Asn Ser Ile Asn
20 25 30

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

Ala Gly Ile Thr Ser Asp Gly Asp Thr Asn Tyr Val Asp Ser Val Pro
50 55 60

Gly Arg Phe Thr Ile Thr Arg Asp Asn Thr Met Arg Thr Val Asp Leu
65 70 75 80

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

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

Val Thr Val Lys Pro
115

