

SEQUENCE LISTING

<110> Institute for Research in Biomedicine

<120> ANTIBODIES WITH FUNCTIONAL DOMAINS IN THE ELBOW REGION

<130> IR01P005WO

<160> 133

<170> PatentIn version 3.5

<210> 1

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> GCE536 VH aa

<400> 1

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

Ser	Val	Lys	Val	Ser	Cys	Lys	Ser	Ser	Gly	Tyr	Val	Phe	Thr	Ser	Tyr
			20					25					30		

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

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

Gln	Gly	Arg	Val	Thr	Val	Thr	Thr	Asp	Ala	Ser	Thr	Asn	Thr	Val	Asp
65					70					75				80	

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

Ala	Arg	Gly	Pro	Arg	Ser	Lys	Pro	Pro	Tyr	Leu	Tyr	Phe	Ala	Leu	Asp
			100					105					110		

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

<210> 2
<211> 107
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<213> Artificial Sequence

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<223> GCE536 VL aa

<400> 2

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

Glu Thr Ala Ile Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

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

Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Ile Arg Gly Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Val Leu Tyr Tyr Cys Gln His Tyr Gly Ser Arg Val
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 3
<211> 330
<212> PRT
<213> Homo sapiens

<400> 3

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

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65 70 75 80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115 120 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
130 135 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145 150 155 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
165 170 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
210 215 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
225 230 235 240

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
275 280 285

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

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
325 330

<210> 4
<211> 107
<212> PRT
<213> Homo sapiens

<400> 4

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
1 5 10 15

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
20 25 30

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

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
50 55 60

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
65 70 75 80

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
100 105

<210> 5
<211> 130
<212> PRT
<213> Artificial Sequence

<220>
<223> C1 VH aa

<400> 5

Gln Val Gln Leu Ala Gln Tyr Gly Gly Gly Ala Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

65		70		75		80									
Leu	Glu	Met	Tyr	Arg	Leu	Ser	Thr	Glu	Asp	Thr	Ala	Ile	Tyr	Tyr	Cys
				85					90					95	
Ala	Arg	Asn	Asp	Gly	Leu	Gly	Arg	Tyr	Thr	Asp	Ala	Gly	Gly	Thr	His
			100					105					110		
Arg	Thr	Ala	Tyr	Leu	Asp	Tyr	Trp	Gly	Arg	Gly	Thr	Leu	Val	Thr	Val
		115					120					125			
Ser	Ser														
	130														

<210> 6
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<220>
 <223> C1 VL aa

<400> 6

Ser	Tyr	Glu	Val	Thr	Gln	Pro	Pro	Ser	Val	Ser	Val	Ser	Pro	Gly	Gln
1				5				10						15	
Ala	Ala	Arg	Ile	Thr	Cys	Ser	Gly	Asp	Glu	Leu	Pro	Arg	Thr	Asp	Ile
			20					25					30		
Ser	Trp	Tyr	Gln	Gln	Thr	Ser	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr
		35					40					45			
Glu	Gly	Thr	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Val	Ser	Gly	Ala	Met	Ala	Thr	Leu	Met	Ile	Ser	Glu	Ala	Gln	Leu	Glu
65					70				75					80	

Asp Glu Gly Asp Tyr Tyr Cys Phe Ser Ile Asp Thr Ser Gly Asn His
85 90 95

Gly Gly Ala Phe Gly Thr Gly Thr Lys Leu Thr Val Leu
100 105

<210> 7
<211> 106
<212> PRT
<213> Homo sapiens

<400> 7

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

Glu Glu Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp
20 25 30

Phe Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro
35 40 45

Val Lys Ala Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn
50 55 60

Lys Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys
65 70 75 80

Ser His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val
85 90 95

Glu Lys Thr Val Ala Pro Thr Glu Cys Ser
100 105

<210> 8
<211> 123
<212> PRT
<213> Artificial Sequence

<220>

<223> C1b VH aa

<400> 8

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

Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Ser Phe Lys Asn Tyr
20 25 30

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

Cys Gly Ile Asn Trp Asn Gly Ser Leu Arg Gly Tyr Ala Asp Ser Val
50 55 60

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

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

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

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

<210> 9

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> C1b VL aa

<400> 9

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Ser Leu Gly Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Gln Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Asn Tyr Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 10

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> FI174 VH aa

<400> 10

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

Ser Val Lys Val Ser Cys Lys Thr Ser Gly Gly Ile Ile Arg Lys Tyr
20 25 30

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

Gly Gly Ile Ile Ala Ile Phe Gly Thr Thr Asn Tyr Ala Gln Lys Phe
50 55 60

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

Leu Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Ile Tyr Tyr Cys
85 90 95

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 11
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> FI174 VL aa

<400> 11

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

Ala Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Ser Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Asp Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys His Gln Tyr Gly Asp Ser Arg

85

90

95

Lys Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 12
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 12

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
 1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
 20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Asp Thr
 35 40 45

Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
 50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
 65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
 85 90 95

Val Lys

<210> 13
 <211> 98
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> mutated LAIR1 fragment aa

<400> 13

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Arg Asn Tyr Leu Tyr Ser Asp Thr
35 40 45

Glu Asp Val Ser Gln Thr Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

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

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

Val Lys

<210> 14

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> PD-1 fragment aa

<400> 14

Asp Ser Pro Asp Arg Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala Leu
1 5 10 15

Leu Val Val Thr Glu Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe Ser
20 25 30

Asn Thr Ser Glu Ser Phe Val Leu Asn Trp Tyr Arg Met Ser Pro Ser
35 40 45

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

Gly Gln Asp Cys Arg Phe Arg Val Thr Gln Leu Pro Asn Gly Arg Asp
65 70 75 80

Phe His Met Ser Val Val Arg Ala Arg Arg Asn Asp Ser Gly Thr Tyr
85 90 95

Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu Ser
100 105 110

Leu Arg Ala Glu Leu Arg Val Thr
115 120

<210> 15
<211> 95
<212> PRT
<213> Artificial Sequence

<220>
<223> SLAM fragment aa

<400> 15

Glu Gln Val Ser Thr Pro Glu Ile Lys Val Leu Asn Lys Thr Gln Glu
1 5 10 15

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

His Val Ala Tyr Ser Trp Ser Glu Lys Ala Gly Thr His Pro Leu Asn
35 40 45

Pro Ala Asn Ser Ser His Leu Leu Ser Leu Thr Leu Gly Pro Gln His
50 55 60

Ala Asp Asn Ile Tyr Ile Cys Thr Val Ser Asn Pro Ile Ser Asn Asn
65 70 75 80

Ser Gln Thr Phe Ser Pro Trp Pro Gly Cys Arg Thr Asp Pro Ser
85 90 95

<210> 16
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> T3-VHH aa

<400> 16

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

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

Ser Tyr Ala Leu Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu
35 40 45

Phe Val Ala His Val Gly Gln Thr Ala Glu Phe Ala Gln Gly Arg Phe
50 55 60

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

Asp Leu Lys Ser Asp Asp Thr Ala Ile Tyr Tyr Cys Val Ala Ser Asn
85 90 95

Arg Gly Trp Ser Pro Ser Arg Val Ser Tyr Trp Gly Gln Gly Thr Gln
100 105 110

Val Thr Val Ser Ser
115

<210> 17
<211> 248
<212> PRT
<213> Artificial Sequence

<220>
<223> TT39.7-scFv aa

<400> 17

Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
1 5 10 15

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

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

Trp Leu Ser Leu Ile Tyr Trp Asp Asp Glu Lys His Tyr Ser Pro Ser
50 55 60

Leu Lys Asn Arg Val Thr Ile Ser Lys Asp Ser Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Leu Thr Asp Met Asp Pro Val Asp Thr Gly Thr Tyr Tyr
85 90 95

Cys Ala His Arg Gly Val Asp Thr Ser Gly Trp Gly Phe Asp Tyr Trp
100 105 110

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Ala Leu Thr Gln Pro
130 135 140

Ala Ser Val Ser Gly Ser Pro Gly Gln Ser Ile Thr Ile Ser Cys Ser

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

Ala Thr Ile Arg Ser Ser Ser Trp Gly Gly Cys Val His Tyr Gly Met
100 105 110

Asp Tyr Trp Gly Lys Gly Thr Gln Val Thr Val Ser Ser
115 120 125

<210> 19
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<223> MPE8-scFv aa

<400> 19

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

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

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

Ser Ser Ile Ser Ala Ser Ser Ser Tyr Ser Asp Tyr Ala Asp Ser Ala
50 55 60

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

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

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

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

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ser Val Val Thr
130 135 140

Gln Pro Pro Ser Val Ser Gly Ala Pro Gly Gln Arg Val Thr Ile Ser
145 150 155 160

Cys Thr Gly Ser Ser Ser Asn Ile Gly Ala Gly Tyr Asp Val His Trp
165 170 175

Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Asp Asn
180 185 190

Asn Asn Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Ala Ser Lys Ser
195 200 205

Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu Gln Ala Glu Asp Glu
210 215 220

Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Arg Asn Leu Ser Gly Val Phe
225 230 235 240

Gly Thr Gly Thr Lys Val Thr Val Leu
245

<210> 20

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> twin StrepTag aa

<400> 20

Ser Ala Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly
1 5 10 15

Gly Ser Gly Gly Ser Ala Trp Ser His Pro Gln Phe Glu Lys
20 25 30

<210> 21

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> AviTag

<400> 21

Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu
1 5 10 15

<210> 22

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Calmodulin-tag

<400> 22

Lys Arg Arg Trp Lys Lys Asn Phe Ile Ala Val Ser Ala Ala Asn Arg
1 5 10 15

Phe Lys Lys Ile Ser Ser Ser Gly Ala Leu
20 25

<210> 23

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> polyglutamate tag

<400> 23

Glu Glu Glu Glu Glu Glu
1 5

<210> 24

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> E-tag

<400> 24

Gly Ala Pro Val Pro Tyr Pro Asp Pro Leu Glu Pro Arg
1 5 10

<210> 25

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> FLAG-tag

<400> 25

Asp Tyr Lys Asp Asp Asp Asp Lys
1 5

<210> 26

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> HA-tag

<400> 26

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
1 5

<210> 27
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> His-tag

<400> 27

His His His His His His
1 5

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

<220>
<223> Myc-tag

<400> 28

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
1 5 10

<210> 29
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> NE-tag

<400> 29

Thr Lys Glu Asn Pro Arg Ser Asn Gln Glu Glu Ser Tyr Asp Asp Asn
1 5 10 15

Glu Ser

<210> 30
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> S-tag

<400> 30

Lys Glu Thr Ala Ala Lys Phe Glu Arg Gln His Met Asp Ser
1 5 10 15

<210> 31
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> SBP-tag

<400> 31

Met Asp Glu Lys Thr Thr Gly Trp Arg Gly Gly His Val Val Glu Gly
1 5 10 15

Leu Ala Gly Glu Leu Glu Gln Leu Arg Ala Arg Leu Glu His His Pro
20 25 30

Gln Gly Gln Arg Glu Pro
35

<210> 32
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Softag 1

<400> 32

Ser Leu Ala Glu Leu Leu Asn Ala Gly Leu Gly Gly Ser
1 5 10

<210> 33
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Softag 3

<400> 33

Thr Gln Asp Pro Ser Arg Val Gly
1 5

<210> 34
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Strep-tag

<400> 34

Trp Ser His Pro Gln Phe Glu Lys
1 5

<210> 35
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> TC tag

<400> 35

Cys Cys Pro Gly Cys Cys
1 5

<210> 36
<211> 14
<212> PRT
<213> Artificial Sequence

<220>

<223> V5 tag

<400> 36

Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr
1 5 10

<210> 37

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> VSV-tag

<400> 37

Tyr Thr Asp Ile Glu Met Asn Arg Leu Gly Lys
1 5 10

<210> 38

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Xpress tag

<400> 38

Asp Leu Tyr Asp Asp Asp Asp Lys
1 5

<210> 39

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Isopeptag

<400> 39

Thr Asp Lys Asp Met Thr Ile Thr Phe Thr Asn Lys Lys Asp Ala Glu
1 5 10 15

<210> 40
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> SpyTag

<400> 40

Ala His Ile Val Met Val Asp Ala Tyr Lys Pro Thr Lys
1 5 10

<210> 41
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> SnoopTag

<400> 41

Lys Leu Gly Asp Ile Glu Phe Ile Lys Val Asn Lys
1 5 10

<210> 42
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Ty1 tag

<400> 42

Glu Val His Thr Asn Gln Asp Pro Leu Asp
1 5 10

<210> 43
<211> 5
<212> PRT
<213> Artificial Sequence

<220>

<223> linker

<400> 43

Gly Gly Gly Gly Ser

1 5

<210> 44

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 44

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

1 5 10

<210> 45

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 45

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

1 5 10 15

<210> 46

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 46

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly

1 5 10 15

Gly Gly Gly Ser
20

<210> 47
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> linker

<400> 47

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25

<210> 48
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> linker

<400> 48

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25 30

<210> 49
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> linker

<400> 49

Phe	Val	Gly	Pro	Pro	Ser	Pro	Phe	Leu	Thr	Ser	Leu	His	Leu	Ser
1				5					10					15

<210> 50

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 50

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

<210> 51

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 51

Gln	Gly	Phe	Thr	Ser	Val	Met	Ala	Pro	Phe	Leu	Pro	Leu	Leu	Thr
1				5						10				15

<210> 52

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 52

Gly	Glu	Tyr	Thr	Gly	Gly	Ser	Leu	Cys	Ala	Thr	Leu	Met	Ser	Met
1				5						10				15

<210> 53
<211> 558
<212> PRT
<213> Artificial Sequence

<220>
<223> C2 heavy chain aa

<400> 53

Gln Val Gln Leu Ala Gln Tyr Gly Gly Gly Ala Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

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

Arg Thr Ala Tyr Leu Asp Tyr Trp Gly Arg Gly Thr Leu Val Thr Val
115 120 125

Ser Ser Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr
130 135 140

Val Ile Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val
145 150 155 160

Gly Val Gln Thr Phe Arg Leu Glu Arg Glu Arg Asn Tyr Leu Tyr Ser
165 170 175

Asp Thr Glu Asp Val Ser Gln Thr Ser Pro Ser Glu Ser Glu Ala Arg
180 185 190

Phe Arg Ile Asp Ser Val Asn Ala Gly Asn Ala Gly Leu Phe Arg Cys
195 200 205

Ile Tyr Tyr Lys Ser Arg Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu
210 215 220

Leu Val Val Lys Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
225 230 235 240

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
245 250 255

Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
260 265 270

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
275 280 285

Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
290 295 300

Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
305 310 315 320

Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
325 330 335

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
340 345 350

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
355 360 365

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
370 375 380

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
385 390 395 400

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
405 410 415

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
420 425 430

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
435 440 445

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
450 455 460

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
465 470 475 480

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
485 490 495

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
500 505 510

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
515 520 525

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
530 535 540

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys

545

550

555

<210> 54

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> C2/C3 light chain aa

<400> 54

Ser Tyr Glu Val Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
 1 5 10 15

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

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

Glu Gly Thr Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
 50 55 60

Val Ser Gly Ala Met Ala Thr Leu Met Ile Ser Glu Ala Gln Leu Glu
 65 70 75 80

Asp Glu Gly Asp Tyr Tyr Cys Phe Ser Ile Asp Thr Ser Gly Asn His
 85 90 95

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

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

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

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

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

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

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

Val Ala Pro Thr Glu Cys Ser
210 215

<210> 55
<211> 558
<212> PRT
<213> Artificial Sequence

<220>
<223> C3 heavy chain aa

<400> 55

Gln Val Gln Leu Ala Gln Tyr Gly Gly Gly Ala Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

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

Arg Thr Ala Tyr Leu Asp Tyr Trp Gly Arg Gly Thr Leu Val Thr Val
115 120 125

Ser Ser Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr
130 135 140

Val Ile Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val
145 150 155 160

Gly Val Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn
165 170 175

Asp Thr Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg
180 185 190

Phe Arg Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys
195 200 205

Ile Tyr Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu
210 215 220

Leu Leu Val Lys Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
225 230 235 240

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
245 250 255

Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
260 265 270

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
275 280 285

Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
290 295 300

Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
305 310 315 320

Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
325 330 335

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
340 345 350

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
355 360 365

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
370 375 380

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
385 390 395 400

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
405 410 415

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
420 425 430

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
435 440 445

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
450 455 460

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val

Gln Gly Arg Val Thr Val Thr Thr Asp Ala Ser Thr Asn Thr Val Asp
65 70 75 80

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

Ala Arg Gly Pro Arg Ser Lys Pro Pro Tyr Leu Tyr Phe Ala Leu Asp
100 105 110

Val Trp Gly Gln Gly Thr Ala Val Thr Val Ser Ser Glu Asp Leu Pro
115 120 125

Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser
130 135 140

His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg
145 150 155 160

Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Asp Thr Glu Asp Val Ser
165 170 175

Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val
180 185 190

Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro
195 200 205

Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys Ala Ser
210 215 220

Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr
225 230 235 240

Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro
245 250 255

Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val

260

265

270

His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
 275 280 285

Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile
 290 295 300

Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val
 305 310 315 320

Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
 325 330 335

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
 340 345 350

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
 355 360 365

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
 370 375 380

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 385 390 395 400

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
 405 410 415

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
 420 425 430

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
 435 440 445

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
 450 455 460

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
465 470 475 480

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
485 490 495

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
500 505 510

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
515 520 525

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
530 535 540

Ser Leu Ser Leu Ser Pro Gly Lys
545 550

<210> 57

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> C4/C5/C6 light chain aa

<400> 57

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

Glu Thr Ala Ile Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

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

Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Ile Arg Gly Arg Phe Ser

50

55

60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Val Leu Tyr Tyr Cys Gln His Tyr Gly Ser Arg Val
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 58

<211> 574

<212> PRT

<213> Artificial Sequence

<220>

<223> C5 heavy chain aa

<400> 58

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

Ser Val Lys Val Ser Cys Lys Ser Ser Gly Tyr Val Phe Thr Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Val Thr Thr Asp Ala Ser Thr Asn Thr Val Asp
65 70 75 80

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

Ala Arg Gly Pro Arg Ser Lys Pro Pro Tyr Leu Tyr Phe Ala Leu Asp
100 105 110

Val Trp Gly Gln Gly Thr Ala Val Thr Val Ser Ser Asp Ser Pro Asp
115 120 125

Arg Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala Leu Leu Val Val Thr
130 135 140

Glu Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu
145 150 155 160

Ser Phe Val Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp
165 170 175

Lys Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys

180

185

190

Arg Phe Arg Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser
 195 200 205

Val Val Arg Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala
 210 215 220

Ile Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu
 225 230 235 240

Leu Arg Val Thr Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
 245 250 255

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
 260 265 270

Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
 275 280 285

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
 290 295 300

Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
 305 310 315 320

Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
 325 330 335

Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
 340 345 350

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
 355 360 365

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 370 375 380

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
385 390 395 400

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
405 410 415

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
420 425 430

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
435 440 445

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
450 455 460

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
465 470 475 480

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
485 490 495

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
500 505 510

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

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
530 535 540

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
545 550 555 560

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
565 570

<210> 59
<211> 604
<212> PRT
<213> Artificial Sequence

<220>
<223> C5b heavy chain aa

<400> 59

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

Ser Val Lys Val Ser Cys Lys Ser Ser Gly Tyr Val Phe Thr Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Val Thr Thr Asp Ala Ser Thr Asn Thr Val Asp
65 70 75 80

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

Ala Arg Gly Pro Arg Ser Lys Pro Pro Tyr Leu Tyr Phe Ala Leu Asp
100 105 110

Val Trp Gly Gln Gly Thr Ala Val Thr Val Ser Ser Phe Val Gly Pro
115 120 125

Pro Ser Pro Phe Leu Thr Ser Leu His Leu Ser Asp Ser Pro Asp Arg
130 135 140

Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala Leu Leu Val Val Thr Glu
145 150 155 160

Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser
165 170 175

Phe Val Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp Lys
180 185 190

Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg
195 200 205

Phe Arg Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser Val
210 215 220

Val Arg Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile
225 230 235 240

Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu
245 250 255

Arg Val Thr Gly Ala Ala Ser Glu Ala Pro Gly Gln Gly Leu Ala Glu
260 265 270

Pro Val Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
275 280 285

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys
290 295 300

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
305 310 315 320

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
325 330 335

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
340 345 350

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
355 360 365

Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro
370 375 380

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
385 390 395 400

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
405 410 415

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
420 425 430

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
435 440 445

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
450 455 460

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
465 470 475 480

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
485 490 495

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
500 505 510

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
515 520 525

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
530 535 540

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 545 550 555 560

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 565 570 575

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 580 585 590

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 595 600

<210> 60
 <211> 604
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> C6 heavy chain aa

<400> 60

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

Ser Val Lys Val Ser Cys Lys Ser Ser Gly Tyr Val Phe Thr Ser Tyr
 20 25 30

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

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

Gln Gly Arg Val Thr Val Thr Thr Asp Ala Ser Thr Asn Thr Val Asp
 65 70 75 80

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

Ala Arg Gly Pro Arg Ser Lys Pro Pro Tyr Leu Tyr Phe Ala Leu Asp
100 105 110

Val Trp Gly Gln Gly Thr Ala Val Thr Val Ser Ser Phe Val Gly Pro
115 120 125

Pro Ser Pro Phe Leu Thr Ser Leu His Leu Ser Asp Ser Pro Asp Arg
130 135 140

Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala Leu Leu Val Val Thr Glu
145 150 155 160

Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser
165 170 175

Phe Val Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp Lys
180 185 190

Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg
195 200 205

Phe Arg Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser Val
210 215 220

Val Arg Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile
225 230 235 240

Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu
245 250 255

Arg Val Thr Gly Ala Ala Ser Glu Ala Pro Gly Gln Gly Leu Ala Glu
260 265 270

Pro Val Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
275 280 285

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys
290 295 300

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
305 310 315 320

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
325 330 335

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
340 345 350

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
355 360 365

Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro
370 375 380

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
385 390 395 400

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
405 410 415

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
420 425 430

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
435 440 445

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
450 455 460

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
465 470 475 480

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala

485

490

495

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 500 505 510

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 515 520 525

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 530 535 540

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 545 550 555 560

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 565 570 575

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 580 585 590

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 595 600

<210> 61

<211> 579

<212> PRT

<213> Artificial Sequence

<220>

<223> C6b heavy chain aa

<400> 61

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

Ser Val Lys Val Ser Cys Lys Ser Ser Gly Tyr Val Phe Thr Ser Tyr
 20 25 30

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

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

Gln Gly Arg Val Thr Val Thr Thr Asp Ala Ser Thr Asn Thr Val Asp
65 70 75 80

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

Ala Arg Gly Pro Arg Ser Lys Pro Pro Tyr Leu Tyr Phe Ala Leu Asp
100 105 110

Val Trp Gly Gln Gly Thr Ala Val Thr Val Ser Ser Gln Gly Phe Thr
115 120 125

Ser Val Met Ala Pro Phe Leu Pro Leu Leu Thr Glu Gln Val Ser Thr
130 135 140

Pro Glu Ile Lys Val Leu Asn Lys Thr Gln Glu Asn Gly Thr Cys Thr
145 150 155 160

Leu Ile Leu Gly Cys Thr Val Glu Lys Gly Asp His Val Ala Tyr Ser
165 170 175

Trp Ser Glu Lys Ala Gly Thr His Pro Leu Asn Pro Ala Asn Ser Ser
180 185 190

His Leu Leu Ser Leu Thr Leu Gly Pro Gln His Ala Asp Asn Ile Tyr
195 200 205

Ile Cys Thr Val Ser Asn Pro Ile Ser Asn Asn Ser Gln Thr Phe Ser
210 215 220

Pro Trp Pro Gly Cys Arg Thr Asp Pro Ser Gly Glu Tyr Thr Gly Gly

225		230		235		240									
Ser	Leu	Cys	Ala	Thr	Leu	Met	Ser	Met	Ala	Ser	Thr	Lys	Gly	Pro	Ser
				245					250					255	
Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala
			260					265					270		
Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val
		275					280					285			
Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala
	290					295					300				
Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val
305					310					315					320
Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His
				325					330					335	
Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys
			340					345					350		
Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly
		355					360					365			
Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met
	370					375					380				
Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His
385					390					395					400
Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val
			405					410						415	
His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr
			420					425					430		

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
435 440 445

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
450 455 460

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
465 470 475 480

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
485 490 495

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
500 505 510

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
515 520 525

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
530 535 540

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
545 550 555 560

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
565 570 575

Pro Gly Lys

<210> 62
<211> 573
<212> PRT
<213> Artificial Sequence

<220>
<223> C7 heavy chain aa

<400> 62

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

Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Ser Phe Lys Asn Tyr
20 25 30

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

Cys Gly Ile Asn Trp Asn Gly Ser Leu Arg Gly Tyr Ala Asp Ser Val
50 55 60

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

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

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

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Asp Ser Pro Asp Arg
115 120 125

Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala Leu Leu Val Val Thr Glu
130 135 140

Gly Asp Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser
145 150 155 160

Phe Val Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp Lys
165 170 175

Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg
180 185 190

Phe Arg Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser Val
195 200 205

Val Arg Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile
210 215 220

Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu
225 230 235 240

Arg Val Thr Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
245 250 255

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
260 265 270

Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
275 280 285

Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly
290 295 300

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
305 310 315 320

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
325 330 335

Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys
340 345 350

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
355 360 365

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
370 375 380

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
385 390 395 400

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
405 410 415

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
420 425 430

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
435 440 445

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
450 455 460

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
465 470 475 480

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
485 490 495

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
500 505 510

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

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
530 535 540

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
545 550 555 560

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
565 570

<210> 63
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> C7/C8/C9 light chain aa

<400> 63

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Ser Leu Gly Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Gln Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Asn Tyr Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 64
<211> 548
<212> PRT
<213> Artificial Sequence

<220>
<223> C8 heavy chain aa

<400> 64

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

Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Ser Phe Lys Asn Tyr
20 25 30

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

Cys Gly Ile Asn Trp Asn Gly Ser Leu Arg Gly Tyr Ala Asp Ser Val
50 55 60

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

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

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

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Glu Gln Val Ser Thr
115 120 125

Pro Glu Ile Lys Val Leu Asn Lys Thr Gln Glu Asn Gly Thr Cys Thr
130 135 140

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

Trp Ser Glu Lys Ala Gly Thr His Pro Leu Asn Pro Ala Asn Ser Ser
165 170 175

His Leu Leu Ser Leu Thr Leu Gly Pro Gln His Ala Asp Asn Ile Tyr
180 185 190

Ile Cys Thr Val Ser Asn Pro Ile Ser Asn Asn Ser Gln Thr Phe Ser
195 200 205

Pro Trp Pro Gly Cys Arg Thr Asp Pro Ser Ala Ser Thr Lys Gly Pro
210 215 220

Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr
225 230 235 240

Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
245 250 255

Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
260 265 270

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
275 280 285

Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
290 295 300

His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser
305 310 315 320

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
325 330 335

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
340 345 350

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
355 360 365

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
370 375 380

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
385 390 395 400

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
405 410 415

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
420 425 430

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
435 440 445

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
450 455 460

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
465 470 475 480

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
485 490 495

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
500 505 510

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
515 520 525

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
530 535 540

Ser Pro Gly Lys
545

<210> 65
<211> 483
<212> PRT
<213> Artificial Sequence

<220>
<223> C9 heavy chain aa

<400> 65

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

Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Ser Phe Lys Asn Tyr
20 25 30

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

Cys Gly Ile Asn Trp Asn Gly Ser Leu Arg Gly Tyr Ala Asp Ser Val
50 55 60

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

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

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

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ser Ala Trp Ser His
115 120 125

Pro Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Ser
130 135 140

Ala Trp Ser His Pro Gln Phe Glu Lys Ala Ser Thr Lys Gly Pro Ser
145 150 155 160

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
165 170 175

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
180 185 190

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
195 200 205

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
210 215 220

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
225 230 235 240

Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys
245 250 255

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
275 280 285

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
290 295 300

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
305 310 315 320

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
325 330 335

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
340 345 350

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
355 360 365

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
370 375 380

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

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
405 410 415

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
420 425 430

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
435 440 445

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
450 455 460

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser

465

470

475

480

Pro Gly Lys

<210> 66

<211> 567

<212> PRT

<213> Artificial Sequence

<220>

<223> C10 heavy chain aa

<400> 66

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

Ser Val Lys Val Ser Cys Lys Thr Ser Gly Gly Ile Ile Arg Lys Tyr
 20 25 30

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

Gly Gly Ile Ile Ala Ile Phe Gly Thr Thr Asn Tyr Ala Gln Lys Phe
 50 55 60

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

Leu Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Ile Tyr Tyr Cys
 85 90 95

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

Gly Thr Leu Val Thr Val Ser Ser Met Ala Gln Val Gln Leu Val Glu
 115 120 125

Ser Gly Gly Gly Leu Val Gln Ala Gly Gly Ser Leu Thr Leu Ser Cys
130 135 140

Ala Ala Ser Gly Ser Thr Ser Arg Ser Tyr Ala Leu Gly Trp Phe Arg
145 150 155 160

Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala His Val Gly Gln Thr
165 170 175

Ala Glu Phe Ala Gln Gly Arg Phe Thr Ile Ser Arg Asp Phe Ala Lys
180 185 190

Asn Thr Val Ser Leu Gln Met Asn Asp Leu Lys Ser Asp Asp Thr Ala
195 200 205

Ile Tyr Tyr Cys Val Ala Ser Asn Arg Gly Trp Ser Pro Ser Arg Val
210 215 220

Ser Tyr Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser Ala Ser Thr
225 230 235 240

Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser
245 250 255

Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
260 265 270

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
275 280 285

Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
290 295 300

Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
305 310 315 320

Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu

325

330

335

Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 340 345 350

Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 355 360 365

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 370 375 380

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 385 390 395 400

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
 405 410 415

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 420 425 430

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 435 440 445

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 450 455 460

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 465 470 475 480

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 485 490 495

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 500 505 510

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 515 520 525

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
530 535 540

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
545 550 555 560

Leu Ser Leu Ser Pro Gly Lys
565

<210> 67

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> C10/C11/C12/C13 light chain aa

<400> 67

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

Ala Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Ser Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Asp Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys His Gln Tyr Gly Asp Ser Arg
85 90 95

Lys Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala

100	105	110
Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser		
115	120	125
Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu		
130	135	140
Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser		
145	150	155
Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu		
165	170	175
Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val		
180	185	190
Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys		
195	200	205
Ser Phe Asn Arg Gly Glu Cys		
210	215	

<210> 68
 <211> 698
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> C11 heavy chain aa

<400> 68

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Arg Lys Pro Gly Ser
1 5 10 15
Ser Val Lys Val Ser Cys Lys Thr Ser Gly Gly Ile Ile Arg Lys Tyr
20 25 30

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

Gly Gly Ile Ile Ala Ile Phe Gly Thr Thr Asn Tyr Ala Gln Lys Phe
50 55 60

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

Leu Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Ile Tyr Tyr Cys
85 90 95

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

Gly Thr Leu Val Thr Val Ser Ser Gln Ile Thr Leu Lys Glu Ser Gly
115 120 125

Pro Thr Leu Val Lys Pro Thr Gln Thr Leu Thr Leu Thr Cys Thr Phe
130 135 140

Ser Gly Phe Ser Leu Ser Thr Ser Arg Val Gly Val Gly Trp Ile Arg
145 150 155 160

Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ser Leu Ile Tyr Trp Asp
165 170 175

Asp Glu Lys His Tyr Ser Pro Ser Leu Lys Asn Arg Val Thr Ile Ser
180 185 190

Lys Asp Ser Ser Lys Asn Gln Val Val Leu Thr Leu Thr Asp Met Asp
195 200 205

Pro Val Asp Thr Gly Thr Tyr Tyr Cys Ala His Arg Gly Val Asp Thr
210 215 220

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

225		230		235		240
Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly						
		245		250		255
Ser Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly						
		260		265		270
Gln Ser Ile Thr Ile Ser Cys Ser Gly Ala Gly Ser Asp Val Gly Gly						
		275		280		285
His Asn Phe Val Ser Trp Tyr Gln Gln Tyr Pro Gly Lys Ala Pro Lys						
		290		295		300
Leu Met Ile Tyr Asp Val Lys Asn Arg Pro Ser Gly Val Ser Tyr Arg						
305		310		315		320
Phe Ser Gly Ser Lys Ser Gly Tyr Thr Ala Ser Leu Thr Ile Ser Gly						
		325		330		335
Leu Gln Ala Glu Asp Glu Ala Thr Tyr Phe Cys Ser Ser Tyr Ser Ser						
		340		345		350
Ser Ser Thr Leu Ile Ile Phe Gly Gly Gly Thr Arg Leu Thr Val Leu						
		355		360		365
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys						
		370		375		380
Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr						
385		390		395		400
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser						
		405		410		415
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser						
		420		425		430

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
435 440 445

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
450 455 460

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
465 470 475 480

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
485 490 495

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
500 505 510

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
515 520 525

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
530 535 540

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
545 550 555 560

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
565 570 575

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
580 585 590

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
595 600 605

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
610 615 620

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
625 630 635 640

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
645 650 655

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
660 665 670

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
675 680 685

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 69
<211> 575
<212> PRT
<213> Artificial Sequence

<220>
<223> C12 heavy chain aa

<400> 69

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

Ser Val Lys Val Ser Cys Lys Thr Ser Gly Gly Ile Ile Arg Lys Tyr
20 25 30

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

Gly Gly Ile Ile Ala Ile Phe Gly Thr Thr Asn Tyr Ala Gln Lys Phe
50 55 60

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

Leu Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Ile Tyr Tyr Cys
85 90 95

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

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

Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala
130 135 140

Ser Gly Phe Thr Leu Asp Tyr Tyr Tyr Ile Gly Trp Phe Arg Gln Ala
145 150 155 160

Pro Gly Lys Glu Arg Glu Ala Val Ser Cys Ile Ser Gly Ser Ser Gly
165 170 175

Ser Thr Tyr Tyr Pro Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg
180 185 190

Asp Asn Ala Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Lys Pro
195 200 205

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Thr Ile Arg Ser Ser Ser Trp
210 215 220

Gly Gly Cys Val His Tyr Gly Met Asp Tyr Trp Gly Lys Gly Thr Gln
225 230 235 240

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
245 250 255

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
260 265 270

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
275 280 285

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
290 295 300

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
305 310 315 320

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

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
340 345 350

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
355 360 365

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
370 375 380

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
385 390 395 400

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
405 410 415

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
420 425 430

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
435 440 445

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
450 455 460

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
465 470 475 480

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

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
500 505 510

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
515 520 525

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
530 535 540

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
545 550 555 560

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
565 570 575

<210> 70
<211> 699
<212> PRT
<213> Artificial Sequence

<220>
<223> C13 heavy chain aa

<400> 70

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

Ser Val Lys Val Ser Cys Lys Thr Ser Gly Gly Ile Ile Arg Lys Tyr
20 25 30

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

Gly Gly Ile Ile Ala Ile Phe Gly Thr Thr Asn Tyr Ala Gln Lys Phe
50 55 60

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

Leu Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Ile Tyr Tyr Cys
85 90 95

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

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

Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala
130 135 140

Ser Gly Phe Thr Phe Ser Ser Tyr Ser Met Asn Trp Val Arg Gln Ala
145 150 155 160

Pro Gly Lys Gly Leu Glu Trp Val Ser Ser Ile Ser Ala Ser Ser Ser
165 170 175

Tyr Ser Asp Tyr Ala Asp Ser Ala Lys Gly Arg Phe Thr Ile Ser Arg
180 185 190

Asp Asn Ala Lys Thr Ser Leu Phe Leu Gln Met Asn Ser Leu Arg Ala
195 200 205

Glu Asp Thr Ala Ile Tyr Phe Cys Ala Arg Ala Arg Ala Thr Gly Tyr
210 215 220

Ser Ser Ile Thr Pro Tyr Phe Asp Ile Trp Gly Gln Gly Thr Leu Val
225 230 235 240

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
245 250 255

Gly Gly Ser Gln Ser Val Val Thr Gln Pro Pro Ser Val Ser Gly Ala
260 265 270

Pro Gly Gln Arg Val Thr Ile Ser Cys Thr Gly Ser Ser Ser Asn Ile
275 280 285

Gly Ala Gly Tyr Asp Val His Trp Tyr Gln Gln Leu Pro Gly Thr Ala
290 295 300

Pro Lys Leu Leu Ile Tyr Asp Asn Asn Asn Arg Pro Ser Gly Val Pro
305 310 315 320

Asp Arg Phe Ser Ala Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile
325 330 335

Thr Gly Leu Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr
340 345 350

Asp Arg Asn Leu Ser Gly Val Phe Gly Thr Gly Thr Lys Val Thr Val
355 360 365

Leu Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
370 375 380

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
385 390 395 400

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
405 410 415

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
420 425 430

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln

435

440

445

Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
 450 455 460

Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
 465 470 475 480

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 485 490 495

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 500 505 510

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 515 520 525

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 530 535 540

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 545 550 555 560

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 565 570 575

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 580 585 590

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
 595 600 605

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 610 615 620

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

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
645 650 655

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
660 665 670

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
675 680 685

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 71
<211> 251
<212> PRT
<213> Artificial Sequence

<220>
<223> MGDUCA VH aa

<400> 71

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

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

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

Ile Gly Glu Ile Tyr His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu
50 55 60

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

Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys

85

90

95

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

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

His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg
 130 135 140

Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Asp Thr Glu Asp Val Ser
 145 150 155 160

Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val
 165 170 175

Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro
 180 185 190

Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys Gly Glu
 195 200 205

Asp Val Thr Trp Ala Leu Pro Gln Ser Gln Leu Asp Pro Arg Ala Cys
 210 215 220

Pro Gln Gly Glu Leu Pro Ile Ser Thr Asp Ile Tyr Tyr Met Asp Val
 225 230 235 240

Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
 245 250

<210> 72

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> MGDUCA VL aa

<400> 72

Ala Ile Arg Met Thr Gln Ser Pro Ser Ser Phe Ser Ala Ser Thr Gly
1 5 10 15

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

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Cys Leu Gln Ser
65 70 75 80

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

Asp Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

<210> 73

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> TT107 VH aa

<400> 73

Gln Val Gln Leu Ile Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

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

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

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

Thr Leu Val Thr Ile Ser Ser
115

<210> 74

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> TT107 VL aa

<400> 74

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Ser Asn
20 25 30

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

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

Gly Ser Gly Ser Gly Thr Asp Phe Ala Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

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

Arg Thr Phe Gly Pro Gly Thr Lys Val Glu Phe Lys
100 105

<210> 75
<211> 221
<212> PRT
<213> Artificial Sequence

<220>
<223> MGJ1 VH

<400> 75

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

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

Gly Met Asn Trp Val Arg Gln Pro Pro Gly Arg Gly Leu Glu Trp Val
35 40 45

Ala Gly Ile Lys Trp Arg Gly Gly Gly Val Ala Leu Val Pro Ser Val
50 55 60

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

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

Ala Arg Asp Ser Gly Phe Arg Gly Gly Arg Gly His Ala Phe Asp Leu

100	105	110
Trp Gly Gln Gly Thr Met Val Thr Ile Ser Ala Glu Asp Leu Pro Arg		
115	120	125
Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His		
130	135	140
Val Thr Phe Val Cys Arg Gly Pro Val Gly Val His Thr Phe Arg Leu		
145	150	155
		160
Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln		
	165	170
		175
Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser		
	180	185
		190
Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys		
	195	200
		205
Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys		
210	215	220

<210> 76
 <211> 221
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> MGJ2 VH

<400> 76

Glu Val Gln Val Val Glu Ser Gly Gly Arg Val Ala Arg Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe His Leu Asp Asp Tyr
20 25 30

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

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

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

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

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

Trp Gly Gln Gly Thr Met Val Thr Val Ser Leu Glu Asp Leu Pro Arg
115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
145 150 155 160

Glu Arg Glu Ser Arg Phe Thr Tyr Asn Asp Thr Glu Asp Val Ser Gln
165 170 175

Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
210 215 220

<210> 77

<211> 220
<212> PRT
<213> Artificial Sequence

<220>
<223> MGJ3 VH

<400> 77

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

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

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

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

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

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

Ala Arg Asp Pro Val Tyr Gly Ser Asp Arg Gly Asp Val Phe Asp Met
100 105 110

Trp Gly Gln Gly Thr Val Val Thr Val Ser Ser Asp Leu Pro Arg Pro
115 120 125

Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His Val
130 135 140

Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu Glu
145 150 155 160

Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln Ala
165 170 175

Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser Glu
180 185 190

Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys Trp
195 200 205

Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
210 215 220

<210> 78
<211> 221
<212> PRT
<213> Artificial Sequence

<220>
<223> MGJ5 VH

<400> 78

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

Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Ser Phe Lys Asn Tyr
20 25 30

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

Cys Gly Ile Asn Trp Asn Gly Ser Leu Arg Gly Tyr Ala Asp Ser Val
50 55 60

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

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

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

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Glu Asp Leu Pro Arg
115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
210 215 220

<210> 79
<211> 221
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ1 VH

<400> 79

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Ser Ile Asn Asp Tyr
20 25 30

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

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

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

Leu Gln Met Asn Ser Leu Thr Gly Asp Asp Thr Ala Phe Tyr Tyr Cys
85 90 95

Val Arg Asp Pro Gly Glu Ser Ser Gly Arg Gly His Ile Phe Asn Ile
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Leu Glu Asp Leu Pro Arg
115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
210 215 220

<210> 80
<211> 221
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ2 VH

<400> 80

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Asn Ile Asn Asp Tyr
20 25 30

Asp Met Ser Trp Val Arg Gln Phe Leu Gly Lys Gly Leu Glu Trp Val
35 40 45

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

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

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

Val Arg Asp Pro Gly Asp Thr Ser Gly Arg Gly His Ile Phe Asn Val
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Leu Glu Asp Leu Pro Arg
115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
210 215 220

<210> 81
<211> 221
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ5 VH

<400> 81

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Asn Ile Asn Asp Tyr
20 25 30

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

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

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

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

85

90

95

Val Arg Asp Pro Gly Asp Arg Ser Gly Arg Gly His Ile Phe Asn Ile
 100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Leu Glu Asp Leu Pro Arg
 115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
 130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
 145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
 165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
 180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
 195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
 210 215 220

<210> 82

<211> 221

<212> PRT

<213> Artificial Sequence

<220>

<223> MMJ6 VH

<400> 82

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Ser Ile Asn Asp Tyr
20 25 30

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

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

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

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

Val Arg Asp Pro Gly Asp Ser Ser Gly Arg Gly Gln Ile Phe Asn Ile
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Leu Glu Asp Leu Pro Arg
115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys

210

215

220

<210> 83
 <211> 221
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> MMJ7 VH

<400> 83

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Ser Ile Asn Asp Tyr
 20 25 30

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

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

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

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

Val Arg Asp Pro Gly Glu Ser Ser Gly Arg Gly His Ile Phe Asn Ile
 100 105 110

Trp Gly Gln Gly Thr Met Val Thr Ile Ser Leu Glu Asp Leu Pro Arg
 115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
 130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
 145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
 165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
 180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
 195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
 210 215 220

<210> 84
 <211> 221
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> MMJ8 VH

<400> 84

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Asn Ile Asn Asp Tyr
 20 25 30

Asp Met Ser Trp Val Arg Gln Phe Leu Gly Lys Gly Leu Glu Trp Val
 35 40 45

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

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

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

Val Arg Asp Pro Gly Asp Thr Ser Gly Arg Gly His Ile Phe Asn Val
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Leu Glu Asp Leu Pro Arg
115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
210 215 220

<210> 85
<211> 221
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ10 VH

<400> 85

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Asn Ile Asn Asp Tyr
20 25 30

Asp Met Ser Trp Val Arg Gln Phe Leu Gly Lys Gly Leu Glu Trp Val
35 40 45

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

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

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

Val Arg Asp Pro Gly Asp Thr Ser Gly Arg Gly His Ile Phe Asn Val
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Leu Glu Asp Leu Pro Arg
115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
210 215 220

<210> 86
<211> 221
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ16 VH

<400> 86

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Asn Ile Asn Asp Tyr
20 25 30

Asp Met Ser Trp Val Arg Gln Phe Leu Gly Lys Gly Leu Glu Trp Val
35 40 45

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

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

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

Val Arg Asp Pro Gly Asp Thr Ser Gly Arg Gly His Ile Phe Asn Val
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Leu Glu Asp Leu Pro Arg
115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys
195 200 205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Gly Lys
210 215 220

<210> 87
<211> 221
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ23 VH

<400> 87

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Asn Ile Asn Asp Tyr
20 25 30

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

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

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

65		70		75		80									
Leu	Gln	Met	Asn	Ser	Leu	Arg	Gly	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys
				85					90					95	
Val	Arg	Asp	Pro	Gly	Asp	Arg	Ser	Gly	Arg	Gly	His	Ile	Phe	Asn	Ile
			100					105					110		
Trp	Gly	Gln	Gly	Thr	Met	Val	Thr	Val	Ser	Leu	Glu	Asp	Leu	Pro	Arg
		115					120					125			
Pro	Ser	Ile	Ser	Ala	Glu	Pro	Gly	Thr	Val	Ile	Pro	Leu	Gly	Ser	His
		130					135				140				
Val	Thr	Phe	Val	Cys	Arg	Gly	Pro	Val	Gly	Val	Gln	Thr	Phe	Arg	Leu
145					150					155					160
Glu	Arg	Glu	Ser	Arg	Ser	Thr	Tyr	Asn	Glu	Thr	Glu	Asp	Val	Ser	Gln
				165					170					175	
Val	Ser	Pro	Ser	Glu	Ser	Glu	Ala	Arg	Phe	Arg	Ile	Asp	Ser	Val	Ser
			180					185					190		
Glu	Gly	Asn	Ala	Gly	Pro	Tyr	Arg	Cys	Ile	Tyr	Tyr	Lys	Pro	Pro	Lys
		195					200					205			
Trp	Ser	Glu	Gln	Ser	Asp	Tyr	Leu	Glu	Leu	Leu	Val	Lys			
	210					215					220				

<210> 88
 <211> 221
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> MMJ25 VH

 <400> 88

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

Ser Leu Arg Leu Ser Cys Glu Val Ser Gly Val Ser Ile Asn Asp Tyr
20 25 30

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

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

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

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

Val Arg Asp Pro Gly Asp Ser Ser Gly Arg Gly His Ile Phe Asn Ile
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Leu Glu Asp Leu Pro Arg
115 120 125

Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly Ser His
130 135 140

Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe Arg Leu
145 150 155 160

Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu Asp Val Ser Gln
165 170 175

Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser Val Ser
180 185 190

Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr Lys Pro Pro Lys

195

200

205

Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu Val Lys
 210 215 220

<210> 89

<211> 228

<212> PRT

<213> Artificial Sequence

<220>

<223> MGM1 VH

<400> 89

Gln Val Gln Leu Ala Gln Tyr Gly Gly Gly Ala Val Gln Pro Gly Gly
 1 5 10 15

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

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

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

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

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

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

Arg Thr Ala Tyr Leu Asp Tyr Trp Gly Arg Gly Thr Leu Val Thr Val
 115 120 125

Ser Ser Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr
 130 135 140

Val Ile Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val
 145 150 155 160

Gly Val Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn
 165 170 175

Asp Thr Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg
 180 185 190

Phe Arg Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys
 195 200 205

Val Tyr Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Asp
 210 215 220

Leu Leu Val Lys
 225

<210> 90
 <211> 227
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> MGM3 VH

<400> 90

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

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

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

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

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

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

Ala Thr Asn Gln Gly Ser Gly Gly Ser Asp Asp Thr Trp Glu Thr Asn
100 105 110

Arg Ser Ala Phe Phe Pro His Trp Gly Gln Gly Thr Leu Val Thr Val
115 120 125

Ser Ser Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val
130 135 140

Ile Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly
145 150 155 160

Val Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Ile Tyr Asn Asp
165 170 175

Thr Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe
180 185 190

Arg Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Val
195 200 205

Tyr Tyr Lys Pro Pro Lys Trp Ser Glu Glu Ser Asp Tyr Leu Glu Leu
210 215 220

Leu Val Lys
225

<210> 91
<211> 228
<212> PRT
<213> Artificial Sequence

<220>
<223> MGM4 VH

<400> 91

Gln 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 Glu Val Ser Gly Phe Arg Phe Ser Thr Tyr
20 25 30

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

Ala Phe Ile Arg Tyr Asp Gly Asn Asn Lys Ser 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 Ile Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Asn Gln Ala Ser Gly Gly Tyr Asp Asp Thr Trp Gly Thr Tyr
100 105 110

Arg Ser Ala Tyr Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
115 120 125

Ser Ser Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr
130 135 140

Val Ile Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val
145 150 155 160

Gly Val Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn
165 170 175

Asp Thr Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg
180 185 190

Phe Arg Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys
195 200 205

Val Tyr Tyr Lys Pro Pro Lys Trp Ser Glu Glu Ser Asp Ser Leu Glu
210 215 220

Leu Leu Val Lys
225

<210> 92
<211> 228
<212> PRT
<213> Artificial Sequence

<220>
<223> MGM5 VH

<400> 92

Gln 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 Lys Met Ser Gly Phe Lys Phe Ser Ala Phe
20 25 30

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

Ala Phe Val Arg Tyr Asp Gly Gly Asp Lys Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

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

Leu Ser Ala Tyr Leu Asp Tyr Trp Gly Gln Gly Thr Gln Val Ser Val
115 120 125

Ser Pro Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr
130 135 140

Val Ile Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val
145 150 155 160

Gly Val Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn
165 170 175

Asp Thr Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg
180 185 190

Phe Arg Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys
195 200 205

Val Tyr Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu
210 215 220

Leu Leu Val Lys
225

<210> 93
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> MGB2 VH

<400> 93

Glu Ala Gln Val Val Asp His Gly Asn Arg Gly Arg Ala Arg Asp Leu
1 5 10 15

Glu Asp Ile Lys Lys Arg Arg Ala Arg Asp Leu Glu Tyr Glu Asp Leu
20 25 30

Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro Leu Gly
35 40 45

Ser Arg Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln Thr Phe
50 55 60

Arg Leu Glu Arg Glu Ser Arg Ser Lys Tyr Asn Glu Thr Glu Asp Val
65 70 75 80

Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg Ile Asp Ser
85 90 95

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

Pro Lys Trp Ser Glu His Ser Asp Phe Leu Glu Leu Leu Val Lys
115 120 125

<210> 94

<211> 116

<212> PRT

<213> Artificial Sequence

<220>

<223> MGB43 VH

<400> 94

Val Ala Glu Val Glu Glu His Ile Asn Lys Arg Arg Ala Arg Asp Leu
1 5 10 15

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

Val Ile Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val
35 40 45

Gly Val Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Arg Tyr Asn
50 55 60

Glu Thr Glu Asp Val Ser Gln Thr Ser Pro Ser Glu Ser Glu Ala Arg
65 70 75 80

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

Leu Tyr Tyr Lys Thr Pro Lys Trp Ser Glu Gln Ser Asp Phe Leu Glu
100 105 110

Leu Leu Val Lys
115

<210> 95
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> MGB47 VH

<400> 95

Glu Ala Glu Val Val Glu His Val Asn Lys Arg Arg Ala Arg Ala Leu
1 5 10 15

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

Val Ile Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val
35 40 45

Gly Val Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Arg Tyr Thr
50 55 60

Glu Thr Glu Asp Val Ser Gln Thr Ser Pro Ser Glu Ser Glu Ala Arg
65 70 75 80

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

Leu Tyr Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Phe Leu Glu
100 105 110

Leu Leu Val Lys
115

<210> 96
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> MGJ1 VL

<400> 96

Asp Phe Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asn Val Asn Thr Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Ala Ala Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Glu Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Arg Gly
50 55 60

Gly Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Thr Ser Leu Gln Pro
65 70 75 80

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Val Arg
100 105

<210> 97
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> MGJ2 VL

<400> 97

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Thr Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Phe Leu Ile
35 40 45

Tyr Lys Ala Ser Phe Leu Glu Asn Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Glu Ser Gly Thr Glu Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro
65 70 75 80

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

Thr Phe Gly Pro Gly Thr Lys Val Glu Ile Lys
100 105

<210> 98

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

<220>
<223> MGJ3 VL

<400> 98

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15

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

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Asp Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Arg Leu Glu Ala Gly Val Pro Ala Arg Phe Ser Ala
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Phe Thr Ile Arg Ser Met Gln Pro
65 70 75 80

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

Thr Phe Gly Pro Gly Thr Lys Val Asp Leu Lys
100 105

<210> 99
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> MGJ5 VL

<400> 99

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Ser Leu Gly Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Gln Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Asn Tyr Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 100

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> MMJ1 VL

<400> 100

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Val Ser Ala Ser Ile Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ile Ile Glu Arg Ser
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Ala Leu Ile
35 40 45

Tyr Lys Thr Ser Asn Leu Glu Asp Gly Val Pro Ser Arg Phe Ser Gly

50

55

60

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

Asp Asp Phe Ala Asn Tyr Tyr Cys Gln Gln Tyr Asp Thr Tyr Pro Phe
 85 90 95

Thr Phe Gly Pro Gly Thr Thr Val Thr Leu Arg
 100 105

<210> 101

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> MMJ5 VL

<400> 101

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Ile Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Val Ile Asp Arg Ser
 20 25 30

Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ser Pro Arg Pro Leu Ile
 35 40 45

Tyr Lys Ala Ser Thr Leu Glu Gly Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

Asp Asp Phe Ala Asn Tyr Tyr Cys Gln Gln Tyr Asp Thr Tyr Pro Phe
 85 90 95

Thr Phe Gly Pro Gly Thr Thr Val Thr Leu Arg
100 105

<210> 102
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ6 VL

<400> 102

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Ile Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ile Ile His Arg Ser
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Arg Ala Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu Glu Gly Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Asp Asp Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Asp Thr Tyr Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Thr Val Thr Leu Arg
100 105

<210> 103
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ7 VL

<400> 103

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Ile Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asp Arg Ser
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Ala Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu Glu Gly Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Asp Asp Phe Ala Asp Tyr Tyr Cys Gln Gln Tyr Asp Thr Tyr Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Thr Val Thr Leu Arg
100 105

<210> 104

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> MMJ8 VL

<400> 104

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Ile Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ile Ile Asp Arg Ser
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Ala Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu Glu Gly Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Asp Asp Phe Ala Asn Tyr Tyr Cys Gln Gln Tyr Asp Thr Tyr Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Thr Val Thr Leu Arg
100 105

<210> 105
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ10 VL

<400> 105

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Ile Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ile Ile Asp Arg Ser
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Ala Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu Glu Gly Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Asp Asp Phe Ala Asn Tyr Tyr Cys Gln Gln Tyr Asp Thr Tyr Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Thr Val Thr Leu Arg
100 105

<210> 106
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ16 VL

<400> 106

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Ile Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ile Ile Asp Arg Ser
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Ala Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu Glu Gly Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Asp Asp Phe Ala Asn Tyr Tyr Cys Gln Gln Tyr Asp Thr Tyr Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Thr Val Thr Leu Arg
100 105

<210> 107
<211> 107

<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ23 VL

<400> 107

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Ile Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Val Ile Asp Arg Ser
20 25 30

Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ser Pro Arg Pro Leu Ile
35 40 45

Tyr Lys Ala Ser Thr Leu Glu Gly Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Asp Asp Phe Ala Asn Tyr Tyr Cys Gln Gln Tyr Asp Thr Tyr Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Thr Val Thr Leu Arg
100 105

<210> 108
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ25 VL

<400> 108

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Ile Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asn Ile Asp Arg Ser
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Ala Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu Glu Asp Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Asp Asp Phe Ala Leu Tyr Tyr Cys Gln Gln Tyr Asp Thr Tyr Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Thr Val Thr Leu Arg
100 105

<210> 109

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> MGM1 VL

<400> 109

Ser Tyr Glu Val Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

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

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

Glu Gly Thr Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Val Ser Gly Ala Met Ala Thr Leu Met Ile Ser Glu Ala Gln Leu Glu
65 70 75 80

Asp Glu Gly Asp Tyr Tyr Cys Phe Ser Ile Asp Thr Ser Gly Asn His
85 90 95

Gly Gly Ala Phe Gly Thr Gly Thr Lys Leu Thr Val Leu
100 105

<210> 110
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> MGM3 VL

<220>
<221> misc_feature
<222> (10)..(10)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (61)..(61)
<223> Xaa can be any naturally occurring amino acid

<400> 110

Ser Tyr Glu Leu Ile Gln Pro Pro Ser Xaa Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Ser Gly Glu Pro Leu Pro Arg Thr Ser Thr
20 25 30

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

Glu Val Ser Lys Arg Pro Ser Gly Ile Pro Glu Arg Xaa Ser Gly Ser
50 55 60

Asn Thr Gly Thr Lys Ala Thr Leu Phe Ile Val Gly Ala Gln Val Glu
65 70 75 80

Asp Glu Gly Asp Tyr Tyr Cys Tyr Ser Thr Asn Thr Ser Gly Gly Ser
85 90 95

Arg Gly Ala Phe Gly Thr Gly Thr Ser Leu Thr Val Leu
100 105

<210> 111
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> MGM4 VL

<400> 111

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

Thr Ala Arg Ile Thr Cys Ser Gly Asp Ala Val Pro Asn Thr Tyr Thr
20 25 30

Tyr Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Glu Asp Ser Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Ser Ser Gly Thr Met Ala Thr Phe Ile Ile Ser Gly Ala Gln Val Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Tyr Ser Thr Asp Thr Ser Asp Asp His
85 90 95

Arg Gly Ala Phe Gly Thr Gly Thr Lys Val Thr Val Leu

100

105

<210> 112
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> MGM5 VL

<400> 112

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

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

Tyr Trp Tyr Gln Gln Lys Ser Arg Gln Ala Pro Val Val Val Ile Tyr
 35 40 45

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

Ile Ser Gly Thr Gln Ala Thr Leu Ile Ile Thr Gly Ala Gln Val Glu
 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Tyr Ser Thr Asp Thr Asn Asn Thr His
 85 90 95

Arg Gly Ala Phe Gly Thr Gly Thr Lys Val Thr Val Leu
 100 105

<210> 113
 <211> 98
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> MGJ1 LAIR1

<400> 113

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

His Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 114

<211> 98

<212> PRT

<213> Artificial Sequence

<220>

<223> MGJ2 LAIR1

<400> 114

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Phe Thr Tyr Asn Asp Thr

35

40

45

Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
 50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
 65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
 85 90 95

Val Lys

<210> 115

<211> 97

<212> PRT

<213> Artificial Sequence

<220>

<223> MGJ3 LAIR1

<400> 115

Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro
 1 5 10 15

Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln
 20 25 30

Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr Glu
 35 40 45

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

Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr Tyr
 65 70 75 80

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

Lys

<210> 116
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MGJ5 LAIR1

<400> 116

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 117
<211> 98
<212> PRT

<213> Artificial Sequence

<220>

<223> MMJ1 LAIR1

<400> 117

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 118

<211> 98

<212> PRT

<213> Artificial Sequence

<220>

<223> MMJ2 LAIR1

<400> 118

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 119
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ5 LAIR1

<400> 119

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 120
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ6 LAIR1

<400> 120

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 121
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ7 LAIR1

<400> 121

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 122
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ8 LAIR1

<400> 122

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 123
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ10 LAIR1

<400> 123

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 124
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MMJ16 LAIR1

<400> 124

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu

85

90

95

Gly Lys

<210> 125

<211> 98

<212> PRT

<213> Artificial Sequence

<220>

<223> MMJ23 LAIR1

<400> 125

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
 1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
 20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
 35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
 50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
 65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
 85 90 95

Val Lys

<210> 126

<211> 98

<212> PRT

<213> Artificial Sequence

<220>

<223> MMJ25 LAIR1

<400> 126

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Val Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 127

<211> 98

<212> PRT

<213> Artificial Sequence

<220>

<223> MGM1 LAIR1

<400> 127

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val

20

25

30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Asp Thr
 35 40 45

Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
 50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Val Tyr
 65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Asp Leu Leu
 85 90 95

Val Lys

<210> 128
 <211> 97
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> MGM3 LAIR1

<400> 128

Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile Pro
 1 5 10 15

Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val Gln
 20 25 30

Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Ile Tyr Asn Asp Thr Glu
 35 40 45

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

Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Val Tyr Tyr
65 70 75 80

Lys Pro Pro Lys Trp Ser Glu Glu Ser Asp Tyr Leu Glu Leu Leu Val
85 90 95

Lys

<210> 129
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MGM4 LAIR1

<400> 129

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Asp Thr
35 40 45

Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Val Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Glu Ser Asp Ser Leu Glu Leu Leu
85 90 95

Val Lys

<210> 130
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MGM5 LAIR1

<400> 130

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Thr Tyr Asn Asp Thr
35 40 45

Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Val Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu Gln Ser Asp Tyr Leu Glu Leu Leu
85 90 95

Val Lys

<210> 131
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MGB2 LAIR1

<400> 131

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser Arg Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Lys Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Ala Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Ile Tyr
65 70 75 80

Tyr Lys Pro Pro Lys Trp Ser Glu His Ser Asp Phe Leu Glu Leu Leu
85 90 95

Val Lys

<210> 132
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MGB43 LAIR1

<400> 132

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Arg Tyr Asn Glu Thr
35 40 45

Glu Asp Val Ser Gln Thr Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Leu Tyr
65 70 75 80

Tyr Lys Thr Pro Lys Trp Ser Glu Gln Ser Asp Phe Leu Glu Leu Leu
85 90 95

Val Lys

<210> 133
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> MGB47 LAIR1

<400> 133

Glu Asp Leu Pro Arg Pro Ser Ile Ser Ala Glu Pro Gly Thr Val Ile
1 5 10 15

Pro Leu Gly Ser His Val Thr Phe Val Cys Arg Gly Pro Val Gly Val
20 25 30

Gln Thr Phe Arg Leu Glu Arg Glu Ser Arg Ser Arg Tyr Thr Glu Thr
35 40 45

Glu Asp Val Ser Gln Thr Ser Pro Ser Glu Ser Glu Ala Arg Phe Arg
50 55 60

Ile Asp Ser Val Ser Glu Gly Asn Ala Gly Pro Tyr Arg Cys Leu Tyr
65 70 75 80

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

Val Lys