

LISTADO DE SECUENCIAS

<110> Janssen Biotech, Inc.

Fransson, Johan

Leu, Jocelyn

Obmolova, Galina

Suri, Anish

Teng, Fang

Teplyakov, Alexey

Zhou, Hong

<120> Anticuerpos anti-CD154 y métodos de uso de estos

<130> JBI5068WOPCT

<140> Para asignarse

<141> 2016-08-04

<150> 62201150

<151> 2015-08-05

<150> 62367660

<151> 2016-07-28

<160> 87

<170> PatentIn Versión 3.5

<210> 1

<211> 261

<212> PRT

<213> Homo sapiens

<400> 1

Met Ile Glu Thr Tyr Asn Gln Thr Ser Pro Arg Ser Ala Ala Thr Gly

1 5 10 15

Leu Pro Ile Ser Met Lys Ile Phe Met Tyr Leu Leu Thr Val Phe Leu

20 25 30

Ile Thr Gln Met Ile Gly Ser Ala Leu Phe Ala Val Tyr Leu His Arg

35 40 45

Arg Leu Asp Lys Ile Glu Asp Glu Arg Asn Leu His Glu Asp Phe Val

50 55 60

Phe Met Lys Thr Ile Gln Arg Cys Asn Thr Gly Glu Arg Ser Leu Ser

65 70 75 80

Leu Leu Asn Cys Glu Glu Ile Lys Ser Gln Phe Glu Gly Phe Val Lys

85 90 95

Asp Ile Met Leu Asn Lys Glu Glu Thr Lys Lys Glu Asn Ser Phe Glu

100 105 110

Met Gln Lys Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser
115 120 125

Glu Ala Ser Ser Lys Thr Thr Ser Val Leu Gln Trp Ala Glu Lys Gly
130 135 140

Tyr Tyr Thr Met Ser Asn Asn Leu Val Thr Leu Glu Asn Gly Lys Gln
145 150 155 160

Leu Thr Val Lys Arg Gln Gly Leu Tyr Tyr Ile Tyr Ala Gln Val Thr
165 170 175

Phe Cys Ser Asn Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser
180 185 190

Leu Cys Leu Lys Ser Pro Gly Arg Phe Glu Arg Ile Leu Leu Arg Ala
195 200 205

Ala Asn Thr His Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His
210 215 220

Leu Gly Gly Val Phe Glu Leu Gln Pro Gly Ala Ser Val Phe Val Asn

225 230 235 240

Val Thr Asp Pro Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe

245 250 255

Gly Leu Leu Lys Leu

260

<210> 2

<211> 261

<212> PRT

<213> Callithrix jacchus

<400> 2

Met Ile Glu Thr Tyr Asn Gln Pro Val Pro Arg Ser Ala Ala Thr Gly

1 5 10 15

Pro Pro Val Ser Met Lys Ile Phe Met Tyr Leu Leu Thr Val Phe Leu

20 25 30

Ile Thr Gln Met Ile Gly Ser Ala Leu Phe Ala Val Tyr Leu His Arg

35 40 45

Arg Leu Asp Lys Ile Glu Asp Glu Arg Asn Leu His Glu Asp Phe Val

50

55

60

Phe Met Lys Thr Ile Gln Arg Cys Asn Thr Gly Glu Arg Ser Leu Ser

65

70

75

80

Leu Leu Asn Cys Glu Glu Ile Lys Ser Gln Phe Glu Gly Phe Val Lys

85

90

95

Asp Ile Met Leu Asn Lys Glu Glu Lys Lys Lys Glu Asn Ser Phe Glu

100

105

110

Met Gln Lys Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser

115

120

125

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

130

135

140

Tyr Tyr Thr Met Ser Asn Asn Leu Val Thr Leu Glu Asn Gly Lys Gln

145

150

155

160

Leu Thr Val Lys Arg Gln Gly Leu Tyr Tyr Ile Tyr Ala Gln Val Thr

165

170

175

Phe Cys Ser Asn Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser
180 185 190

Leu Cys Leu Lys Pro Pro Asn Arg Phe Glu Arg Ile Leu Leu Arg Ala
195 200 205

Ala Asn Thr His Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His
210 215 220

Leu Gly Gly Ile Phe Glu Leu Gln Pro Gly Ala Ser Val Phe Val Asn
225 230 235 240

Val Thr Asp Pro Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe
245 250 255

Gly Leu Leu Lys Leu
260

<210> 3

<211> 261

<212> PRT

<213> *Macaca fascicularis*

<400> 3

Met Ile Glu Thr Tyr Asn Gln Pro Ser Pro Arg Ser Ala Ala Thr Gly
1 5 10 15

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

Ile Thr Gln Met Ile Gly Ser Ala Leu Phe Ala Val Tyr Leu His Arg
35 40 45

Arg Leu Asp Lys Ile Glu Asp Glu Arg Asn Leu His Glu Asp Phe Val
50 55 60

Phe Met Lys Thr Ile Gln Arg Cys Asn Thr Gly Glu Arg Ser Leu Ser
65 70 75 80

Leu Leu Asn Cys Glu Glu Ile Lys Ser Gln Phe Glu Gly Phe Val Lys
85 90 95

Asp Ile Met Leu Asn Lys Glu Glu Lys Lys Lys Glu Asn Ser Phe Glu
100 105 110

Met Gln Lys Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser
115 120 125

Glu Ala Ser Ser Lys Thr Thr Ser Val Leu Gln Trp Ala Glu Lys Gly
130 135 140

Tyr Tyr Thr Met Ser Asn Asn Leu Val Thr Leu Glu Asn Gly Lys Gln
145 150 155 160

Leu Thr Val Lys Arg Gln Gly Leu Tyr Tyr Ile Tyr Ala Gln Val Thr
165 170 175

Phe Cys Ser Asn Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser
180 185 190

Leu Cys Leu Lys Ser Pro Gly Arg Phe Glu Arg Ile Leu Leu Arg Ala
195 200 205

Ala Asn Thr His Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His
210 215 220

Leu Gly Gly Val Phe Glu Leu Gln Pro Gly Ala Ser Val Phe Val Asn
225 230 235 240

Val Thr Asp Pro Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe
245 250 255

Gly Leu Leu Lys Leu

260

<210> 4

<211> 149

<212> PRT

<213> Homo sapiens

<400> 4

Met Gln Lys Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser

1 5 10 15

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

20 25 30

Tyr Tyr Thr Met Ser Asn Asn Leu Val Thr Leu Glu Asn Gly Lys Gln

35 40 45

Leu Thr Val Lys Arg Gln Gly Leu Tyr Tyr Ile Tyr Ala Gln Val Thr

50 55 60

Phe Cys Ser Asn Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser

65 70 75 80

Leu Cys Leu Lys Ser Pro Gly Arg Phe Glu Arg Ile Leu Leu Arg Ala

85

90

95

Ala Asn Thr His Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His

100

105

110

Leu Gly Gly Val Phe Glu Leu Gln Pro Gly Ala Ser Val Phe Val Asn

115

120

125

Val Thr Asp Pro Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe

130

135

140

Gly Leu Leu Lys Leu

145

<210> 5

<211> 149

<212> PRT

<213> Callithrix jacchus

<400> 5

Met Gln Lys Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser

1

5

10

15

Glu Ala Ser Ser Lys Thr Thr Ser Val Leu Gln Trp Ala Glu Lys Gly
20 25 30

Tyr Tyr Thr Met Ser Asn Asn Leu Val Thr Leu Glu Asn Gly Lys Gln
35 40 45

Leu Thr Val Lys Arg Gln Gly Leu Tyr Tyr Ile Tyr Ala Gln Val Thr
50 55 60

Phe Cys Ser Asn Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser
65 70 75 80

Leu Cys Leu Lys Pro Pro Asn Arg Phe Glu Arg Ile Leu Leu Arg Ala
85 90 95

Ala Asn Thr His Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His
100 105 110

Leu Gly Gly Ile Phe Glu Leu Gln Pro Gly Ala Ser Val Phe Val Asn
115 120 125

Val Thr Asp Pro Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe

130

135

140

Gly Leu Leu Lys Leu

145

<210> 6

<211> 149

<212> PRT

<213> *Macaca fascicularis*

<400> 6

Met Gln Lys Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser

1

5

10

15

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

20

25

30

Tyr Tyr Thr Met Ser Asn Asn Leu Val Thr Leu Glu Asn Gly Lys Gln

35

40

45

Leu Thr Val Lys Arg Gln Gly Leu Tyr Tyr Ile Tyr Ala Gln Val Thr

50

55

60

Phe Cys Ser Asn Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser

65	70	75	80
Leu Cys Leu Lys Ser Pro Gly Arg Phe Glu Arg Ile Leu Leu Arg Ala			
	85	90	95
Ala Asn Thr His Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His			
	100	105	110
Leu Gly Gly Val Phe Glu Leu Gln Pro Gly Ala Ser Val Phe Val Asn			
	115	120	125
Val Thr Asp Pro Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe			
	130	135	140
Gly Leu Leu Lys Leu			
145			
<210> 7			
<211> 161			
<212> PRT			
<213> Secuencia artificial			
<220>			
<223> Proteína de fusión smCD154-histag			

<400> 7

Gly Ser His His His His His His Gly Gly Gly Ser Met Gln Lys Gly
1 5 10 15

Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser Glu Ala Ser Ser
20 25 30

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

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

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

Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser Leu Cys Leu Lys
85 90 95

Ser Pro Gly Arg Phe Glu Arg Ile Leu Leu Arg Ala Ala Asn Thr His
100 105 110

Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His Leu Gly Gly Val

115	120	125
Phe Glu Leu Gln Pro Gly Ala Ser Val Phe Val Asn Val Thr Asp Pro		
130	135	140

Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe Gly Leu Leu Lys
145 150 155 160

Leu

<210> 8

<211> 161

<212> PRT

<213> Secuencia artificial

<220>

<223> Proteína de fusión smCD154-histag

<400> 8

Gly Ser His His His His His His Gly Gly Gly Ser Met Gln Lys Gly
1 5 10 15

Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser Glu Ala Ser Ser
20 25 30

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

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

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

Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser Leu Cys Leu Lys
85 90 95

Pro Pro Asn Arg Phe Glu Arg Ile Leu Leu Arg Ala Ala Asn Thr His
100 105 110

Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His Leu Gly Gly Ile
115 120 125

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

Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe Gly Leu Leu Lys

145 150 155 160

Leu

<210> 9

<211> 161

<212> PRT

<213> Secuencia artificial

<220>

<223> Proteína de fusión scCD154-histag

<400> 9

Gly Ser His His His His His His Gly Gly Gly Ser Met Gln Lys Gly

1 5 10 15

Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser Glu Ala Ser Ser

20 25 30

Lys Thr Thr Ser Val Leu Gln Trp Ala Glu Lys Gly Tyr Tyr Thr Met

35 40 45

Ser Asn Asn Leu Val Thr Leu Glu Asn Gly Lys Gln Leu Thr Val Lys

50 55 60

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

Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser Leu Cys Leu Lys
85 90 95

Ser Pro Gly Arg Phe Glu Arg Ile Leu Leu Arg Ala Ala Asn Thr His
100 105 110

Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His Leu Gly Gly Val
115 120 125

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

Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe Gly Leu Leu Lys
145 150 155 160

Leu

<210> 10

<211> 6
<212> PRT
<213> Secuencia artificial

<220>
<223> Etiqueta de His6

<400> 10

His His His His His His

1 5

<210> 11
<211> 33
<212> PRT
<213> Secuencia artificial

<220>
<223> Etiqueta de ILZ

<400> 11

Arg Met Lys Gln Ile Glu Asp Lys Ile Glu Glu Ile Leu Ser Lys Ile

1 5 10 15

Tyr His Ile Glu Asn Glu Ile Ala Arg Ile Lys Lys Leu Ile Gly Glu

20 25 30

Arg

<210> 12

<211> 198

<212> PRT

<213> Secuencia artificial

<220>

<223> Proteína de fusión shCD154-ILZ

<400> 12

Gly Ser His His His His His His Gly Gly Gly Ser Arg Met Lys Gln

1 5 10 15

Ile Glu Asp Lys Ile Glu Glu Ile Leu Ser Lys Ile Tyr His Ile Glu

20 25 30

Asn Glu Ile Ala Arg Ile Lys Lys Leu Ile Gly Glu Arg Gly Gly Gly

35 40 45

Ser Met Gln Lys Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile

50 55 60

Ser Glu Ala Ser Ser Lys Thr Thr Ser Val Leu Gln Trp Ala Glu Lys

65		70		75		80									
Gly	Tyr	Tyr	Thr	Met	Ser	Asn	Asn	Leu	Val	Thr	Leu	Glu	Asn	Gly	Lys
				85				90					95		
Gln	Leu	Thr	Val	Lys	Arg	Gln	Gly	Leu	Tyr	Tyr	Ile	Tyr	Ala	Gln	Val
			100					105					110		
Thr	Phe	Cys	Ser	Asn	Arg	Glu	Ala	Ser	Ser	Gln	Ala	Pro	Phe	Ile	Ala
		115					120					125			
Ser	Leu	Cys	Leu	Lys	Ser	Pro	Gly	Arg	Phe	Glu	Arg	Ile	Leu	Leu	Arg
	130					135				140					
Ala	Ala	Asn	Thr	His	Ser	Ser	Ala	Lys	Pro	Cys	Gly	Gln	Gln	Ser	Ile
145					150					155				160	
His	Leu	Gly	Gly	Val	Phe	Glu	Leu	Gln	Pro	Gly	Ala	Ser	Val	Phe	Val
			165					170					175		
Asn	Val	Thr	Asp	Pro	Ser	Gln	Val	Ser	His	Gly	Thr	Gly	Phe	Thr	Ser
		180						185					190		

Phe Gly Leu Leu Lys Leu

195

<210> 13

<211> 198

<212> PRT

<213> Secuencia artificial

<220>

<223> Proteína de fusión smCD154-ILZ

<400> 13

Gly Ser His His His His His His Gly Gly Gly Ser Arg Met Lys Gln

1 5 10 15

Ile Glu Asp Lys Ile Glu Glu Ile Leu Ser Lys Ile Tyr His Ile Glu

20 25 30

Asn Glu Ile Ala Arg Ile Lys Lys Leu Ile Gly Glu Arg Gly Gly Gly

35 40 45

Ser Met Gln Lys Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile

50 55 60

Ser Glu Ala Ser Ser Lys Thr Thr Ser Val Leu Gln Trp Ala Glu Lys

65		70		75		80									
Gly	Tyr	Tyr	Thr	Met	Ser	Asn	Asn	Leu	Val	Thr	Leu	Glu	Asn	Gly	Lys
				85				90					95		
Gln	Leu	Thr	Val	Lys	Arg	Gln	Gly	Leu	Tyr	Tyr	Ile	Tyr	Ala	Gln	Val
			100					105					110		
Thr	Phe	Cys	Ser	Asn	Arg	Glu	Ala	Ser	Ser	Gln	Ala	Pro	Phe	Ile	Ala
		115					120					125			
Ser	Leu	Cys	Leu	Lys	Pro	Pro	Asn	Arg	Phe	Glu	Arg	Ile	Leu	Leu	Arg
	130					135				140					
Ala	Ala	Asn	Thr	His	Ser	Ser	Ala	Lys	Pro	Cys	Gly	Gln	Gln	Ser	Ile
145					150					155				160	
His	Leu	Gly	Gly	Ile	Phe	Glu	Leu	Gln	Pro	Gly	Ala	Ser	Val	Phe	Val
			165					170					175		
Asn	Val	Thr	Asp	Pro	Ser	Gln	Val	Ser	His	Gly	Thr	Gly	Phe	Thr	Ser
		180						185					190		

Phe Gly Leu Leu Lys Leu

195

<210> 14

<211> 198

<212> PRT

<213> Secuencia artificial

<220>

<223> Proteína de fusión scCD154-ILZ

<400> 14

Gly Ser His His His His His His Gly Gly Gly Ser Arg Met Lys Gln

1 5 10 15

Ile Glu Asp Lys Ile Glu Glu Ile Leu Ser Lys Ile Tyr His Ile Glu

20 25 30

Asn Glu Ile Ala Arg Ile Lys Lys Leu Ile Gly Glu Arg Gly Gly Gly

35 40 45

Ser Met Gln Lys Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile

50 55 60

Ser Glu Ala Ser Ser Lys Thr Thr Ser Val Leu Gln Trp Ala Glu Lys

65		70		75		80									
Gly	Tyr	Tyr	Thr	Met	Ser	Asn	Asn	Leu	Val	Thr	Leu	Glu	Asn	Gly	Lys
				85				90					95		
Gln	Leu	Thr	Val	Lys	Arg	Gln	Gly	Leu	Tyr	Tyr	Ile	Tyr	Ala	Gln	Val
			100					105					110		
Thr	Phe	Cys	Ser	Asn	Arg	Glu	Ala	Ser	Ser	Gln	Ala	Pro	Phe	Ile	Ala
		115					120					125			
Ser	Leu	Cys	Leu	Lys	Ser	Pro	Gly	Arg	Phe	Glu	Arg	Ile	Leu	Leu	Arg
	130					135				140					
Ala	Ala	Asn	Thr	His	Ser	Ser	Ala	Lys	Pro	Cys	Gly	Gln	Gln	Ser	Ile
145					150					155				160	
His	Leu	Gly	Gly	Val	Phe	Glu	Leu	Gln	Pro	Gly	Ala	Ser	Val	Phe	Val
			165					170					175		
Asn	Val	Thr	Asp	Pro	Ser	Gln	Val	Ser	His	Gly	Thr	Gly	Phe	Thr	Ser
		180						185					190		

Phe Gly Leu Leu Lys Leu

195

<210> 15

<211> 277

<212> PRT

<213> Homo sapiens

<400> 15

Met Val Arg Leu Pro Leu Gln Cys Val Leu Trp Gly Cys Leu Leu Thr

1 5 10 15

Ala Val His Pro Glu Pro Pro Thr Ala Cys Arg Glu Lys Gln Tyr Leu

20 25 30

Ile Asn Ser Gln Cys Cys Ser Leu Cys Gln Pro Gly Gln Lys Leu Val

35 40 45

Ser Asp Cys Thr Glu Phe Thr Glu Thr Glu Cys Leu Pro Cys Gly Glu

50 55 60

Ser Glu Phe Leu Asp Thr Trp Asn Arg Glu Thr His Cys His Gln His

65 70 75 80

Lys Tyr Cys Asp Pro Asn Leu Gly Leu Arg Val Gln Gln Lys Gly Thr
85 90 95

Ser Glu Thr Asp Thr Ile Cys Thr Cys Glu Glu Gly Trp His Cys Thr
100 105 110

Ser Glu Ala Cys Glu Ser Cys Val Leu His Arg Ser Cys Ser Pro Gly
115 120 125

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

Pro Cys Pro Val Gly Phe Phe Ser Asn Val Ser Ser Ala Phe Glu Lys
145 150 155 160

Cys His Pro Trp Thr Ser Cys Glu Thr Lys Asp Leu Val Val Gln Gln
165 170 175

Ala Gly Thr Asn Lys Thr Asp Val Val Cys Gly Pro Gln Asp Arg Leu
180 185 190

Arg Ala Leu Val Val Ile Pro Ile Ile Phe Gly Ile Leu Phe Ala Ile
195 200 205

Leu Leu Val Leu Val Phe Ile Lys Lys Val Ala Lys Lys Pro Thr Asn
210 215 220

Lys Ala Pro His Pro Lys Gln Glu Pro Gln Glu Ile Asn Phe Pro Asp
225 230 235 240

Asp Leu Pro Gly Ser Asn Thr Ala Ala Pro Val Gln Glu Thr Leu His
245 250 255

Gly Cys Gln Pro Val Thr Gln Glu Asp Gly Lys Glu Ser Arg Ile Ser
260 265 270

Val Gln Glu Arg Gln
275

<210> 16

<211> 5

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR1

<400> 16

Ser Tyr Ala Ile Ser

1 5

<210> 17

<211> 5

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR1

<400> 17

Ser Tyr Gly Ile Ser

1 5

<210> 18

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR1

<400> 18

Ser Tyr Ser Phe Tyr Trp Gly

1 5

<210> 19

<211> 5

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR1

<400> 19

Ala Tyr Tyr Ile His

1 5

<210> 20

<211> 5

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR1

<400> 20

Asp Tyr Tyr Ile His

1 5

<210> 21

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR1

<400> 21

Ser Phe Ile Tyr Tyr Trp Gly

1 5

<210> 22

<211> 17

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR2

<400> 22

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

1 5 10 15

Gly

<210> 23

<211> 17

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR2

<400> 23

Trp Ile Ser Pro Ile Phe Gly Asn Thr Asn Tyr Ala Gln Lys Phe Gln

1 5 10 15

Gly

<210> 24

<211> 17

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR2

<400> 24

Gly Ile Ser Pro Tyr Phe Gly Asn Thr Asn Tyr Ala Gln Lys Phe Gln

1 5 10 15

Gly

<210> 25

<211> 16

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR2

<400> 25

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

1 5 10 15

<210> 26

<211> 17

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR2

<400> 26

Arg Ile Asn Pro Asp Ser Gly Gly Thr Asp Tyr Ala Gln Arg Phe Gln

1 5 10 15

Gly

<210> 27

<211> 17

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR2

<400> 27

Arg Phe Asn Pro Asn Ser Gly Asp Thr Asn Gly Ala Gln Lys Phe Gln

1 5 10 15

Gly

<210> 28

<211> 16

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR2

<400> 28

Cys Ile Tyr Ser Ser Gly Gly Thr Tyr Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 29

<211> 14

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR3

<400> 29

Gly Ala Ser Val Trp Asp Gly Pro Ala Glu Val Phe Asp Tyr
1 5 10

<210> 30

<211> 9

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR3

<400> 30

Ser Arg Tyr Tyr Gly Asp Leu Asp Tyr

1 5

<210> 31

<211> 12

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR3

<400> 31

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

1 5 10

<210> 32

<211> 12

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR3

<400> 32

Leu Gln Leu Gly Thr Thr Thr Asp Tyr Phe Asp His

1 5 10

<210> 33

<211> 20

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR3

<400> 33

Asp Trp Asn Tyr Tyr Asp Gly Ser Gly Tyr Phe Gly Pro Gly Tyr Tyr

1

5

10

15

Gly Leu Asp Val

20

<210> 34

<211> 11

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR3

<400> 34

Glu Gly Glu Leu Ala Gly Ile Phe Phe Asp Tyr

1

5

10

<210> 35

<211> 12

<212> PRT

<213> Secuencia artificial

<220>

<223> HCDR3

<400> 35

Leu Trp Leu Gly Thr Thr Thr Asp Tyr Phe Asp Tyr

1 5 10

<210> 36

<211> 17

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR1

<400> 36

Lys Ser Ser Gln Ser Val Leu Ala Ser Ser Asn Asn Glu Asn Phe Leu

1 5 10 15

Ala

<210> 37

<211> 11

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR1

<400> 37

Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn

1 5 10

<210> 38

<211> 17

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR1

<400> 38

Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser Asn Asn Lys Asn Tyr Leu

1 5 10 15

Ala

<210> 39

<211> 11

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR1

<400> 39

Ser Gly Asp Glu Leu Gly Asp Lys Phe Ala Cys

1 5 10

<210> 40

<211> 11

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR1

<400> 40

Ser Gly Asp Lys Leu Gly Asp Lys Tyr Val Cys

1 5 10

<210> 41

<211> 11

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR1

<400> 41

Ser Gly Asp Lys Leu Gly Asp Lys Tyr Val Ser

1 5 10

<210> 42

<211> 11

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR1

<400> 42

Ser Gly Asp Lys Leu Gly Asp Lys Phe Ala Cys

1 5 10

<210> 43

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR2

<400> 43

Ser Ala Ser Thr Arg Glu Ser

1 5

<210> 44

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR2

<400> 44

Tyr Ala Asn Ser Leu Gln Ser

1 5

<210> 45

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR2

<400> 45

Trp Ala Ser Thr Arg Glu Ser

1 5

<210> 46

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR2

<400> 46

Gln Glu Asn Lys Arg Pro Ser

1 5

<210> 47

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR2

<400> 47

Gln Asp Arg Lys Arg Pro Ser

1 5

<210> 48

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR2

<400> 48

Gln Asp Asp Lys Arg Pro Ser

1 5

<210> 49

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR2

<400> 49

Tyr Ala Ser Ser Leu Gln Ser

1 5

<210> 50

<211> 7

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR2

<400> 50

Tyr Ala Asn Thr Leu Gln Ser

1 5

<210> 51

<211> 9

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR3

<400> 51

Gln Gln Ala Tyr Thr Thr Pro Phe Thr

1 5

<210> 52

<211> 9

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR3

<400> 52

Gln Gln Ser Asp Ser Ile Pro Trp Thr

1 5

<210> 53

<211> 9

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR3

<400> 53

Gln Gln Tyr Tyr Ser Thr Pro Leu Thr

1 5

<210> 54

<211> 9

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR3

<400> 54

Gln Ala Trp Asp Ser Asp Thr Ala Val

1 5

<210> 55

<211> 9

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR3

<400> 55

Gln Ala Trp Asp Ser Gly Thr Val Val

1 5

<210> 56

<211> 9

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR3

<400> 56

Gln Ala Trp Asp Ser Ser Thr Val Val

1 5

<210> 57

<211> 9

<212> PRT

<213> Secuencia artificial

<220>

<223> LCDR3

<400> 57

Gln Ala Trp Asp Ser Asn Thr Val Val

1 5

<210> 58

<211> 123

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de C4LB5

<400> 58

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

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

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

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

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

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

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

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

<210> 59

<211> 118

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de C4LB89

<400> 59

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr

20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

35 40 45

Gly Trp Ile Ser Pro Ile Phe Gly Asn Thr Asn Tyr Ala Gln Lys Phe

50 55 60

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

65 70 75 80

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

85

90

95

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

100

105

110

Leu Val Thr Val Ser Ser

115

<210> 60

<211> 121

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de C4LB94

<400> 60

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser

1

5

10

15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr

20

25

30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

35

40

45

Gly Gly Ile Ser Pro Tyr Phe Gly Asn Thr Asn Tyr Ala Gln Lys Phe

50

55

60

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

65

70

75

80

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

85

90

95

Ala Arg Asp Thr Gly Trp Val Gly Ala Phe Tyr Leu Asp Tyr Trp Gly

100

105

110

Gln Gly Thr Leu Val Thr Val Ser Ser

115

120

<210> 61

<211> 122

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de C4LB150

<400> 61

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

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

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

Trp Ile Gly Ser Leu Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

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

Ser Leu Asn Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

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

Gly Gln Gly Thr Leu Val Thr Val Ser Ser

115

120

<210> 62

<211> 129

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de C4LB189

<400> 62

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

1

5

10

15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ala Ala Tyr

20

25

30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

35

40

45

Gly Arg Ile Asn Pro Asp Ser Gly Gly Thr Asp Tyr Ala Gln Arg Phe

50

55

60

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

65

70

75

80

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

85

90

95

Ala Arg Asp Trp Asn Tyr Tyr Asp Gly Ser Gly Tyr Phe Gly Pro Gly

100

105

110

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

115

120

125

Ser

<210> 63

<211> 120

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de C4LB191

<400> 63

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

1

5

10

15

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

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

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

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

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

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 64

<211> 122

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de C4LB199

<400> 64

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Asp Ser Ile Ser Ser Phe
20 25 30

Ile Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Asp
35 40 45

Trp Val Gly Cys Ile Tyr Ser Ser Gly Gly Thr Tyr Tyr Asn Pro Ser
50 55 60

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

Ser Leu Lys Leu Pro Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Leu Trp Leu Gly Thr Thr Thr Asp Tyr Phe Asp Tyr Trp
100 105 110

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

<210> 65

<211> 113

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de C4LB5

<400> 65

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

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

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

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

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

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

Ala Tyr Thr Thr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
100 105 110

Lys

<210> 66

<211> 107

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de C4LB89

<400> 66

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser 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 Tyr			
20	25	30	
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile			
35	40	45	
Tyr Tyr Ala Asn Ser 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 Ser Leu Gln Pro			
65	70	75	80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asp Ser Ile Pro Trp			
85	90	95	
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys			
100	105		

<210> 67

<211> 113

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de C4LB94

<400> 67

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly

1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser

20 25 30

Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln

35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val

50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr

65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln

85 90 95

Tyr Tyr Ser Thr Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile

100

105

110

Lys

<210> 68

<211> 106

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de C4LB150

<400> 68

Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln

1

5

10

15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Glu Leu Gly Asp Lys Phe Ala

20

25

30

Cys Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Ile Trp

35

40

45

Gln Glu Asn Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser

50

55

60

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

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

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

<210> 69

<211> 106

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de C4LB189

<400> 69

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

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

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

Gln Asp Arg Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Ile
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Gly Thr Val Val
85 90 95

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

<210> 70

<211> 106

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de C4LB191

<400> 70

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

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

Ser Trp Asn His Gln Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr
35 40 45

Gln Asp Arg Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

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

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

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

<210> 71

<211> 106

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de C4LB199

<400> 71

Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln

1 5 10 15

Thr Val Ser Ile Thr Cys Ser Gly Asp Lys Leu Gly Asp Lys Phe Ala

20 25 30

Cys Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Val Val Ile Tyr

35 40 45

Gln Asp Asp Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser

50 55 60

Thr Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met

65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Asn Thr Val Val

85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu

100

105

<210> 72

<211> 107

<212> PRT

<213> Secuencia artificial

<220>

<223> VL o C4LB235

<400> 72

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser 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 Tyr

20

25

30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile

35

40

45

Tyr Tyr Ala Ser Ser 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 Ser Leu Gln Pro

65	70	75	80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asp Ser Ile Pro Trp			
	85	90	95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys			
	100	105	
<210> 73			
<211> 107			
<212> PRT			
<213> Secuencia artificial			
<220>			
<223> VL de C4LB236			
<400> 73			
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser 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 Tyr			
	20	25	30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile			
	35	40	45

Tyr Tyr Ala Asn 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 Ser Leu Gln Pro
65 70 75 80

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

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

<210> 74

<211> 118

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de 5c8

<400> 74

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

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

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

Gly Glu Ile Asn Pro Ser Asn Gly Asp Thr Asn Phe Asn Glu Lys Phe
50 55 60

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

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

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

Leu Val Thr Val Ser Ser
115

<210> 75

<211> 111

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de 5c8

<400> 75

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

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

Thr Tyr Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

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

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

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

Glu Ile Pro Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 76

<211> 321

<212> ADN

<213> Secuencia artificial

<220>

<223> ADNc de VH de C4LB231

<400> 76

gacatccaga tgacccagag ccccagcagc ctgagcgcca gcgtgggcga cagagtgacc 60

atcacctgtc gggccagcca gagcatcagc agctacctga actggatatca gcagaagccc 120

ggcaaggccc ccaagctgct gatctactac gccaacagcc tgcagagcgg cgtgcccagc 180

agattcagcg gcagcggctc cggcaccgac ttcaccctga ccatcagcag cctgcagccc 240

gaggacttcg ccacctacta ctgccagcag agcgacagca tcccctggac cttcggccag 300

ggcaccaagg tggaaatcaa g 321

<210> 77

<211> 354

<212> ADN

<213> Secuencia artificial

<220>

<223> ADNc de VL de C4LB231

<400> 77

cagggtccagc tgggtgcagtc tggcgccgaa gtgaagaaac ccggcagcag cgtgaaggtg 60

tcctgcaagg ccagcggcgg caccttcagc agctacggca tcagctgggt ccgacaggcc 120

ccaggacagg gcctggaatg gatgggctgg atcagcccca tcttcggcaa caccaactac 180

gccagaaat tccagggcag agtgaccatc accgcgcagc agagcaccag caccgcctac 240

atggaactga gcagcctgcg gagcgaggac accgccgtgt actactgcgc cagaagccgg 300

tactacggcg acctggacta ctggggccag ggcaccctgg tcaccgtgtc ctct 354

<210> 78

<211> 387

<212> ADN

<213> Secuencia artificial

<220>

<223> ADNc de VH de C4LB191

<400> 78

cagggtgcagc tgggtgcagag cggcgctcag gtgcagctgg tgcagtctgg cgccgaagtg 60

aagaaacctg gcgccagcat gaaggtgtcc tgcaaggcca gcggctacac cttcaccgac 120

tactacatcc actgggtgcg ccaggcccca ggccaggac tggaatgggt gggacggttc	180
aacccaaca gcggcgacac caacggcgcc cagaaattcc agggcagagt gaccatgacc	240
cgggacacca gcatcagcac cgcctacatg gaactgaccc ggctgcggag cgacgacacc	300
gccgtgtacc actgtgccag agagggcgag ctggccggca tcttcttcga ctactggggc	360
cagggcacc tggtgacagt gtccagc	387

<210> 79

<211> 318

<212> ADN

<213> Secuencia artificial

<220>

<223> ADNc de VL de C4LB191

<400> 79

agctacgagc tgaccagcc cccagcgtg tccgtgtctc ctggccagac cgccagcatc	60
acctgtagcg gcgacaagct gggcgacaaa tacgtgtcct ggaaccacca gaagcccggc	120
cagagccccg tgctggtgat ctaccaggac cggaagaggc ccagcggcat ccccgagaga	180
ttcagcggca gcaacagcgg caacaccgcc accctgacca tcagcggcac ccaggccatg	240
gacgaggccg actactactg ccaggcctgg gacagcagca ccgtggtgtt cggcggaggc	300
accaagctga ccgtgctg	318

<210> 80

<211> 448

<212> PRT

<213> Secuencia artificial

<220>

<223> FL mAb C4LB89 VH en IgG1sigma

<400> 80

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

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

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

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

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

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

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

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

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

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
180 185 190

Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
195 200 205

Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr
210 215 220

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Ala Ser Ser
225 230 235 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
245 250 255

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Ala Glu Asp Pro
260 265 270

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
275 280 285

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
290 295 300

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
305 310 315 320

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

	325		330		335
Ile	Ser	Lys	Ala	Lys	Gly
				Gln	Pro
				Arg	Glu
				Pro	Gln
				Val	Tyr
				Thr	Leu
	340		345		350
Pro	Pro	Ser	Arg	Glu	Glu
				Met	Thr
				Lys	Asn
				Gln	Val
				Ser	Leu
				Thr	Cys
	355		360		365
Leu	Val	Lys	Gly	Phe	Tyr
				Pro	Ser
				Asp	Ile
				Ala	Val
				Glu	Trp
				Glu	Ser
	370		375		380
Asn	Gly	Gln	Pro	Glu	Asn
				Asn	Tyr
				Lys	Thr
				Thr	Pro
				Pro	Val
				Leu	Asp
	385		390		395
					400
Ser	Asp	Gly	Ser	Phe	Phe
				Leu	Tyr
				Ser	Lys
				Leu	Thr
				Val	Asp
				Lys	Ser
	405		410		415
Arg	Trp	Gln	Gln	Gly	Asn
				Val	Phe
				Ser	Cys
				Ser	Val
				Met	His
				Glu	Ala
	420		425		430
Leu	His	Asn	His	Tyr	Thr
				Gln	Lys
				Ser	Leu
				Ser	Leu
				Ser	Pro
				Gly	Lys
	435		440		445

<210> 81

<211> 214

<212> PRT

<213> Secuencia artificial

<220>

<223> Cadena ligera de C4LB89

<400> 81

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser 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 Tyr

20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile

35 40 45

Tyr Tyr Ala Asn Ser 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 Ser Leu Gln Pro

65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asp Ser Ile Pro Trp

85

90

95

Thr Phe Gly Gln Gly Thr Lys Val 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> 82

<211> 448

<212> PRT

<213> Secuencia artificial

<220>

<223> FL mAb C4LB89 VH en IgG1sigmaYTE

<400> 82

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr

20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

35 40 45

Gly Trp Ile Ser Pro Ile Phe Gly Asn Thr Asn Tyr Ala Gln Lys Phe

50 55 60

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

65		70		75		80									
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Arg	Ser	Arg	Tyr	Tyr	Gly	Asp	Leu	Asp	Tyr	Trp	Gly	Gln	Gly	Thr
			100					105					110		
Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro
		115						120					125		
Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly
		130						135					140		
Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn
145					150					155				160	
Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln
			165						170					175	
Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser
			180						185					190	

Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
195 200 205

Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr
210 215 220

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Ala Ser Ser
225 230 235 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Tyr Ile Thr Arg
245 250 255

Glu Pro Glu Val Thr Cys Val Val Val Asp Val Ser Ala Glu Asp Pro
260 265 270

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
275 280 285

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
290 295 300

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
305 310 315 320

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser Ile Glu Lys Thr
325 330 335

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
340 345 350

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
355 360 365

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
370 375 380

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
385 390 395 400

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
405 410 415

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
420 425 430

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 83

<211> 444

<212> PRT

<213> Secuencia artificial

<220>

<223> FL mAb C4LB89 VH en IgG2sigma

<400> 83

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

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

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

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

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

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

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

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

Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly
130 135 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
180 185 190

Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser
195 200 205

Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val Glu Cys
210 215 220

Pro Pro Cys Pro Ala Pro Pro Ala Ala Ala Ser Ser Val Phe Leu Phe
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
245 250 255

Thr Cys Val Val Val Asp Val Ser Ala Glu Asp Pro Glu Val Gln Phe
260 265 270

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

Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr
290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
305 310 315 320

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

	325		330		335
Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg					
	340		345		350
Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly					
	355		360		365
Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro					
	370		375		380
Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser					
	385		390		395
					400
Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln					
	405		410		415
Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His					
	420		425		430
Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys					
	435		440		

<210> 84

<211> 119

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de C4LB119

<400> 84

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

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

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

Gly Ala Ile Asp Pro Tyr Phe Gly Tyr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

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

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

85

90

95

Ala Arg Thr Gly Leu Asn Tyr Gly Gly Phe Asp Tyr Trp Gly Gln Gly

100

105

110

Thr Leu Val Thr Val Ser Ser

115

<210> 85

<211> 107

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de C4LB119

<400> 85

Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly

1

5

10

15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr

20

25

30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile

35

40

45

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

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

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

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

<210> 86

<211> 121

<212> PRT

<213> Secuencia artificial

<220>

<223> VH de C4LB83

<400> 86

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

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

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

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

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 87

<211> 107

<212> PRT

<213> Secuencia artificial

<220>

<223> VL de C4LB83

<400> 87

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

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

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

Tyr Ala Ala Ser Ser 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 Ser Leu Gln Pro
65 70 75 80

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

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys

100

105