

LISTADO DE SECUENCIAS

<110> UCB Biopharma SPRL

<120> ANTICUERPOS QUE COMPRENDEN UN POLIPÉPTIDO INSERTADO EN LA REGIÓN 3 DEL MARCO

<130> PF0155-WO

<150> GB1811368.8

<151> 2018-07-11

<160> 144

<170> PatentIn version 3.5

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<211> 217

<212> PRT

<213> Secuencia Artificial

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<223> CA645 Cadena Ligera gL5

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

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

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

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

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

Ser	Asp	Thr	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg	Thr
			100					105					110		

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

Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro
130 135 140

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

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

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

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

Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

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

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

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

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

Ser Asp Thr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

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Gln Ser Ser Pro Ser Val Trp Ser Asn Phe Leu Ser
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Glu Ala Ser Lys Leu Thr Ser
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Gly Gly Gly Tyr Ser Ser Ile Ser Asp Thr Thr
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Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
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Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Ile Asp Leu Ser Asn Tyr
20 25 30

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

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

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

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

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

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

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

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

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

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

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
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Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
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20 25 30

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

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

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

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

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Gln Gly Thr Leu Val Thr Val Ser Ser
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Ile Ile Trp Ala Ser Gly Thr Thr Phe Tyr Ala Thr Trp Ala Lys Gly
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Thr Val Pro Gly Tyr Ser Thr Ala Pro Tyr Phe Asp Leu
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Ser Gly Gly Gly Gly Ser Glu
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Asp Lys Thr His Thr Ser
1 5

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Ser Gly Gly Gly Gly Ser
1 5

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

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
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Ala Ala Ala Gly Ser Gly Gly Ala Ser Ala Ser
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Gly Ala Ser Ala Ser
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Ala Ala Ala Gly Ser Gly Xaa Gly Gly Gly Ser Xaa Gly Gly Gly Ser
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Xaa Gly Gly Gly Ser Gly Ala Ser Ala Ser
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Xaa Gly Gly Gly Ser Xaa Gly Gly Gly Ser Gly Ala Ser Ala Ser
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Pro Gly Gly Asn Arg Gly Thr Thr Thr Thr Arg Arg Pro Ala Thr Thr
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Thr Gly Ser Ser Pro Gly Pro Thr Gln Ser His Tyr
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<400> 25

Ala Thr Thr Thr Gly Ser Ser Pro Gly Pro Thr
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Ala Thr Thr Thr Gly Ser
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<400> 27

Glu Pro Ser Gly Pro Ile Ser Thr Ile Asn Ser Pro Pro Ser Lys Glu
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Ser His Lys Ser Pro
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Gly Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp
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Gly Gly Gly Gly Ile Ala Pro Ser Met Val Gly Gly Gly Gly Ser
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Gly Gly Gly Gly Lys Val Glu Gly Ala Gly Gly Gly Gly Ser
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Gly Gly Gly Gly Ser Met Lys Ser His Asp Gly Gly Gly Gly Ser
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Gly Gly Gly Gly Asn Leu Ile Thr Ile Val Gly Gly Gly Gly Ser
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Gly Gly Gly Gly Val Val Pro Ser Leu Pro Gly Gly Gly Gly Ser
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Gly Gly Glu Lys Ser Ile Pro Gly Gly Gly Gly Ser
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<400> 35

Arg Pro Leu Ser Tyr Arg Pro Pro Phe Pro Phe Gly Phe Pro Ser Val
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Arg Pro

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Tyr	Pro	Arg	Ser	Ile	Tyr	Ile	Arg	Arg	Arg	His	Pro	Ser	Pro	Ser	Leu
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Thr Thr

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<400> 37

Thr	Pro	Ser	His	Leu	Ser	His	Ile	Leu	Pro	Ser	Phe	Gly	Leu	Pro	Thr
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Glu Asn

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<400> 38

Arg	Pro	Val	Ser	Pro	Phe	Thr	Phe	Pro	Arg	Leu	Ser	Asn	Ser	Trp	Leu
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Pro Ala

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<400> 39

Ser	Pro	Ala	Ala	His	Phe	Pro	Arg	Ser	Ile	Pro	Arg	Pro	Gly	Pro	Ile
1				5					10					15	

Arg Thr

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Ala	Pro	Gly	Pro	Ser	Ala	Pro	Ser	His	Arg	Ser	Leu	Pro	Ser	Arg	Ala
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Phe Gly

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Pro	Arg	Asn	Ser	Ile	His	Phe	Leu	His	Pro	Leu	Leu	Val	Ala	Pro	Leu
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Gly Ala

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Met	Pro	Ser	Leu	Ser	Gly	Val	Leu	Gln	Val	Arg	Tyr	Leu	Ser	Pro	Pro
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Asp Leu

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Ser	Pro	Gln	Tyr	Pro	Ser	Pro	Leu	Thr	Leu	Thr	Leu	Pro	Pro	His	Pro
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Ser Leu

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Asn	Pro	Ser	Leu	Asn	Pro	Pro	Ser	Tyr	Leu	His	Arg	Ala	Pro	Ser	Arg
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Ile Ser

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Leu	Pro	Trp	Arg	Thr	Ser	Leu	Leu	Pro	Ser	Leu	Pro	Leu	Arg	Arg	Arg
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Pro

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<400> 46

Pro	Pro	Leu	Phe	Ala	Lys	Gly	Pro	Val	Gly	Leu	Leu	Ser	Arg	Ser	Phe
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Pro Pro

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Val	Pro	Pro	Ala	Pro	Val	Val	Ser	Leu	Arg	Ser	Ala	His	Ala	Arg	Pro
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Pro Tyr

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Leu Arg Pro Thr Pro Pro Arg Val Arg Ser Tyr Thr Cys Cys Pro Thr
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Pro

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Pro Asn Val Ala His Val Leu Pro Leu Leu Thr Val Pro Trp Asp Asn
1 5 10 15

Leu Arg

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<400> 50

Cys Asn Pro Leu Leu Pro Leu Cys Ala Arg Ser Pro Ala Val Arg Thr
1 5 10 15

Phe Pro

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Gly Ala Pro Ala Pro Ala Ala Pro Ala Pro Ala
1 5 10

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<400> 52

Pro Pro Pro Pro
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<210> 53
<211> 112
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<213> Homo sapiens

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Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile Glu Asp Leu Ile
1 5 10 15

Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu Ser Asp Val His
20 25 30

Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe Leu Leu Glu Leu Gln
35 40 45

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

Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser Asn Gly Asn Val
65 70 75 80

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

85

90

95

Lys Glu Phe Leu Gln Ser Phe Val His Ile Val Gln Met Phe Ile Asn
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Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15

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

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

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

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

Gly Met Gly Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile Glu
 85 90 95

Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu Ser
 100 105 110

Asp Val His Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe Leu Leu
 115 120 125

Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile His Asp
 130 135 140

Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser Asn

145		150		155		160									
Gly	Asn	Val	Thr	Glu	Ser	Gly	Cys	Lys	Glu	Cys	Glu	Glu	Leu	Glu	Glu
				165					170					175	
Lys	Asn	Ile	Lys	Glu	Phe	Leu	Gln	Ser	Phe	Val	His	Ile	Val	Gln	Met
			180					185					190		
Phe	Ile	Asn	Ser	Gly	Gly	Ser	Tyr	Thr	Tyr	Lys	Asn	Thr	Val	Tyr	Leu
		195					200					205			
Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala
	210					215					220				
Arg	Thr	Val	Pro	Gly	Tyr	Ser	Thr	Ala	Pro	Tyr	Phe	Asp	Leu	Trp	Gly
225					230					235					240
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	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	Lys	Val	Glu	Pro	Lys	Ser	Cys
			340					345					350		

<210> 55
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<213> Homo sapiens

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Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
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Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30

Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
65 70 75 80

Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
85 90 95

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile
115 120 125

Ile Ser Thr Leu Thr
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Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
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Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Ile Asp Leu Ser Asn Tyr
20 25 30

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

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

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

Gly Gly Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu
85 90 95

Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn
100 105 110

Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met
115 120 125

Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu
130 135 140

Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe
145 150 155 160

His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu
165 170 175

Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu
180 185 190

Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln
195 200 205

Ser Ile Ile Ser Thr Leu Thr Gly Gly Gly Lys Asn Thr Val Tyr Leu
210 215 220

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

Arg Thr Val Pro Gly Tyr Ser Thr Ala Pro Tyr Phe Asp Leu Trp Gly
245 250 255

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

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

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
290 295 300

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
305 310 315 320

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
325 330 335

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
340 345 350

Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
355 360 365

<210> 57
<211> 178
<212> PRT
<213> Homo sapiens

<400> 57

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

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

Gln Glu Lys Leu Val Ser Glu Cys Ala Thr Tyr Lys Leu Cys His Pro
35 40 45

Glu Glu Leu Val Leu Leu Gly His Ser Leu Gly Ile Pro Trp Ala Pro

50		55		60
Leu Ser Ser Cys Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser				
65		70		75
Gln Leu His Ser Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu				
	85		90	95
Glu Gly Ile Ser Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu				
	100		105	110
Asp Val Ala Asp Phe Ala Thr Thr Ile Trp Gln Gln Met Glu Glu Leu				
	115		120	125
Gly Met Ala Pro Ala Leu Gln Pro Thr Gln Gly Ala Met Pro Ala Phe				
	130		135	140
Ala Ser Ala Phe Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser His				
145		150		155
Leu Gln Ser Phe Leu Glu Val Ser Tyr Arg Val Leu Arg His Leu Ala				
	165		170	175

Gln Pro

<210> 58
 <211> 412
 <212> PRT
 <213> Secuencia Artificial

<220>
 <223> CA645 Fab HC Fwk3 G-CSF

<400> 58

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

35																
Gly	Ile	Ile	Trp	Ala	Ser	Gly	Thr	Thr	Phe	Tyr	Ala	Thr	Trp	Ala	Lys	
50						55					60					
Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Gly	Gly	Gly	Gly	Ser	Ala	
65					70					75					80	
Thr	Pro	Leu	Gly	Pro	Ala	Ser	Ser	Leu	Pro	Gln	Ser	Phe	Leu	Leu	Lys	
				85					90					95		
Cys	Leu	Glu	Gln	Val	Arg	Lys	Ile	Gln	Gly	Asp	Gly	Ala	Ala	Leu	Gln	
			100					105					110			
Glu	Lys	Leu	Val	Ser	Glu	Cys	Ala	Thr	Tyr	Lys	Leu	Cys	His	Pro	Glu	
		115					120					125				
Glu	Leu	Val	Leu	Leu	Gly	His	Ser	Leu	Gly	Ile	Pro	Trp	Ala	Pro	Leu	
	130					135					140					
Ser	Ser	Cys	Pro	Ser	Gln	Ala	Leu	Gln	Leu	Ala	Gly	Cys	Leu	Ser	Gln	
145					150					155					160	
Leu	His	Ser	Gly	Leu	Phe	Leu	Tyr	Gln	Gly	Leu	Leu	Gln	Ala	Leu	Glu	
				165					170					175		
Gly	Ile	Ser	Pro	Glu	Leu	Gly	Pro	Thr	Leu	Asp	Thr	Leu	Gln	Leu	Asp	
			180					185					190			
Val	Ala	Asp	Phe	Ala	Thr	Thr	Ile	Trp	Gln	Gln	Met	Glu	Glu	Leu	Gly	
		195					200					205				
Met	Ala	Pro	Ala	Leu	Gln	Pro	Thr	Gln	Gly	Ala	Met	Pro	Ala	Phe	Ala	
	210					215					220					
Ser	Ala	Phe	Gln	Arg	Arg	Ala	Gly	Gly	Val	Leu	Val	Ala	Ser	His	Leu	
225					230					235					240	
Gln	Ser	Phe	Leu	Glu	Val	Ser	Tyr	Arg	Val	Leu	Arg	His	Leu	Ala	Gln	
				245					250					255		

Pro Ser Gly Gly Gly Gly Lys Asn Thr Val Tyr Leu Gln Met Asn Ser
260 265 270

Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro
275 280 285

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

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
305 310 315 320

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
325 330 335

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
340 345 350

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
355 360 365

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
370 375 380

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
385 390 395 400

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
405 410

<210> 59

<211> 127

<212> PRT

<213> Homo sapiens

<400> 59

Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His Val
1 5 10 15

Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp Thr
20 25 30

Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe Asp
35 40 45

Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys Gln
50 55 60

Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met Met
65 70 75 80

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

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

Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu
115 120 125

<210> 60
<211> 362
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 Fab HC Fwk3 GM-CSF

<400> 60

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

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

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

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

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

Gly Gly Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu
85 90 95

His Val Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg
100 105 110

Asp Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met
115 120 125

Phe Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr
130 135 140

Lys Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr
145 150 155 160

Met Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr
165 170 175

Ser Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu
180 185 190

Lys Asp Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln
195 200 205

Glu Gly Gly Gly Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg
210 215 220

Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly Tyr
225 230 235 240

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

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
260 265 270

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
275 280 285

Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
290 295 300

Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly
305 310 315 320

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
325 330 335

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
340 345 350

Val Asp Lys Lys Val Glu Pro Lys Ser Cys
355 360

<210> 61
<211> 359
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 Fab HC con GM-CSF en el C-terminal de CH1

<400> 61

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Gly Gly Ser Gly Gly Gly Gly Ala Pro Ala Arg Ser Pro Ser Pro
225 230 235 240

Ser Thr Gln Pro Trp Glu His Val Asn Ala Ile Gln Glu Ala Arg Arg
245 250 255

Leu Leu Asn Leu Ser Arg Asp Thr Ala Ala Glu Met Asn Glu Thr Val
260 265 270

Glu Val Ile Ser Glu Met Phe Asp Leu Gln Glu Pro Thr Cys Leu Gln
275 280 285

Thr Arg Leu Glu Leu Tyr Lys Gln Gly Leu Arg Gly Ser Leu Thr Lys
290 295 300

Leu Lys Gly Pro Leu Thr Met Met Ala Ser His Tyr Lys Gln His Cys
305 310 315 320

Pro Pro Thr Pro Glu Thr Ser Cys Ala Thr Gln Ile Ile Thr Phe Glu
325 330 335

Ser Phe Lys Glu Asn Leu Lys Asp Phe Leu Leu Val Ile Pro Phe Asp
340 345 350

Cys Trp Glu Pro Val Gln Glu
355

<210> 62
<211> 124
<212> PRT
<213> Murino

<400> 62

Ala Pro Thr Arg Ser Pro Ile Thr Val Thr Arg Pro Trp Lys His Val
1 5 10 15

Glu Ala Ile Lys Glu Ala Leu Asn Leu Leu Asp Asp Met Pro Val Thr
20 25 30

Leu Asn Glu Glu Val Glu Val Val Ser Asn Glu Phe Ser Phe Lys Lys
35 40 45

Leu Thr Cys Val Gln Thr Arg Leu Lys Ile Phe Glu Gln Gly Leu Arg
50 55 60

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

Tyr Gln Thr Tyr Cys Pro Pro Thr Pro Glu Thr Asp Cys Glu Thr Gln
85 90 95

Val Thr Thr Tyr Ala Asp Phe Ile Asp Ser Leu Lys Thr Phe Leu Thr
100 105 110

Asp Ile Pro Phe Glu Cys Lys Lys Pro Gly Gln Lys
115 120

<210> 63

<211> 359
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 Fab HC Fwk3 mGM-CSF

<400> 63

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

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

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

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

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

Gly Gly Ala Pro Thr Arg Ser Pro Ile Thr Val Thr Arg Pro Trp Lys
85 90 95

His Val Glu Ala Ile Lys Glu Ala Leu Asn Leu Leu Asp Asp Met Pro
100 105 110

Val Thr Leu Asn Glu Glu Val Glu Val Val Ser Asn Glu Phe Ser Phe
115 120 125

Lys Lys Leu Thr Cys Val Gln Thr Arg Leu Lys Ile Phe Glu Gln Gly
130 135 140

Leu Arg Gly Asn Phe Thr Lys Leu Lys Gly Ala Leu Asn Met Thr Ala
145 150 155 160

Ser Tyr Tyr Gln Thr Tyr Cys Pro Pro Thr Pro Glu Thr Asp Cys Glu
165 170 175

Thr Gln Val Thr Thr Tyr Ala Asp Phe Ile Asp Ser Leu Lys Thr Phe

180	185	190
Leu Thr Asp Ile Pro Phe Glu Cys Lys Lys Pro Gly Gln Lys Gly Gly		
195	200	205
Gly Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp		
210	215	220
Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly Tyr Ser Thr Ala		
225	230	235
Pro Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser		
245	250	255
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys		
260	265	270
Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr		
275	280	285
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser		
290	295	300
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser		
305	310	315
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr		
325	330	335
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys		
340	345	350
Lys Val Glu Pro Lys Ser Cys		
355		

<210> 64
 <211> 356
 <212> PRT
 <213> Secuencia Artificial

 <220>
 <223> CA645 Fab HC con mGM-CSF en el C-terminal de CH1

<400> 64

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Gly Gly Gly Ser Gly Gly Gly Gly Ala Pro Thr Arg Ser Pro Ile Thr
225 230 235 240

Val Thr Arg Pro Trp Lys His Val Glu Ala Ile Lys Glu Ala Leu Asn
245 250 255

Leu Leu Asp Asp Met Pro Val Thr Leu Asn Glu Glu Val Glu Val Val
260 265 270

Ser Asn Glu Phe Ser Phe Lys Lys Leu Thr Cys Val Gln Thr Arg Leu
275 280 285

Lys Ile Phe Glu Gln Gly Leu Arg Gly Asn Phe Thr Lys Leu Lys Gly
290 295 300

Ala Leu Asn Met Thr Ala Ser Tyr Tyr Gln Thr Tyr Cys Pro Pro Thr
305 310 315 320

Pro Glu Thr Asp Cys Glu Thr Gln Val Thr Thr Tyr Ala Asp Phe Ile
325 330 335

Asp Ser Leu Lys Thr Phe Leu Thr Asp Ile Pro Phe Glu Cys Lys Lys
340 345 350

Pro Gly Gln Lys
355

<210> 65
<211> 166
<212> PRT
<213> Homo sapiens

<400> 65

Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu
1 5 10 15

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

Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe
35 40 45

Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu Val Trp
50 55 60

Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu
65 70 75 80

Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp
85 90 95

Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu
100 105 110

Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala
115 120 125

Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val
130 135 140

Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala
145 150 155 160

Cys Arg Thr Gly Asp Arg
165

<210> 66
<211> 401
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 Fab HC Fwk3 EPO

<400> 66

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

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

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

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

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

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

Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala
100 105 110

Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val
115 120 125

Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu
130 135 140

Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln
145 150 155 160

Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His
165 170 175

Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg
180 185 190

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

Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe
210 215 220

Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly
225 230 235 240

Glu Ala Cys Arg Thr Gly Asp Arg Gly Gly Gly Lys Asn Thr Val Tyr
245 250 255

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
260 265 270

Ala Arg Thr Val Pro Gly Tyr Ser Thr Ala Pro Tyr Phe Asp Leu Trp
275 280 285

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
290 295 300

Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr
305 310 315 320

Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
325 330 335

Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
340 345 350

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
355 360 365

Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
370 375 380

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

Cys

<210> 67
<211> 125
<212> PRT
<213> Secuencia Artificial

<220>
<223> VHH6

<400> 67

Asp Val Gln Phe Val Glu Ser Gly Gly Gly Ser Val His Ala Gly Gly
1 5 10 15

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

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

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

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

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

Ala Ala Arg Pro Ser Ile Arg Cys Ala Ser Phe Ser Ala Thr Glu Tyr
100 105 110

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

<210> 68
<211> 369
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 Fab HC Fwk3 VHH6

<400> 68

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

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

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

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

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

Gly Gly Gly Ser Asp Val Gln Phe Val Glu Ser Gly Gly Gly Ser Val
85 90 95

His Ala Gly Gly Ser Leu Arg Leu Asn Cys Ala Thr Ser Gly Tyr Ile
100 105 110

Tyr Ser Thr Tyr Cys Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu
115 120 125

Arg Glu Gly Val Ala His Ile Tyr Thr Asn Ser Gly Arg Thr Tyr Tyr
130 135 140

Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Gln Asp Asn Ala Lys
145 150 155 160

Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Lys Pro Glu Asp Thr Ala
165 170 175

Ile Tyr Tyr Cys Ala Ala Arg Pro Ser Ile Arg Cys Ala Ser Phe Ser
180 185 190

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

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Asn Thr Val Tyr
210 215 220

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

Ala Arg Thr Val Pro Gly Tyr Ser Thr Ala Pro Tyr Phe Asp Leu Trp
245 250 255

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

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

Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
290 295 300

Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
305 310 315 320

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
325 330 335

Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
340 345 350

His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser
355 360 365

Cys

<210> 69
<211> 119
<212> PRT
<213> Secuencia Artificial

<220>
<223> VHH15

<400> 69

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

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

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

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

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

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

Asn Leu Gln Cys Leu Arg Tyr Pro Gly Glu Tyr Tyr Trp Gly Gln Gly
100 105 110

Thr Gln Val Thr Val Ser Ser
115

<210> 70
<211> 363
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 Fab HC Fwk3 VHH15

<400> 70

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

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

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

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

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

Gly Gly Gly Ser Gln Val Gln Leu Val Glu Ser Gly Gly Gly Ser Val
85 90 95

Gln Ala Gly Gly Ser Leu Arg Leu Ser Cys Val Ala Ala Ser Gly Tyr
100 105 110

Thr Gly Cys Thr Tyr Asp Met Arg Trp Tyr Arg Gln Ala Pro Gly Lys
115 120 125

Glu Arg Glu Phe Val Ser Gly Ile Asp Ser Asp Gly Arg Ala Thr Tyr
130 135 140

Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Gln Ser Asn Ala Lys
145 150 155 160

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

Met Tyr Tyr Cys Asn Leu Gln Cys Leu Arg Tyr Pro Gly Glu Tyr Tyr
180 185 190

Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser Gly Gly Gly Gly Ser
195 200 205

Gly Gly Gly Gly Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu
210 215 220

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly
225 230 235 240

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

Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
260 265 270

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
275 280 285

Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
290 295 300

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
305 310 315 320

Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
325 330 335

Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
340 345 350

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
355 360

<210> 71
<211> 190
<212> PRT
<213> Homo sapiens

<400> 71

Gln Gly Trp Gln Ala Phe Lys Asn Asp Ala Thr Glu Ile Ile Pro Glu
1 5 10 15

Leu Gly Glu Tyr Pro Glu Pro Pro Pro Glu Leu Glu Asn Asn Lys Thr
20 25 30

Met Asn Arg Ala Glu Asn Gly Gly Arg Pro Pro His His Pro Phe Glu
35 40 45

Thr Lys Asp Val Ser Glu Tyr Ser Cys Arg Glu Leu His Phe Thr Arg
50 55 60

Tyr Val Thr Asp Gly Pro Cys Arg Ser Ala Lys Pro Val Thr Glu Leu
65 70 75 80

Val Cys Ser Gly Gln Cys Gly Pro Ala Arg Leu Leu Pro Asn Ala Ile
85 90 95

Gly Arg Gly Lys Trp Trp Arg Pro Ser Gly Pro Asp Phe Arg Cys Ile
100 105 110

Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro Gly Gly
115 120 125

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

Lys Arg Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly
145 150 155 160

Thr Glu Ala Ala Arg Pro Gln Lys Gly Arg Lys Pro Arg Pro Arg Ala
165 170 175

Arg Ser Ala Lys Ala Asn Gln Ala Glu Leu Glu Asn Ala Tyr
180 185 190

<210> 72

<211> 88

<212> PRT

<213> Secuencia Artificial

<220>

<223> dominio central de la esclerostina humana

<400> 72

Cys Arg Glu Leu His Phe Thr Arg Tyr Val Thr Asp Gly Pro Cys Arg
1 5 10 15

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

Ala Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys Trp Trp Arg Pro
35 40 45

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

Val Gln Leu Leu Cys Pro Gly Gly Glu Ala Pro Arg Ala Arg Lys Val
65 70 75 80

Arg Leu Val Ala Ser Cys Lys Cys
85

<210> 73

<211> 314

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 Cadena Pesada Fab con dominio central de esclerostina humana
insertada
en el marco 3, enlazadores S sencillos

<400> 73

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

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

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

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

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

Phe Thr Arg Tyr Val Thr Asp Gly Pro Cys Arg Ser Ala Lys Pro Val
85 90 95

Thr Glu Leu Val Cys Ser Gly Gln Cys Gly Pro Ala Arg Leu Leu Pro
100 105 110

Asn Ala Ile Gly Arg Gly Lys Trp Trp Arg Pro Ser Gly Pro Asp Phe
115 120 125

Arg Cys Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys
130 135 140

Pro Gly Gly Glu Ala Pro Arg Ala Arg Lys Val Arg Leu Val Ala Ser
145 150 155 160

Cys Lys Cys Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg
165 170 175

Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly Tyr
180 185 190

Ser Thr Ala Pro Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val Thr
195 200 205

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
210 215 220

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
225 230 235 240

Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
245 250 255

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

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
275 280 285

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
290 295 300

Val Asp Lys Lys Val Glu Pro Lys Ser Cys
305 310

<210> 74
<211> 333
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 Fab Cadena Pesada con dominio central de esclerostina humana
insertada
en el marco 3, enlazadores Gly-Ser (2X G4S)

<400> 74

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

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

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

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

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

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

Gly Pro Cys Arg Ser Ala Lys Pro Val Thr Glu Leu Val Cys Ser Gly
100 105 110

Gln Cys Gly Pro Ala Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys
115 120 125

Trp Trp Arg Pro Ser Gly Pro Asp Phe Arg Cys Ile Pro Asp Arg Tyr
130 135 140

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

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

Gly Ser Gly Gly Gly Gly Ser Lys Asn Thr Val Tyr Leu Gln Met Asn
180 185 190

Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val
195 200 205

Pro Gly Tyr Ser Thr Ala Pro Tyr Phe Asp Leu Trp Gly Gln Gly Thr
210 215 220

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

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

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

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

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

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

Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
325 330

<210> 75

<211> 323

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 Fab Cadena Pesada con dominio central de esclerostina humana
insertada
en el marco 3, Enlazadores rígidos

<400> 75

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

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

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

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

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

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

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

Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys Trp Trp Arg Pro Ser
115 120 125

Gly Pro Asp Phe Arg Cys Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val
130 135 140

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

Leu Val Ala Ser Cys Lys Cys Glu Tyr His Gly Leu Gln Lys Asn Thr
165 170 175

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

Tyr Cys Ala Arg Thr Val Pro Gly Tyr Ser Thr Ala Pro Tyr Phe Asp
195 200 205

Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
210 215 220

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

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

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

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

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

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

Lys Ser Cys

<210> 76

<211> 425

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 Fab Cadena Pesada con esclerostina humana madura de longitud completa

insertada en el marco 3, enlazadores Gly-Ser (1X G4S)

<400> 76

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

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

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

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

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

Gly	Trp	Gln	Ala	Phe	Lys	Asn	Asp	Ala	Thr	Glu	Ile	Ile	Pro	Glu	Leu
				85					90					95	

Gly	Glu	Tyr	Pro	Glu	Pro	Pro	Pro	Glu	Leu	Glu	Asn	Asn	Lys	Thr	Met
			100					105					110		

Asn	Arg	Ala	Glu	Asn	Gly	Gly	Arg	Pro	Pro	His	His	Pro	Phe	Glu	Thr
		115					120					125			

Lys	Asp	Val	Ser	Glu	Tyr	Ser	Cys	Arg	Glu	Leu	His	Phe	Thr	Arg	Tyr
	130					135					140				

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

Cys Ser Gly Gln Cys Gly Pro Ala Arg Leu Leu Pro Asn Ala Ile Gly
165 170 175

Arg Gly Lys Trp Trp Arg Pro Ser Gly Pro Asp Phe Arg Cys Ile Pro
180 185 190

Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro Gly Gly Glu
195 200 205

Ala Pro Arg Ala Arg Lys Val Arg Leu Val Ala Ser Cys Lys Cys Lys
210 215 220

Arg Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly Thr
225 230 235 240

Glu Ala Ala Arg Pro Gln Lys Gly Arg Lys Pro Arg Pro Arg Ala Arg
245 250 255

Ser Ala Lys Ala Asn Gln Ala Glu Leu Glu Asn Ala Tyr Ser Gly Gly
260 265 270

Gly Gly Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala
275 280 285

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly Tyr Ser
290 295 300

Thr Ala Pro Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val
305 310 315 320

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
325 330 335

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys
340 345 350

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
355 360 365

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
370 375 380

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
385 390 395 400

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
405 410 415

Asp Lys Lys Val Glu Pro Lys Ser Cys
420 425

<210> 77
<211> 10
<212> PRT
<213> Secuencia Artificial

<220>
<223> Enlazador flexible

<400> 77

Lys Tyr Gln Ser Gly Gly Ser Gly Met Gly
1 5 10

<210> 78
<211> 7
<212> PRT
<213> Secuencia Artificial

<220>
<223> Enlazador flexible

<400> 78

Ser Gly Gly Ser Tyr Thr Tyr
1 5

<210> 79
<211> 8
<212> PRT
<213> Secuencia Artificial

<220>

<223> Enlazador flexible

<400> 79

Gly Gly Gly Ser Gly Gly Gly Gly
1 5

<210> 80

<211> 7

<212> PRT

<213> Secuencia Artificial

<220>

<223> Enlazador flexible

<400> 80

Gly Ser Ser Ser Ser Gly Ser
1 5

<210> 81

<211> 5

<212> PRT

<213> Secuencia Artificial

<220>

<223> Enlazador flexible

<400> 81

Ser Gly Gly Gly Gly
1 5

<210> 82

<211> 5

<212> PRT

<213> Secuencia Artificial

<220>

<223> Enlazador rígido

<400> 82

Ile Pro Phe Thr Val
1 5

<210> 83

<211> 347

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA497 Fab Cadena Pesada con IL-15 humana insertada en el marco 3,
enlazadores Gly-Ser

<400> 83

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 Val Ile Phe Ser Asp Tyr
20 25 30

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

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

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

Gly Gly Gly Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile Glu
85 90 95

Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu Ser
100 105 110

Asp Val His Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe Leu Leu
115 120 125

Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile His Asp
130 135 140

Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser Asn
145 150 155 160

Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu Leu Glu Glu
165 170 175

Lys Asn Ile Lys Glu Phe Leu Gln Ser Phe Val His Ile Val Gln Met
180 185 190

Phe Ile Asn Gly Gly Gly Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
195 200 205

Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr Asp Ala Asn
210 215 220

Arg Gln Asn Tyr Asp Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
225 230 235 240

Thr Val Ser Ser 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 Lys Val Glu Pro Lys Ser Cys
340 345

<210> 84
<211> 218
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA497 Fab Cadena Ligera

<400> 84

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

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Glu Ser Val Ser Ser Ser
20 25 30

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

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

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

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

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

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
115 120 125

Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
130 135 140

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145 150 155 160

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
165 170 175

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

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

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 85

<211> 346
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA240 Fab Cadena Pesada con IL-15 humana insertada en el marco 3,
enlazadores Gly-Ser

<400> 85

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

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

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

Ala Gln Met Arg Asn Lys Asn Tyr Gln Tyr Gly Thr Tyr Tyr Ala Glu
50 55 60

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

Ser Gly Gly Gly Gly Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys
85 90 95

Ile Glu Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr
100 105 110

Glu Ser Asp Val His Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe
115 120 125

Leu Leu Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile
130 135 140

His Asp Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser
145 150 155 160

Ser Asn Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu Leu
165 170 175

Glu Glu Lys Asn Ile Lys Glu Phe Leu Gln Ser Phe Val His Ile Val
180 185 190

Gln Met Phe Ile Asn Gly Gly Gly Lys Asn Ser Leu Tyr Leu Gln Met
195 200 205

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

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

Val Ser Ser 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 Lys Val Glu Pro Lys Ser Cys
340 345

<210> 86
<211> 214
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA240 Fab Cadena Ligera

<400> 86

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 Gln Ala Ser Gln Asp Ile Gly Ile Ser
20 25 30

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

Tyr Asn Ala Asn Asn Leu Ala Asp 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 Leu Gln His Asn Ser Ala 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> 87
<211> 219
<212> PRT
<213> Secuencia Artificial

<220>
<223> HyHEL5 Cadena Pesada

<400> 87

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

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

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

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

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

Met Gln Leu Asn Ser Leu Thr Ser Glu Asp Ser Gly Val Tyr Tyr Cys
85 90 95

Leu His Gly Asn Tyr Asp Phe Asp Gly Trp Gly Gln Gly Thr Thr Leu
100 105 110

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

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

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

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

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

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

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
210 215

<210> 88
<211> 212
<212> PRT
<213> Secuencia Artificial

<220>
<223> HyHEL5 Cadena Ligera

<400> 88

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

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Asn Tyr Met
20 25 30

Tyr Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
35 40 45

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

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Thr Glu
65 70 75 80

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

Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser
100 105 110

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

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

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

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

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

Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn
195 200 205

Arg Gly Glu Cys
210

<210> 89
<211> 127
<212> PRT
<213> Secuencia Artificial

<220>
<223> D3L11

<400> 89

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

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

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

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

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

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

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

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

<210> 90

<211> 360

<212> PRT

<213> Secuencia Artificial

<220>

<223> Cadena Ligera anti-lisozima HyHEL5 con anti-lisozima VHH D3L11
insertada en el marco 3, enlazadores Gly-Ser

<400> 90

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

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Asn Tyr Met
20 25 30

Tyr Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
35 40 45

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

Gly Ser Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu Val Glu Ser
65 70 75 80

Gly Gly Gly Ser Val Gln Ala Gly Gly Ser Leu Arg Leu Ser Cys Ala
85 90 95

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

Ala Pro Gly Lys Ala Arg Glu Gly Val Ala Ala Leu Tyr Thr His Thr

115																	
Gly	Asn	Thr	Tyr	Tyr	Thr	Asp	Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser		
130						135					140						
Gln	Asp	Lys	Ala	Lys	Asn	Met	Ala	Tyr	Leu	Arg	Met	Asp	Ser	Val	Lys		
145					150					155					160		
Ser	Glu	Asp	Thr	Ala	Ile	Tyr	Thr	Cys	Gly	Ala	Thr	Arg	Lys	Tyr	Val		
				165					170					175			
Pro	Val	Arg	Phe	Ala	Leu	Asp	Gln	Ser	Ser	Tyr	Asp	Tyr	Trp	Gly	Gln		
			180					185					190				
Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly		
		195					200					205					
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Thr	Ser	Tyr	Ser	Leu	Thr	Ile	Ser	Ser		
210						215					220						
Met	Glu	Thr	Glu	Asp	Ala	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Trp	Gly	Arg		
225					230					235					240		
Asn	Pro	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Thr	Val		
				245					250					255			
Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys		
			260					265					270				
Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg		
		275					280					285					
Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn		
290						295					300						
Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser		
305					310					315					320		
Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys		
				325					330					335			

Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr
340 345 350

Lys Ser Phe Asn Arg Gly Glu Cys
355 360

<210> 91

<211> 352

<212> PRT

<213> Secuencia Artificial

<220>

<223> Cadena Ligera anti-lisozima HyHEL5 con anti-IL-6 VHH15 insertado
en el marco 3, enlazadores Gly-Ser

<400> 91

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

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Asn Tyr Met
20 25 30

Tyr Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
35 40 45

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

Gly Ser Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Glu Ser
65 70 75 80

Gly Gly Gly Ser Val Gln Ala Gly Gly Ser Leu Arg Leu Ser Cys Val
85 90 95

Ala Ala Ser Gly Tyr Thr Gly Cys Thr Tyr Asp Met Arg Trp Tyr Arg
100 105 110

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

Gly Arg Ala Thr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser
130 135 140

Gln Ser Asn Ala Lys Ile Ala Val Tyr Leu Gln Met Asp Ser Leu Lys
145 150 155 160

Leu Glu Asp Thr Ala Met Tyr Tyr Cys Asn Leu Gln Cys Leu Arg Tyr
165 170 175

Pro Gly Glu Tyr Tyr Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser
180 185 190

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Thr
195 200 205

Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Thr Glu Asp Ala Ala Thr
210 215 220

Tyr Tyr Cys Gln Gln Trp Gly Arg Asn Pro Thr Phe Gly Gly Gly Thr
225 230 235 240

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

Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
260 265 270

Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
275 280 285

Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
290 295 300

Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
305 310 315 320

Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
325 330 335

Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
340 345 350

<210> 92
<211> 365
<212> PRT
<213> Secuencia Artificial

<220>
<223> Cadena Ligera con anti-lisozima CA645 con VHH D3L11 insertada en el marco 3, enlazadores Gly-Ser

<400> 92

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

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

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

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

Gly Ser Gly Ser Gly Ser Gly Gly Gly Gly Ser Asp Val Gln Leu Val
65 70 75 80

Glu Ser Gly Gly Gly Ser Val Gln Ala Gly Gly Ser Leu Arg Leu Ser
85 90 95

Cys Ala Ala Ser Gly Ser Thr Asp Ser Ile Glu Tyr Met Thr Trp Phe
100 105 110

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

His Thr Gly Asn Thr Tyr Tyr Thr Asp Ser Val Lys Gly Arg Phe Thr
130 135 140

Ile Ser Gln Asp Lys Ala Lys Asn Met Ala Tyr Leu Arg Met Asp Ser
145 150 155 160

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

Tyr Val Pro Val Arg Phe Ala Leu Asp Gln Ser Ser Tyr Asp Tyr Trp
180 185 190

Gly Gln Gly Thr Gln Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
195 200 205

Gly Gly Gly Ser Gly Gly Gly Gly Ser Thr Asp Phe Thr Leu Thr Ile
210 215 220

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gly Gly Gly
225 230 235 240

Tyr Ser Ser Ile Ser Asp Thr Thr Phe Gly Gly Gly Thr Lys Val Glu
245 250 255

Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser
260 265 270

Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn
275 280 285

Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala
290 295 300

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

Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp
325 330 335

Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu
340 345 350

Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
355 360 365

<210> 93

<211> 360

<212> PRT

<213> Secuencia Artificial

<220>

<223> Fab Cadena Pesada CA645 con IL-15 humana insertada en el marco 3
con enlazador largo bovino

<400> 93

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

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

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

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

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Thr Ser Val His Gln Glu
65 70 75 80

Thr Lys Lys Tyr Gln Ser Asn Trp Val Asn Val Ile Ser Asp Leu Lys
85 90 95

Lys Ile Glu Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr Leu Tyr
100 105 110

Thr Glu Ser Asp Val His Pro Ser Cys Lys Val Thr Ala Met Lys Cys
115 120 125

Phe Leu Leu Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp Ala Ser
130 135 140

Ile His Asp Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu
145 150 155 160

Ser Ser Asn Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu
165 170 175

Leu Glu Glu Lys Asn Ile Lys Glu Phe Leu Gln Ser Phe Val His Ile
180 185 190

Val Gln Met Phe Ile Asn Ser Tyr Thr Tyr Asn Tyr Glu Trp His Val
195 200 205

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

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly Tyr Ser Thr
225 230 235 240

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

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
260 265 270

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
275 280 285

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
290 295 300

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
305 310 315 320

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
325 330 335

Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
340 345 350

Lys Lys Val Glu Pro Lys Ser Cys
355 360

<210> 94

<211> 350

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 Fab Cadena Pesada con IL-15 hmana insertada en el marco 3
con enlazador corto bovino

<400> 94

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

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

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

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

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

Ser Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile Glu Asp Leu
85 90 95

Ile Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu Ser Asp Val
100 105 110

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

Gln Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile His Asp Thr Val
130 135 140

Glu Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser Asn Gly Asn
145 150 155 160

Val Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu Leu Glu Glu Lys Asn
165 170 175

Ile Lys Glu Phe Leu Gln Ser Phe Val His Ile Val Gln Met Phe Ile
180 185 190

Asn Ser Tyr Thr Tyr Asn Tyr Glu Lys Asn Thr Val Tyr Leu Gln Met
195 200 205

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

210		215		220
Val Pro Gly Tyr Ser Thr Ala Pro Tyr Phe Asp Leu Trp Gly Gln Gly				
225		230		240
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe				
		245		255
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu				
		260		270
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp				
		275		285
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu				
		290		300
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser				
305		310		320
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro				
		325		335
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys				
		340		350
<210> 95				
<211> 356				
<212> PRT				
<213> Secuencia Artificial				
<220>				
<223> CA645 Fab Cadena Pesada con IL-15 humana insertada en el marco 3 con enlazador 2xG4S				
<400> 95				
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly				
1		5		10
				15
Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Ile Asp Leu Ser Asn Tyr				
		20		30
				25

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

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

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

Gly Gly Gly Ser Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile
85 90 95

Glu Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu
100 105 110

Ser Asp Val His Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe Leu
115 120 125

Leu Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile His
130 135 140

Asp Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser
145 150 155 160

Asn Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu Leu Glu
165 170 175

Glu Lys Asn Ile Lys Glu Phe Leu Gln Ser Phe Val His Ile Val Gln
180 185 190

Met Phe Ile Asn Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Asn
195 200 205

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

Tyr Tyr Cys Ala Arg Thr Val Pro Gly Tyr Ser Thr Ala Pro Tyr Phe
225 230 235 240

Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr
245 250 255

Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser
260 265 270

Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
275 280 285

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
290 295 300

Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
305 310 315 320

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

Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu
340 345 350

Pro Lys Ser Cys
355

<210> 96
<211> 12
<212> PRT
<213> Secuencia Artificial

<220>
<223> Enlazador

<400> 96

Thr Ser Val His Gln Glu Thr Lys Lys Tyr Gln Ser
1 5 10

<210> 97
<211> 12
<212> PRT
<213> Secuencia Artificial

<220>
<223> Enlazador

<400> 97

Ser Tyr Thr Tyr Asn Tyr Glu Trp His Val Asp Val
1 5 10

<210> 98
<211> 7
<212> PRT
<213> Secuencia Artificial

<220>
<223> Enlazador

<400> 98

Glu Thr Lys Lys Tyr Gln Ser
1 5

<210> 99
<211> 7
<212> PRT
<213> Secuencia Artificial

<220>
<223> Enlazador

<400> 99

Ser Tyr Thr Tyr Asn Tyr Glu
1 5

<210> 100
<211> 188
<212> PRT
<213> Homo sapiens

<400> 100

Asn Cys Trp Leu Arg Gln Ala Lys Asn Gly Arg Cys Gln Val Leu Tyr
1 5 10 15

Lys Thr Glu Leu Ser Lys Glu Glu Cys Cys Ser Thr Gly Arg Leu Ser
20 25 30

Thr Ser Trp Thr Glu Glu Asp Val Asn Asp Asn Thr Leu Phe Lys Trp
35 40 45

Met Ile Phe Asn Gly Gly Ala Pro Asn Cys Ile Pro Cys Lys Glu Pro
50 55 60

Arg Cys Val Cys Ala Pro Asp Cys Ser Asn Ile Thr Trp Lys Gly Pro
65 70 75 80

Val Cys Gly Leu Asp Gly Lys Thr Tyr Arg Asn Glu Cys Ala Leu Leu
85 90 95

Lys Ala Arg Cys Lys Glu Gln Pro Glu Leu Glu Val Gln Tyr Gln Gly
100 105 110

Arg Cys Lys Lys Thr Cys Arg Asp Val Phe Cys Pro Gly Ser Ser Thr
115 120 125

Cys Val Val Asp Gln Thr Asn Asn Ala Tyr Cys Val Thr Cys Asn Arg
130 135 140

Ile Cys Pro Glu Pro Ala Ser Ser Glu Gln Tyr Leu Cys Gly Asn Asp
145 150 155 160

Gly Val Thr Tyr Ser Ser Ala Cys His Leu Arg Lys Ala Thr Cys Leu
165 170 175

Leu Gly Arg Ser Ile Gly Leu Ala Gly Glu Tyr Lys
180 185

<210> 101

<211> 627

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 Fab Cadena Pesada con dos monómeros humanos IL-10 insertados
en el marco 3

<400> 101

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

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

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

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

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

Ser Asn Cys Trp Leu Arg Gln Ala Lys Asn Gly Arg Cys Gln Val Leu
85 90 95

Tyr Lys Thr Glu Leu Ser Lys Glu Glu Cys Cys Ser Thr Gly Arg Leu
100 105 110

Ser Thr Ser Trp Thr Glu Glu Asp Val Asn Asp Asn Thr Leu Phe Lys
115 120 125

Trp Met Ile Phe Asn Gly Gly Ala Pro Asn Cys Ile Pro Cys Lys Glu
130 135 140

Pro Arg Cys Val Cys Ala Pro Asp Cys Ser Asn Ile Thr Trp Lys Gly
145 150 155 160

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

Leu Lys Ala Arg Cys Lys Glu Gln Pro Glu Leu Glu Val Gln Tyr Gln
180 185 190

Gly Arg Cys Lys Lys Thr Cys Arg Asp Val Phe Cys Pro Gly Ser Ser
195 200 205

Thr Cys Val Val Asp Gln Thr Asn Asn Ala Tyr Cys Val Thr Cys Asn
210 215 220

Arg Ile Cys Pro Glu Pro Ala Ser Ser Glu Gln Tyr Leu Cys Gly Asn
225 230 235 240

Asp Gly Val Thr Tyr Ser Ser Ala Cys His Leu Arg Lys Ala Thr Cys
245 250 255

Leu Leu Gly Arg Ser Ile Gly Leu Ala Gly Glu Tyr Lys Gly Gly Gly
260 265 270

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asn Cys Trp Leu
275 280 285

Arg Gln Ala Lys Asn Gly Arg Cys Gln Val Leu Tyr Lys Thr Glu Leu
290 295 300

Ser Lys Glu Glu Cys Cys Ser Thr Gly Arg Leu Ser Thr Ser Trp Thr
305 310 315 320

Glu Glu Asp Val Asn Asp Asn Thr Leu Phe Lys Trp Met Ile Phe Asn
325 330 335

Gly Gly Ala Pro Asn Cys Ile Pro Cys Lys Glu Pro Arg Cys Val Cys
340 345 350

Ala Pro Asp Cys Ser Asn Ile Thr Trp Lys Gly Pro Val Cys Gly Leu
355 360 365

Asp Gly Lys Thr Tyr Arg Asn Glu Cys Ala Leu Leu Lys Ala Arg Cys
370 375 380

Lys Glu Gln Pro Glu Leu Glu Val Gln Tyr Gln Gly Arg Cys Lys Lys
385 390 395 400

Thr Cys Arg Asp Val Phe Cys Pro Gly Ser Ser Thr Cys Val Val Asp
405 410 415

Gln Thr Asn Asn Ala Tyr Cys Val Thr Cys Asn Arg Ile Cys Pro Glu
420 425 430

Pro Ala Ser Ser Glu Gln Tyr Leu Cys Gly Asn Asp Gly Val Thr Tyr
435 440 445

Ser Ser Ala Cys His Leu Arg Lys Ala Thr Cys Leu Leu Gly Arg Ser
450 455 460

Ile Gly Leu Ala Tyr Glu Gly Gly Gly Gly Ser Gly Ser Lys Asn Thr
465 470 475 480

Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr
485 490 495

Tyr Cys Ala Arg Thr Val Pro Gly Tyr Ser Thr Ala Pro Tyr Phe Asp
500 505 510

Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
515 520 525

Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
530 535 540

Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
545 550 555 560

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
565 570 575

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
580 585 590

Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
595 600 605

Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro
610 615 620

Lys Ser Cys
625

<210> 102
<211> 110
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645-Cys dominio VL (gL5)

<400> 102

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

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

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

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

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

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

Ser Asp Thr Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 103

<211> 121

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645-Cys dominio VH (gH5)

<400> 103

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

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

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

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

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 104
<211> 6
<212> PRT
<213> Secuencia Artificial

<220>
<223> Enlazador rígido

<400> 104

Glu Tyr His Gly Leu Gln
1 5

<210> 105
<211> 119
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 dominio VH (gH1)

<400> 105

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

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

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

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

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

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

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

Thr Leu Val Thr Val Ser Ser
115

<210> 106

<211> 121

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 dominio VH (gH37)

<400> 106

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

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

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

Gly Ile Ile Trp Ala Ser Gly Thr Thr Ala Tyr Ala Thr Trp Ala Lys
50 55 60

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 107
<211> 120
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 dominio VH (gH47)

<400> 107

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

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

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

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

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

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

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 108
<211> 110
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 dominio VL (gL1)

<400> 108

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

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

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

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

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

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

Ser Asp Thr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 109

<211> 110

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 dominio VL (gL4)

<400> 109

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

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

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

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

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

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

Ser Asp Thr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 110

<211> 112

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645-Cys dominio VL (gL4)

<400> 110

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

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

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

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

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

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

Ser Asp Thr Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys Arg Thr
100 105 110

<210> 111

<211> 11

<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 111

Asp Leu Cys Leu Arg Asp Trp Gly Cys Leu Trp
1 5 10

<210> 112
<211> 11
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 112

Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp
1 5 10

<210> 113
<211> 15
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 113

Met Glu Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp Gly Asp
1 5 10 15

<210> 114
<211> 20
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 114

Gln Arg Leu Met Glu Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp
1 5 10 15

Glu Asp Asp Glu
20

<210> 115
<211> 20
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 115

Gln Gly Leu Ile Gly Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp
1 5 10 15

Gly Arg Ser Val
20

<210> 116
<211> 21
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 116

Gln Gly Leu Ile Gly Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp
1 5 10 15

Gly Arg Ser Val Lys
20

<210> 117
<211> 15
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 117

Glu Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp Glu Asp Asp
1 5 10 15

<210> 118
<211> 18
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 118

Arg Leu Met Glu Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp Glu
1 5 10 15

Asp Asp

<210> 119
<211> 16
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 119

Met Glu Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp Glu Asp Asp
1 5 10 15

<210> 120
<211> 15
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 120

Met Glu Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp Glu Asp
1 5 10 15

<210> 121
<211> 18
<212> PRT
<213> Secuencia Artificial

<220>
<223> Péptido de unión a la albúmina

<400> 121

Arg Leu Met Glu Asp Ile Cys Leu Ala Arg Trp Gly Cys Leu Trp Glu
1 5 10 15

Asp Asp

<210> 122

<211> 20

<212> PRT

<213> Secuencia Artificial

<220>

<223> Péptido de unión a la albúmina

<400> 122

Glu Val Arg Ser Phe Cys Thr Arg Trp Pro Ala Glu Lys Ser Cys Lys
1 5 10 15

Pro Leu Arg Gly
20

<210> 123

<211> 20

<212> PRT

<213> Secuencia Artificial

<220>

<223> Péptido de unión a la albúmina

<400> 123

Arg Ala Pro Glu Ser Phe Val Cys Tyr Trp Glu Thr Ile Cys Phe Glu
1 5 10 15

Arg Ser Glu Gln
20

<210> 124

<211> 11

<212> PRT

<213> Secuencia Artificial

<220>

<223> Péptido de unión a la albúmina

<400> 124

Glu Met Cys Tyr Phe Pro Gly Ile Cys Trp Met
1 5 10

<210> 125

<211> 224

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA497 Fab Cadena Pesada

<400> 125

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 Val Ile Phe Ser Asp Tyr
20 25 30

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

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

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

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

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

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

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

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

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

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

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

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

<210> 126

<211> 223

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA240 Fab Cadena Pesada

<400> 126

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

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

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

Ala Gln Met Arg Asn Lys Asn Tyr Gln Tyr Gly Thr Tyr Tyr Ala Glu
50 55 60

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

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

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

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

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

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

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

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

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

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

<210> 127
<211> 247
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA497 dsscFv (vHvL)

<400> 127

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 Val Ile Phe Ser Asp Tyr
20 25 30

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

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

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

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

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

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

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

Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys
145 150 155 160

Ala Ser Glu Ser Val Ser Ser Ser Met Tyr Ser Tyr Met His Trp Tyr
165 170 175

Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Arg Ala Ser
180 185 190

Asn Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly
195 200 205

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala
210 215 220

Thr Tyr Tyr Cys Gln Gln Ser Trp Thr Ala Pro Arg Thr Phe Gly Cys
225 230 235 240

Gly Thr Lys Val Glu Ile Lys
245

<210> 128

<211> 247

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA497 dsscFv (vLvH)

<400> 128

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

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Glu Ser Val Ser Ser Ser
20 25 30

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

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

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

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

Thr Ala Pro Arg Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys Gly
100 105 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val
115 120 125

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

Arg Leu Ser Cys Ala Ala Ser Gly Val Ile Phe Ser Asp Tyr Tyr Met
145 150 155 160

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

Ile Asn Phe Asn Ala Asp Ile Ser Tyr Tyr Arg Glu Ser Val Lys Gly
180 185 190

Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr Leu Tyr Leu Gln
195 200 205

Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr Tyr Cys Thr Thr
210 215 220

Asp Ala Asn Arg Gln Asn Tyr Asp Trp Phe Ala Tyr Trp Gly Gln Gly
225 230 235 240

Thr Leu Val Thr Val Ser Ser
245

<210> 129

<211> 491

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 Fab HC Fwk3 CA497 dsscFv (vHvL)

<400> 129

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

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

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

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

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

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
85 90 95

Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Val Ile
100 105 110

Phe Ser Asp Tyr Tyr Met Ala Trp Val Arg Gln Ala Pro Gly Lys Cys
115 120 125

Leu Glu Trp Val Ala Ser Ile Asn Phe Asn Ala Asp Ile Ser Tyr Tyr
130 135 140

Arg Glu Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys
145 150 155 160

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala
165 170 175

Val Tyr Tyr Cys Thr Thr Asp Ala Asn Arg Gln Asn Tyr Asp Trp Phe
180 185 190

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
195 200 205

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Leu
210 215 220

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
225 230 235 240

Ile Thr Cys Lys Ala Ser Glu Ser Val Ser Ser Ser Met Tyr Ser Tyr
245 250 255

Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
260 265 270

Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
275 280 285

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
290 295 300

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Trp Thr Ala Pro Arg
305 310 315 320

Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
325 330 335

Gly Gly Gly Gly Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu
340 345 350

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly
355 360 365

Tyr Ser Thr Ala Pro Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val
370 375 380

Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
385 390 395 400

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
405 410 415

Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
420 425 430

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
435 440 445

Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
450 455 460

Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
465 470 475 480

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
485 490

<210> 130

<211> 491

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 Fab HC Fwk3 CA497 dsscFv (vLvH)

<400> 130

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

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

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

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

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

Gly Gly Gly Ser Ala Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser
85 90 95

Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Glu Ser
100 105 110

Val Ser Ser Ser Met Tyr Ser Tyr Met His Trp Tyr Gln Gln Lys Pro
115 120 125

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser
130 135 140

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
145 150 155 160

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys
165 170 175

Gln Gln Ser Trp Thr Ala Pro Arg Thr Phe Gly Cys Gly Thr Lys Val
180 185 190

Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
195 200 205

Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro
210 215 220

Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Val Ile Phe Ser
225 230 235 240

Asp Tyr Tyr Met Ala Trp Val Arg Gln Ala Pro Gly Lys Cys Leu Glu
245 250 255

Trp Val Ala Ser Ile Asn Phe Asn Ala Asp Ile Ser Tyr Tyr Arg Glu
260 265 270

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
275 280 285

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
290 295 300

Tyr Cys Thr Thr Asp Ala Asn Arg Gln Asn Tyr Asp Trp Phe Ala Tyr
305 310 315 320

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
325 330 335

Gly Gly Gly Gly Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu
340 345 350

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly
355 360 365

Tyr Ser Thr Ala Pro Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val
370 375 380

Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
385 390 395 400

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
405 410 415

Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
420 425 430

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
435 440 445

Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
450 455 460

Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
465 470 475 480

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
485 490

<210> 131

<211> 718

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 IgG4P HC Fwk3 CA497 dsscFv (vHvL)

<400> 131

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

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

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

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

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

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
85 90 95

Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Val Ile
100 105 110

Phe Ser Asp Tyr Tyr Met Ala Trp Val Arg Gln Ala Pro Gly Lys Cys
115 120 125

Leu Glu Trp Val Ala Ser Ile Asn Phe Asn Ala Asp Ile Ser Tyr Tyr
130 135 140

Arg Glu Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys
145 150 155 160

Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala
165 170 175

Val Tyr Tyr Cys Thr Thr Asp Ala Asn Arg Gln Asn Tyr Asp Trp Phe
180 185 190

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
195 200 205

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Leu
210 215 220

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
225 230 235 240

Ile Thr Cys Lys Ala Ser Glu Ser Val Ser Ser Ser Met Tyr Ser Tyr
245 250 255

Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
260 265 270

Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
275 280 285

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
290 295 300

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Trp Thr Ala Pro Arg
305 310 315 320

Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser
325 330 335

Gly Gly Gly Gly Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu
340 345 350

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly
355 360 365

Tyr Ser Thr Ala Pro Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val
370 375 380

Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
385 390 395 400

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
405 410 415

Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
420 425 430

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
435 440 445

Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
450 455 460

Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
465 470 475 480

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
485 490 495

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
500 505 510

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
515 520 525

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
530 535 540

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
545 550 555 560

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
565 570 575

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
580 585 590

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
595 600 605

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
610 615 620

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
625 630 635 640

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
645 650 655

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
660 665 670

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
675 680 685

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
690 695 700

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
705 710 715

<210> 132

<211> 718

<212> PRT

<213> Secuencia Artificial

<220>

<223> CA645 IgG4P HC Fwk3 CA497 dsscFv (vLvH)

<400> 132

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

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

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

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

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

Gly Gly Gly Ser Ala Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser
85 90 95

Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Glu Ser
100 105 110

Val Ser Ser Ser Met Tyr Ser Tyr Met His Trp Tyr Gln Gln Lys Pro
115 120 125

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser
130 135 140

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
145 150 155 160

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys
165 170 175

Gln Gln Ser Trp Thr Ala Pro Arg Thr Phe Gly Cys Gly Thr Lys Val
180 185 190

Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
195 200 205

Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro
210 215 220

Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Val Ile Phe Ser
225 230 235 240

Asp Tyr Tyr Met Ala Trp Val Arg Gln Ala Pro Gly Lys Cys Leu Glu
245 250 255

Trp Val Ala Ser Ile Asn Phe Asn Ala Asp Ile Ser Tyr Tyr Arg Glu
260 265 270

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
275 280 285

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
290 295 300

Tyr Cys Thr Thr Asp Ala Asn Arg Gln Asn Tyr Asp Trp Phe Ala Tyr
305 310 315 320

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
325 330 335

Gly Gly Gly Gly Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu
340 345 350

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Thr Val Pro Gly
355 360 365

Tyr Ser Thr Ala Pro Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val
370 375 380

Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
385 390 395 400

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
405 410 415

Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
420 425 430

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
435 440 445

Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
450 455 460

Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
465 470 475 480

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
485 490 495

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
500 505 510

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
515 520 525

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
530 535 540

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
545 550 555 560

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
565 570 575

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
580 585 590

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
595 600 605

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
610 615 620

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
625 630 635 640

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
645 650 655

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
660 665 670

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
675 680 685

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
690 695 700

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
705 710 715

<210> 133
<211> 213
<212> PRT
<213> Secuencia Artificial

<220>
<223> Anti-CD3 Cadena Ligera

<400> 133

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 Ser Ala Ser Ser Ser Val Ser Tyr Met
20 25 30

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

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

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

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

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

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

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

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

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

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

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

Asn Arg Gly Glu Cys
210

<210> 134
<211> 222
<212> PRT
<213> Secuencia Artificial

<220>
<223> Anti-CD3 Fab HC

<400> 134

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 135

<211> 446

<212> PRT

<213> Secuencia Artificial

<220>

<223> Anti-CD3 IgG4P HC

<400> 135

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

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

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

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

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

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

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

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

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

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

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

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

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

Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
210 215 220

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 136
<211> 214
<212> PRT
<213> Secuencia Artificial

<220>
<223> Anti-CD28 Cadena Ligera

<400> 136

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 His Ala Ser Gln Asn Ile Tyr Val Trp
20 25 30

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

Tyr Lys Ala Ser Asn Leu His Thr 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 Gly Gln Thr Tyr Pro Tyr
85 90 95

Thr Phe Gly Gly 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> 137
<211> 223
<212> PRT
<213> Secuencia Artificial

<220>
<223> Anti-CD28 Fab HC

<400> 137

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 Thr Ser Tyr
20 25 30

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

Gly Cys Ile Tyr Pro Gly Asn Val Asn Thr Asn Tyr Asn Glu Lys Phe
50 55 60

Lys Asp Arg Ala Thr Leu Thr Val 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 Tyr Phe Cys
85 90 95

Thr Arg Ser His Tyr Gly Leu Asp Trp Asn Phe Asp Val Trp Gly Gln
100 105 110

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

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

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

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

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

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

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

<210> 138

<211> 447

<212> PRT

<213> Secuencia Artificial

<220>

<223> Anti-CD28 IgG4P HC

<400> 138

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 Thr Ser Tyr
20 25 30

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

Gly Cys Ile Tyr Pro Gly Asn Val Asn Thr Asn Tyr Asn Glu Lys Phe
50 55 60

Lys Asp Arg Ala Thr Leu Thr Val 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 Tyr Phe Cys
85 90 95

Thr Arg Ser His Tyr Gly Leu Asp Trp Asn Phe Asp Val Trp Gly Gln
100 105 110

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

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

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

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

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

Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys
195 200 205

Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro
210 215 220

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 139

<211> 488

<212> PRT

<213> Secuencia Artificial

<220>

<223> Anti-CD28 Fab HC Fwk3 anti-CD3 dsscFv (vHvL)

<400> 139

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 Thr Ser Tyr
20 25 30

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

Gly Cys Ile Tyr Pro Gly Asn Val Asn Thr Asn Tyr Asn Glu Lys Phe
50 55 60

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

Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val
85 90 95

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr
100 105 110

Thr Phe Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys
115 120 125

Cys Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn
130 135 140

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser
145 150 155 160

Lys Asn Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr
165 170 175

Gly Val Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp
180 185 190

Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly
195 200 205

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
210 215 220

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

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
245 250 255

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
260 265 270

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

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
290 295 300

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
305 310 315 320

Phe Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly
325 330 335

Gly Gly Gly Ser Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg
340 345 350

Ser Asp Asp Thr Ala Val Tyr Phe Cys Thr Arg Ser His Tyr Gly Leu
355 360 365

Asp Trp Asn Phe Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
370 375 380

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
385 390 395 400

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
405 410 415

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
420 425 430

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
435 440 445

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
450 455 460

Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
465 470 475 480

Lys Lys Val Glu Pro Lys Ser Cys
485

<210> 140

<211> 487

<212> PRT

<213> Secuencia Artificial

<220>

<223> Anti-CD3 Fab HC Fwk3 anti-CD3 dsscFv (vHvL)

<400> 140

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

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

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

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

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

Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val
85 90 95

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr
100 105 110

Thr Phe Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys
115 120 125

Cys Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn
130 135 140

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser
145 150 155 160

Lys Asn Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr
165 170 175

Gly Val Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp
180 185 190

Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly
195 200 205

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
210 215 220

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

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
245 250 255

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
260 265 270

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

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
290 295 300

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
305 310 315 320

Phe Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly
325 330 335

Gly Gly Gly Ser Lys Asn Thr Ala Phe Leu Gln Met Asp Ser Leu Arg
340 345 350

Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His
355 360 365

Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser
370 375 380

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
385 390 395 400

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
405 410 415

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
420 425 430

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
435 440 445

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
450 455 460

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
465 470 475 480

Lys Val Glu Pro Lys Ser Cys
485

<210> 141

<211> 712

<212> PRT

<213> Secuencia Artificial

<220>

<223> Anti-CD28 IgG4P HC Fwk3 anti-CD3 dsscFv (vHvL)

<400> 141

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 Thr Ser Tyr
20 25 30

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

Gly Cys Ile Tyr Pro Gly Asn Val Asn Thr Asn Tyr Asn Glu Lys Phe
50 55 60

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

Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val
85 90 95

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr
100 105 110

Thr Phe Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys
115 120 125

Cys Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn
130 135 140

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser
145 150 155 160

Lys Asn Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr
165 170 175

Gly Val Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp
180 185 190

Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly
195 200 205

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
210 215 220

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

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
245 250 255

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
260 265 270

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

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
290 295 300

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
305 310 315 320

Phe Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly
325 330 335

Gly Gly Gly Ser Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg
340 345 350

Ser Asp Asp Thr Ala Val Tyr Phe Cys Thr Arg Ser His Tyr Gly Leu
355 360 365

Asp Trp Asn Phe Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
370 375 380

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

Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
405 410 415

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
420 425 430

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
435 440 445

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys
450 455 460

Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp
465 470 475 480

Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala
485 490 495

Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
500 505 510

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
515 520 525

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

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
545 550 555 560

Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
565 570 575

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
580 585 590

Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
595 600 605

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr
610 615 620

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
625 630 635 640

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
645 650 655

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
660 665 670

Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe
675 680 685

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
690 695 700

Ser Leu Ser Leu Ser Leu Gly Lys
705 710

<210> 142

<211> 711

<212> PRT

<213> Secuencia Artificial

<220>

<223> Anti-CD3 IgG4P HC Fwk3 anti-CD3 dsscFv (vHvL)

<400> 142

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

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

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

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

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

Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val
85 90 95

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr
100 105 110

Thr Phe Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys
115 120 125

Cys Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn
130 135 140

Tyr Asn Gln Lys Phe Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser
145 150 155 160

Lys Asn Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr
165 170 175

Gly Val Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp
180 185 190

Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly
195 200 205

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
210 215 220

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

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
245 250 255

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
260 265 270

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

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
290 295 300

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
305 310 315 320

Phe Gly Cys Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly
325 330 335

Gly Gly Gly Ser Lys Asn Thr Ala Phe Leu Gln Met Asp Ser Leu Arg
340 345 350

Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His
355 360 365

Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser
370 375 380

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
385 390 395 400

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
420 425 430

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
435 440 445

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
450 455 460

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
465 470 475 480

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro
485 490 495

Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
500 505 510

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
515 520 525

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

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
545 550 555 560

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
565 570 575

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
580 585 590

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
595 600 605

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
610 615 620

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
625 630 635 640

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
645 650 655

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
660 665 670

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
675 680 685

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
690 695 700

Leu Ser Leu Ser Leu Gly Lys
705 710

<210> 143
<211> 251
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 scFv (VH-VL)

<400> 143

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

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

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

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

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

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

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

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

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
130 135 140

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

Thr Ile Thr Cys Gln Ser Ser Pro Ser Val Trp Ser Asn Phe Leu Ser
165 170 175

Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Glu
180 185 190

Ala Ser Lys Leu Thr Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
210 215 220

Phe Ala Thr Tyr Tyr Cys Gly Gly Gly Tyr Ser Ser Ile Ser Asp Thr
225 230 235 240

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
245 250

<210> 144
<211> 251
<212> PRT
<213> Secuencia Artificial

<220>
<223> CA645 dsscFv (VH-VL)

<400> 144

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

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

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

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

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

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

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

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

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln
130 135 140

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

Thr Ile Thr Cys Gln Ser Ser Pro Ser Val Trp Ser Asn Phe Leu Ser
165 170 175

Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Glu
180 185 190

Ala Ser Lys Leu Thr Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
210 215 220

Phe Ala Thr Tyr Tyr Cys Gly Gly Gly Tyr Ser Ser Ile Ser Asp Thr
225 230 235 240

Thr Phe Gly Cys Gly Thr Lys Val Glu Ile Lys
245 250