

SEQUENCE LISTING

<110> ELECTRA THERAPEUTICS, INC.

<120> SIRP ALPHA AND SIRP BETA 1 ANTIBODIES AND USES THEREOF

<130> ELTH-002/00WO 336159-2005

<140> PCT/US2021/031541

<141> 2021-05-10

<150> US 63/022,309

<151> 2020-05-08

<160> 180

<170> PatentIn version 3.5

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<211> 504

<212> PRT

<213> Homo sapiens

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Leu	Leu	Leu	Ala	Ala	Ser	Cys	Ala	Trp	Ser	Gly	Val	Ala	Gly	Glu	Glu
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Glu	Leu	Gln	Val	Ile	Gln	Pro	Asp	Lys	Ser	Val	Leu	Val	Ala	Ala	Gly
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Glu	Thr	Ala	Thr	Leu	Arg	Cys	Thr	Ala	Thr	Ser	Leu	Ile	Pro	Val	Gly
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Pro	Ile	Gln	Trp	Phe	Arg	Gly	Ala	Gly	Pro	Gly	Arg	Glu	Leu	Ile	Tyr
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Asn	Gln	Lys	Glu	Gly	His	Phe	Pro	Arg	Val	Thr	Thr	Val	Ser	Asp	Leu
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Thr	Lys	Arg	Asn	Asn	Met	Asp	Phe	Ser	Ile	Arg	Ile	Gly	Asn	Ile	Thr
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Pro	Ala	Asp	Ala	Gly	Thr	Tyr	Tyr	Cys	Val	Lys	Phe	Arg	Lys	Gly	Ser
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Pro Asp Asp Val Glu Phe Lys Ser Gly Ala Gly Thr Glu Leu Ser Val

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Arg	Ala	Lys	Pro	Ser	Ala	Pro	Val	Val	Ser	Gly	Pro	Ala	Ala	Arg	Ala
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Thr	Pro	Gln	His	Thr	Val	Ser	Phe	Thr	Cys	Glu	Ser	His	Gly	Phe	Ser
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Pro	Arg	Asp	Ile	Thr	Leu	Lys	Trp	Phe	Lys	Asn	Gly	Asn	Glu	Leu	Ser
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Asp	Phe	Gln	Thr	Asn	Val	Asp	Pro	Val	Gly	Glu	Ser	Val	Ser	Tyr	Ser
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Ile	His	Ser	Thr	Ala	Lys	Val	Val	Leu	Thr	Arg	Glu	Asp	Val	His	Ser
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Gln	Val	Ile	Cys	Glu	Val	Ala	His	Val	Thr	Leu	Gln	Gly	Asp	Pro	Leu
225					230					235					240
Arg	Gly	Thr	Ala	Asn	Leu	Ser	Glu	Thr	Ile	Arg	Val	Pro	Pro	Thr	Leu
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Glu	Val	Thr	Gln	Gln	Pro	Val	Arg	Ala	Glu	Asn	Gln	Val	Asn	Val	Thr
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Cys	Gln	Val	Arg	Lys	Phe	Tyr	Pro	Gln	Arg	Leu	Gln	Leu	Thr	Trp	Leu
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Glu	Asn	Gly	Asn	Val	Ser	Arg	Thr	Glu	Thr	Ala	Ser	Thr	Val	Thr	Glu
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Ser	Ala	His	Arg	Asp	Asp	Val	Lys	Leu	Thr	Cys	Gln	Val	Glu	His	Asp
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Gly	Gln	Pro	Ala	Val	Ser	Lys	Ser	His	Asp	Leu	Lys	Val	Ser	Ala	His
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Glu	Arg	Asn	Ile	Tyr	Ile	Val	Val	Gly	Val	Val	Cys	Thr	Leu	Leu	Val
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Ala	Leu	Leu	Met	Ala	Ala	Leu	Tyr	Leu	Val	Arg	Ile	Arg	Gln	Lys	Lys
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Ala	Arg	Glu	Ile	Thr	Gln	Asp	Thr	Asn	Asp	Ile	Thr	Tyr	Ala	Asp	Leu
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Asn	Leu	Pro	Lys	Gly	Lys	Lys	Pro	Ala	Pro	Gln	Ala	Ala	Glu	Pro	Asn
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Asn	His	Thr	Glu	Tyr	Ala	Ser	Ile	Gln	Thr	Ser	Pro	Gln	Pro	Ala	Ser
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Glu	Asp	Thr	Leu	Thr	Tyr	Ala	Asp	Leu	Asp	Met	Val	His	Leu	Asn	Arg
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Thr	Pro	Lys	Gln	Pro	Ala	Pro	Lys	Pro	Glu	Pro	Ser	Phe	Ser	Glu	Tyr
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 <213> Homo sapiens

<400> 2

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Leu	Leu	Leu	Ala	Ala	Ser	Cys	Ala	Trp	Ser	Gly	Val	Ala	Gly	Glu	Glu
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Glu	Leu	Gln	Val	Ile	Gln	Pro	Asp	Lys	Ser	Val	Ser	Val	Ala	Ala	Gly
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Glu	Ser	Ala	Ile	Leu	His	Cys	Thr	Val	Thr	Ser	Leu	Ile	Pro	Val	Gly
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Pro	Ile	Gln	Trp	Phe	Arg	Gly	Ala	Gly	Pro	Ala	Arg	Glu	Leu	Ile	Tyr
65					70					75					80

Asn	Gln	Lys	Glu	Gly	His	Phe	Pro	Arg	Val	Thr	Thr	Val	Ser	Glu	Ser
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Thr	Lys	Arg	Glu	Asn	Met	Asp	Phe	Ser	Ile	Ser	Ile	Ser	Asn	Ile	Thr
			100						105					110	

Pro	Ala	Asp	Ala	Gly	Thr	Tyr	Tyr	Cys	Val	Lys	Phe	Arg	Lys	Gly	Ser
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Pro	Asp	Thr	Glu	Phe	Lys	Ser	Gly	Ala	Gly	Thr	Glu	Leu	Ser	Val	Arg
	130						135					140			

Ala	Lys	Pro	Ser	Ala	Pro	Val	Val	Ser	Gly	Pro	Ala	Ala	Arg	Ala	Thr
145					150					155					160

Pro	Gln	His	Thr	Val	Ser	Phe	Thr	Cys	Glu	Ser	His	Gly	Phe	Ser	Pro
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Arg	Asp	Ile	Thr	Leu	Lys	Trp	Phe	Lys	Asn	Gly	Asn	Glu	Leu	Ser	Asp
			180					185					190		

Phe	Gln	Thr	Asn	Val	Asp	Pro	Val	Gly	Glu	Ser	Val	Ser	Tyr	Ser	Ile
		195					200					205			

His	Ser	Thr	Ala	Lys	Val	Val	Leu	Thr	Arg	Glu	Asp	Val	His	Ser	Gln
	210					215					220				

Val	Ile	Cys	Glu	Val	Ala	His	Val	Thr	Leu	Gln	Gly	Asp	Pro	Leu	Arg
225					230					235					240

Gly	Thr	Ala	Asn	Leu	Ser	Glu	Thr	Ile	Arg	Val	Pro	Pro	Thr	Leu	Glu
			245						250					255	

Val	Thr	Gln	Gln	Pro	Val	Arg	Ala	Glu	Asn	Gln	Val	Asn	Val	Thr	Cys
			260					265					270		

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

Asn	Gly	Asn	Val	Ser	Arg	Thr	Glu	Thr	Ala	Ser	Thr	Val	Thr	Glu	Asn
290				295				300							

Lys	Asp	Gly	Thr	Tyr	Asn	Trp	Met	Ser	Trp	Leu	Leu	Val	Asn	Val	Ser
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Ala	His	Arg	Asp	Asp	Val	Lys	Leu	Thr	Cys	Gln	Val	Glu	His	Asp	Gly
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Gln	Pro	Ala	Val	Ser	Lys	Ser	His	Asp	Leu	Lys	Val	Ser	Ala	His	Pro
				340				345				350			

Lys	Glu	Gln	Gly	Ser	Asn	Thr	Ala	Ala	Glu	Asn	Thr	Gly	Ser	Asn	Glu
355								360				365			

Arg	Asn	Ile	Tyr	Ile	Val	Val	Gly	Val	Val	Cys	Thr	Leu	Leu	Val	Ala
370								375				380			

Leu	Leu	Met	Ala	Ala	Leu	Tyr	Leu	Val	Arg	Ile	Arg	Gln	Lys	Lys	Ala		
385								390				395				400	

Gln	Gly	Ser	Thr	Ser	Ser	Thr	Arg	Leu	His	Glu	Pro	Glu	Lys	Asn	Ala		
				405								410				415	

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

Ala	Asp	Leu	Asn	Leu	Pro	Lys	Gly	Lys	Lys	Pro	Ala	Pro	Gln	Ala	Ala		
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Glu	Pro	Asn	Asn	His	Thr	Glu	Tyr	Ala	Ser	Ile	Gln	Thr	Ser	Pro	Gln		
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Pro	Ala	Ser	Glu	Asp	Thr	Leu	Thr	Tyr	Ala	Asp	Leu	Asp	Met	Val	His				
465								470								475		480	

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr
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Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys
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		20						25					30		

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

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

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

Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys
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Lys	Ala	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys
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Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro
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Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys
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Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp
145					150					155					160

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

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

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

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

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

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

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

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

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

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

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

Glu	Leu	Gln	Val	Ile	Gln	Pro	Asp	Lys	Ser	Val	Leu	Val	Ala	Ala	Gly
	35						40					45			

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

Pro	Ile	Gln	Trp	Phe	Arg	Gly	Ala	Gly	Pro	Gly	Arg	Glu	Leu	Ile	Tyr
65					70					75					80

Asn	Gln	Lys	Glu	Gly	His	Phe	Pro	Arg	Val	Thr	Thr	Val	Ser	Asp	Leu
			85						90					95	

Thr	Lys	Arg	Asn	Asn	Met	Asp	Phe	Ser	Ile	Arg	Ile	Gly	Asn	Ile	Thr
			100						105				110		

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

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

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

Thr	Pro	Gln	His	Thr	Val	Ser	Phe	Thr	Cys	Glu	Ser	His	Gly	Phe	Ser
165				170				175							

Pro	Arg	Asp	Ile	Thr	Leu	Lys	Trp	Phe	Lys	Asn	Gly	Asn	Glu	Leu	Ser
180				185				190							

Asp	Phe	Gln	Thr	Asn	Val	Asp	Pro	Val	Gly	Glu	Ser	Val	Ser	Tyr	Ser
195				200				205							

Ile	His	Ser	Thr	Ala	Lys	Val	Val	Leu	Thr	Arg	Glu	Asp	Val	His	Ser
210				215				220							

Gln	Val	Ile	Cys	Glu	Val	Ala	His	Val	Thr	Leu	Gln	Gly	Asp	Pro	Leu
225				230				235				240			

Arg	Gly	Thr	Ala	Asn	Leu	Ser	Glu	Thr	Ile	Arg	Val	Pro	Pro	Thr	Leu
245				250				255							

Glu	Val	Thr	Gln	Gln	Pro	Val	Arg	Ala	Glu	Asn	Gln	Val	Asn	Val	Thr
260				265				270							

Cys	Gln	Val	Arg	Lys	Phe	Tyr	Pro	Gln	Arg	Leu	Gln	Leu	Thr	Trp	Leu
275				280				285							

Glu	Asn	Gly	Asn	Val	Ser	Arg	Thr	Glu	Thr	Ala	Ser	Thr	Val	Thr	Glu
290				295				300							

Asn	Lys	Asp	Gly	Thr	Tyr	Asn	Trp	Met	Ser	Trp	Leu	Leu	Val	Asn	Val
305				310				315				320			

Ser	Ala	His	Arg	Asp	Asp	Val	Lys	Leu	Thr	Cys	Gln	Val	Glu	His	Asp
325				330				335							

Gly	Gln	Pro	Ala	Val	Ser	Lys	Ser	His	Asp	Leu	Lys	Val	Ser	Ala	His
340				345				350							

Pro	Lys	Glu	Gln	Gly	Ser	Asn	Thr	Ala	Ala	Glu	Asn	Thr	Gly	Ser	Asn
355				360				365							

Glu	Arg	Asn	Ile	Tyr	Ile	Val	Val	Gly	Val	Val	Cys	Thr	Leu	Leu	Val
370				375				380							

Ala	Leu	Leu	Met	Ala	Ala	Leu	Tyr	Leu	Val	Arg	Ile	Arg	Gln	Lys	Lys
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Ala	Gln	Gly	Ser	Thr	Ser	Ser	Thr	Arg	Leu	His	Glu	Pro	Glu	Lys	Asn
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Ala	Arg	Glu	Ile	Thr	Gln	Val	Gln	Ser	Leu	Asp	Thr	Asn	Asp	Ile	Thr
			420						425					430	
Tyr	Ala	Asp	Leu	Asn	Leu	Pro	Lys	Gly	Lys	Lys	Pro	Ala	Pro	Gln	Ala
			435					440					445		
Ala	Glu	Pro	Asn	Asn	His	Thr	Glu	Tyr	Ala	Ser	Ile	Gln	Thr	Ser	Pro
			450				455						460		
Gln	Pro	Ala	Ser	Glu	Asp	Thr	Leu	Thr	Tyr	Ala	Asp	Leu	Asp	Met	Val
465						470					475				480
His	Leu	Asn	Arg	Thr	Pro	Lys	Gln	Pro	Ala	Pro	Lys	Pro	Glu	Pro	Ser
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Phe	Ser	Glu	Tyr	Ala	Ser	Val	Gln	Val	Pro	Arg	Lys				
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Met	Thr	Leu	Leu	Leu	Gly	Arg	Leu	Thr	Gly	Val	Ala	Gly	Glu	Asp	Glu
				20				25					30		

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

Ser	Ala	Thr	Leu	Arg	Cys	Ala	Met	Thr	Ser	Leu	Ile	Pro	Val	Gly	Pro
50				55				60							

Ile	Met	Trp	Phe	Arg	Gly	Ala	Gly	Ala	Gly	Arg	Glu	Leu	Ile	Tyr	Asn
65		70				75				80					

Gln	Lys	Glu	Gly	His	Phe	Pro	Arg	Val	Thr	Thr	Val	Ser	Glu	Leu	Thr
				85				90				95			

Lys	Arg	Asn	Asn	Leu	Asp	Phe	Ser	Ile	Ser	Ile	Ser	Asn	Ile	Thr	Pro
100				105				110							

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

Asp	Asp	Val	Glu	Phe	Lys	Ser	Gly	Ala	Gly	Thr	Glu	Leu	Ser	Val	Arg
130				135				140							

Ala	Lys	Pro	Ser	Ala	Pro	Val	Val	Ser	Gly	Pro	Ala	Val	Arg	Ala	Thr
145		150				155				160					

Pro	Glu	His	Thr	Val	Ser	Phe	Thr	Cys	Glu	Ser	His	Gly	Phe	Ser	Pro
				165				170				175			

Arg	Asp	Ile	Thr	Leu	Lys	Trp	Phe	Lys	Asn	Gly	Asn	Glu	Leu	Ser	Asp
180				185				190							

Phe	Gln	Thr	Asn	Val	Asp	Pro	Ala	Gly	Asp	Ser	Val	Ser	Tyr	Ser	Ile
195				200				205							

His	Ser	Thr	Ala	Arg	Val	Val	Leu	Thr	Arg	Gly	Asp	Val	His	Ser	Gln
210		215				220									

Val	Ile	Cys	Glu	Ile	Ala	His	Ile	Thr	Leu	Gln	Gly	Asp	Pro	Leu	Arg
225		230				235				240					

Gly	Thr	Ala	Asn	Leu	Ser	Glu	Ala	Ile	Arg	Val	Pro	Pro	Thr	Leu	Glu
245				250				255							

Val	Thr	Gln	Gln	Pro	Met	Arg	Ala	Glu	Asn	Gln	Ala	Asn	Val	Thr	Cys
260				265				270							

Gln	Val	Ser	Asn	Phe	Tyr	Pro	Arg	Gly	Leu	Gln	Leu	Thr	Trp	Leu	Glu
275				280				285							

Asn	Gly	Asn	Val	Ser	Arg	Thr	Glu	Thr	Ala	Ser	Thr	Leu	Ile	Glu	Asn
290				295				300							

Lys	Asp	Gly	Thr	Tyr	Asn	Trp	Met	Ser	Trp	Leu	Leu	Val	Asn	Thr	Cys
305				310				315				320			

Ala	His	Arg	Asp	Asp	Val	Val	Leu	Thr	Cys	Gln	Val	Glu	His	Asp	Gly
325				330				335							

Gln	Gln	Ala	Val	Ser	Lys	Ser	Tyr	Ala	Leu	Glu	Ile	Ser	Ala	His	Gln
340				345				350							

Lys	Glu	His	Gly	Ser	Asp	Ile	Thr	His	Glu	Ala	Ala	Leu	Ala	Pro	Thr
355				360				365							

Ala	Pro	Leu	Leu	Val	Ala	Leu	Leu	Leu	Gly	Pro	Lys	Leu	Leu	Leu	Val
370				375				380							

Val	Gly	Val	Ser	Ala	Ile	Tyr	Ile	Cys	Trp	Lys	Gln	Lys	Ala
385				390				395					

<210> 8

<400> 8
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<210> 9

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L1

<400> 9

Gln	Ser	Ile	Ser	Ser	Trp
1		5			

<210> 10

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L1

<400> 10

Thr Gly Ala Val Thr Thr Ser Asn Tyr
1 5

<210> 11

<211> 330

<212> PRT

<213> Artificial Sequence

<220>

<223> IgG1 Fc domain

<400> 11

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

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

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

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

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

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

Lys Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

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

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

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp

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

<210> 12
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> IgG1 Fc domain

<220>
<221> SITE

<222> (98)..(98)

<223> Xaa is Val or Ala

<400> 12

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

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

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

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

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

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

Lys Xaa Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

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

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

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

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

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

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

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

210	215	220
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu		
225	230	235 240
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr		
	245	250 255
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn		
	260	265 270
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe		
	275	280 285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn		
	290	295 300
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr		
305	310	315 320

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

<210> 13
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> IgG1 Fc domain

<220>
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<222> (98)..(98)
<223> Xaa is Val or Ala

<220>
<221> SITE
<222> (119)..(119)
<223> Xaa is Gly or Ala

<220>
<221> SITE
<222> (122)..(122)
<223> Xaa is Ser or Asp

<220>
<221> SITE
<222> (215)..(215)

<223> Xaa is Ile or Glu

<400> 13

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

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

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

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

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

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

Lys	Xaa	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys
		100						105					110		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 14
 <211> 330
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> IgG1 Fc domain

<220>
 <221> SITE
 <222> (98)..(98)
 <223> Xaa is Val or Ala

<400> 14

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

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

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

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

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

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

Lys	Xaa	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys
			100						105					110	

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 15
 <211> 330
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> IgG1 Fc domain

<220>
 <221> SITE
 <222> (98)..(98)
 <223> Xaa is Val or Ala

<220>
 <221> SITE
 <222> (311)..(311)
 <223> Xaa is Met or Leu

<220>
 <221> SITE
 <222> (317)..(317)
 <223> Xaa is Asn or Ser

<400> 15

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

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

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

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

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

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

Lys	Xaa	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys
				100					105					110	

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 16
 <211> 330
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> IgG1 Fc domain

<220>
 <221> SITE
 <222> (97)..(97)
 <223> Xaa is Lys or Arg

<220>
 <221> SITE
 <222> (239)..(239)
 <223> Xaa is Asp or Glu

<220>
 <221> SITE
 <222> (241)..(241)
 <223> Xaa is Leu or Met

<400> 16

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 17
<211> 327
<212> PRT
<213> Artificial Sequence

<220>
<223> IggG4 Fc domain

<400> 17

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

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

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

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

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

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

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

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

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

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
145 150 155 160

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

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
180 185 190

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

Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg
	210					215					220				

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

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

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

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

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

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

Leu	Ser	Leu	Ser	Leu	Gly	Lys
				325		

<210> 18
 <211> 327
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> IgG4 Fc domain

<400> 18

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

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

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

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

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

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

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

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

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

Asp	Val	Ser	Gln	Glu	Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	Tyr	Val	Asp
145					150					155					160

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

Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp
		180						185					190		

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

Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg
	210					215					220				

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

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

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

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

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

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

Leu	Ser	Leu	Ser	Leu	Gly	Lys
						325

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<220>
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<400> 19

Gln	Ser	Leu	Leu	Tyr	Ser	Thr	Asn	Gln	Lys	Asn	Tyr	
1					5					10		

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Gln	Ser	Ile	Val	His	Ser	Asn	Gly	Asn	Thr	Tyr		
1					5					10		

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<400> 21

Gln	Ser	Leu	Val	His	Ser	Asn	Gly	Asn	Thr	Tyr		
1					5					10		

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<211> 6
<212> PRT
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<220>
<223> CDR-L1

<400> 22

Gln Ser Val Ser Asn Asp
1 5

<210> 23
<211> 3
<212> PRT
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<220>
<223> CDR-L2

<400> 23

Leu Gly Ser
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<210> 24
<211> 327
<212> PRT
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<223> Xaa is Ser or Pro

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<400> 24

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

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

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

35					40					45									
Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser				
50					55					60									
Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Lys	Thr				
65					70					75					80				
Tyr	Thr	Cys	Asn	Val	Asp	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys				
85					90					95									
Arg	Val	Glu	Ser	Lys	Tyr	Gly	Pro	Pro	Cys	Pro	Xaa	Cys	Pro	Ala	Pro				
100					105					110									
Glu	Phe	Xaa	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys				
115					120					125									
Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val				
130					135					140									
Asp	Val	Ser	Gln	Glu	Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	Tyr	Val	Asp				
145					150					155					160				
Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Phe				
165					170					175									
Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp				
180					185					190									
Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Gly	Leu				
195					200					205									
Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg				
210					215					220									
Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Gln	Glu	Glu	Met	Thr	Lys				
225					230					235					240				
Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp				
245					250					255									
Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys				
260					265					270									

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

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

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

Leu	Ser	Leu	Ser	Leu	Gly	Lys
325						

<210> 25
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<220>
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<400> 25

Lys	Ala	Ser
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<210> 26
 <211> 3
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR-L2

<400> 26

Gly	Thr	Asn
1		

<210> 27
 <211> 330
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> IgG1 Fc domain

<400> 27

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	245	250	255
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn			
	260	265	270
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe			
	275	280	285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn			
	290	295	300
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr			
	305	310	315
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys			
	325	330	
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Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys			
1	5	10	15
Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr			
	20	25	30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser			
	35	40	45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser			
	50	55	60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr			
65	70	75	80
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys			
	85	90	95
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys			

100					105					110						
Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Asp	Val	Phe	Leu	Phe	Pro	Pro	
115					120					125						
Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	
130					135					140						
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	
145					150					155					160	
Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	
165					170					175						
Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	
180					185					190						
His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	
195					200					205						
Lys	Ala	Leu	Pro	Ala	Pro	Glu	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	
210					215					220						
Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	
225					230					235					240	
Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	
245					250					255						
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	
260					265					270						
Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	
275					280					285						
Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	
290					295					300						
Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	
305					310					315					320	
Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys							
325					330											

<210> 29
<211> 330
<212> PRT
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<220>
<223> IgG1 Fc domain

<400> 29

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<220>
 <223> IgG1 Fc domain

<400> 30

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	275		280		285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn					
290		295		300	
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr					
305		310		315	320
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys					
	325		330		
<210> 31					
<211> 330					
<212> PRT					
<213> Artificial Sequence					
<220>					
<223> IgG1 Fc domain					
<400> 31					
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys					
1	5		10		15
Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr					
	20		25		30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser					
	35		40		45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser					
	50		55		60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr					
65		70		75	80
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys					
	85		90		95
Lys Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys					
	100		105		110
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro					
	115		120		125
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys					

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

<210> 32

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L2

<400> 32

Trp Ala Ser
1

<210> 33

<211> 330

<212> PRT

<213> Artificial Sequence

<220>

<223> IgG1 Fc domain

<400> 33

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

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

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

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

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

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

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

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

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

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

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

<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-L2

<400> 35

Tyr Ala Ser
1

<210> 36
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> IgG1 Fc domain

<400> 36

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 37

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L3

<400> 37

Met Gln Ala Leu Gln Thr Pro Arg Thr
1 5

<210> 38

<211> 330

<212> PRT

<213> Artificial Sequence

<220>

<223> IgG1 Fc domain

<400> 38

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

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

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

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

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

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

Lys Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 39
 <211> 330
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> IgG1 Fc domain

<400> 39

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

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

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

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

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

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

Lys	Ala	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys
				100				105				110			

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

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

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

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

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

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

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

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

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

Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	260	265	270
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe	275	280	285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn	290	295	300
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Ser His Tyr Thr	305	310	315
			320
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys	325	330	
<210>	40		
<211>	9		
<212>	PRT		
<213>	Artificial Sequence		
<220>			
<223>	CDR-L3		
<400>	40		
Gln Gln Tyr Asn Ser Tyr Ser Trp Thr	1	5	
<210>	41		
<211>	9		
<212>	PRT		
<213>	Artificial Sequence		
<220>			
<223>	CDR-L3		
<400>	41		
Ala Leu Trp Tyr Ser Asn His Trp Val	1	5	
<210>	42		
<211>	330		
<212>	PRT		
<213>	Artificial Sequence		
<220>			
<223>	IgG1 Fc domain		
<400>	42		
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys			

1	5	10	15
Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr	20	25	30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser	35	40	45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser	50	55	60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr	65	70	75
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys	85	90	95
Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys	100	105	110
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro	115	120	125
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys	130	135	140
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp	145	150	155
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu	165	170	175
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu	180	185	190
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn	195	200	205
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly	210	215	220
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu	225	230	235
			240

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

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

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

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

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

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

<210> 43
 <211> 330
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> IgG1 Fc domain

<400> 43

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

325

330

<210> 44

<211> 330

<212> PRT

<213> Artificial Sequence

<220>

<223> IgG1 Fc domain

<400> 44

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

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

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

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

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

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

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

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

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

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

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

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu

	180		185		190										
His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn
	195						200					205			
Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly
	210						215					220			
Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu
225						230					235				240
Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr
			245						250					255	
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn
		260						265						270	
Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe
	275						280					285			
Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn
	290						295					300			
Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr
305						310					315				320
Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys						
			325						330						
<210> 45															
<211> 330															
<212> PRT															
<213> Artificial Sequence															
<220>															
<223> IgG1 Fc domain															
<400> 45															
Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys
1				5						10				15	
Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr
			20					25					30		
Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser

35					40					45									
Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser				
50					55					60									
Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr				
65					70					75					80				
Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys				
85					90					95									
Arg	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys				
100					105					110									
Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro				
115					120					125									
Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys				
130					135					140									
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp				
145					150					155					160				
Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu				
165					170					175									
Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu				
180					185					190									
His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn				
195					200					205									
Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly				
210					215					220									
Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu				
225					230					235					240				
Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr				
245					250					255									
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn				
260					265					270									

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

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

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

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

<210> 46
 <211> 330
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> IgG1 Fc domain

<400> 46

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

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

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

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

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

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

Lys	Ala	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys
			100					105					110		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<210> 47

<211> 330

<212> PRT

<213> Artificial Sequence

<220>

<223> IgG1 Fc domain

<400> 47

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

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

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

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

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

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

Lys Ala Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

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

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

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

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

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

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

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

<u>210</u>	<u>215</u>	<u>220</u>
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu		
<u>225</u>	<u>230</u>	<u>235</u>
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr		
	<u>245</u>	<u>250</u>
		<u>255</u>
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn		
	<u>260</u>	<u>265</u>
		<u>270</u>
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe		
	<u>275</u>	<u>280</u>
		<u>285</u>
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn		
<u>290</u>	<u>295</u>	<u>300</u>
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr		
<u>305</u>	<u>310</u>	<u>315</u>
		<u>320</u>
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys		
	<u>325</u>	<u>330</u>

<210> 48

<400> 48
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<210> 49

<400> 49
000

<210> 50

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L3

<400> 50

Gln Gln Tyr Tyr Ser Tyr Pro Trp Thr
<u>1</u>
<u>5</u>

<210> 51

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L3

<400> 51

Phe Gln Gly Ser His Phe Pro Tyr Thr
1 5

<210> 52

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L3

<400> 52

Ser Gln Ser Thr His Val Pro Phe Thr
1 5

<210> 53

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L3

<400> 53

Gln Gln Asp Tyr Ser Ser Pro Trp Thr
1 5

<210> 54

<400> 54

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Gly Tyr Thr Phe Thr Gly Tyr Tyr
1 5

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Gly Phe Thr Phe Ser Asn Tyr Gly

1 5

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<223> CDR-H1

<400> 58

Gly Phe Thr Leu Ser Ser Tyr Ala

1 5

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<211> 327

<212> PRT

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<400> 59

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

1 5 10 15

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

20 25 30

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

35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser

50 55 60

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

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

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

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

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

Asp	Val	Ser	Gln	Glu	Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	Tyr	Val	Asp
145					150					155					160

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

Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp
		180						185					190		

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

Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg
	210					215					220				

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

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

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

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

Arg	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Glu	Gly	Asn	Val	Phe	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

290	295	300
-----	-----	-----

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

Leu	Ser	Leu	Ser	Leu	Gly	Lys
				325		

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<212> PRT
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<220>
<223> IgG4 Fc

<400> 60

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

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

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

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

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

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

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

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

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

Asp	Val	Ser	Gln	Glu	Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	Tyr	Val	Asp
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

145	150	155	160
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe			
	165	170	175
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp			
	180	185	190
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu			
	195	200	205
Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg			
	210	215	220
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys			
225	230	235	240
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp			
	245	250	255
Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys			
	260	265	270
Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser			
	275	280	285
Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser			
	290	295	300
Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser			
305	310	315	320
Leu Ser Leu Ser Leu Gly Lys			
	325		
<210>	61		
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<212>	PRT		
<213>	Artificial Sequence		
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<223>	IgG4 Fc		
<400>	61		
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg			

1	5	10	15
Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr	20	25	30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser	35	40	45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser	50	55	60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr	65	70	75
Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys	85	90	95
Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro	100	105	110
Glu Ala Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys	115	120	125
Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val	130	135	140
Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp	145	150	155
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe	165	170	175
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp	180	185	190
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu	195	200	205
Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg	210	215	220
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys	225	230	235
			240

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

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

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

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

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

Leu	Ser	Leu	Ser	Leu	Gly	Lys
				325		

<210> 62
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<220>
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<400> 62

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

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

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

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

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

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

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

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

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

Asp	Val	Ser	Gln	Glu	Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	Tyr	Val	Asp
145				150				155				160			

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

Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp
180				185				190							

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

Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg
210				215				220							

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

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

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

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

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

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

Leu Ser Leu Ser Leu Gly Lys

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<400> 63

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

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

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

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

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

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

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

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

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

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
 145 150 155 160

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

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp

	180		185		190										
Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Gly	Leu
	195						200					205			
Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg
	210					215					220				
Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Gln	Glu	Glu	Met	Thr	Lys
225					230					235					240
Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp
		245						250						255	
Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys
		260						265						270	
Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser
		275					280					285			
Arg	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Glu	Gly	Asn	Val	Phe	Ser
	290					295					300				
Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser
305					310					315					320
Leu	Ser	Leu	Ser	Leu	Gly	Lys									
				325											

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<210> 65

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<210> 66

<211> 8

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<223> CDR-H1

<400> 66

Gly Tyr Thr Phe Thr Ser Tyr Trp
1 5

<210> 67
<211> 8
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<220>
<223> CDR-H1

<400> 67

Gly Phe Ala Phe Ser Ser Tyr Asp
1 5

<210> 68
<211> 8
<212> PRT
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<220>
<223> CDR-H1

<400> 68

Gly Tyr Thr Phe Thr Ser Tyr Tyr
1 5

<210> 69
<211> 8
<212> PRT
<213> Artificial Sequence

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<400> 69

Gly Tyr Thr Phe Thr Asp Tyr Glu
1 5

<210> 70

<400> 70
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<210> 71
<211> 8
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<223> CDR-H2

<400> 71

Ile Asn Pro Asn Ser Gly Gly Thr
1 5

<210> 72

<400> 72
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<210> 73

<211> 8

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<213> Artificial Sequence

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<223> CDR-H2

<400> 73

Ile Trp Tyr Asp Gly Ser Tyr Lys
1 5

<210> 74

<211> 8

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<223> CDR-H2

<400> 74

Ser Ser Gly Ser Gly Ala Asn Thr
1 5

<210> 75

<400> 75
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<210> 76

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<400> 81
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<210> 82
<211> 8
<212> PRT
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<400> 82

Ile Asp Pro Ser Thr Gly Tyr Thr
1 5

<210> 83
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-H2

<400> 83

Ile Ser Ser Gly Gly Gly Ser Ile
1 5

<210> 84
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-H2

<400> 84

Ile Tyr Pro Gly Asn Val His Thr
1 5

<210> 85
<211> 8
<212> PRT
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<223> CDR-H2

<400> 85

Ile Asp Pro Glu Thr Gly Gly Thr
1 5

<210> 86

<400> 86
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<210> 87
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-H3

<400> 87

Ala Arg Glu Asp Cys Thr Ser Ile Ser Cys Ser Phe Asp Tyr
1 5 10

<210> 88

<400> 88
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<210> 89

<400> 89
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<210> 90
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-H3

<400> 90

Val Arg Glu Ser Val Gly Tyr Ser Ser Gly Trp Ser Phe Asp Tyr
1 5 10 15

<210> 91
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-H3

<400> 91

Ala	Arg	Leu	Arg	Phe	Phe	Asp	Trp	Phe	Asp	Tyr
1				5					10	

<210> 92

<400> 92
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<210> 93

<400> 93
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<210> 94

<400> 94
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<210> 99

<400> 99
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<210> 100
<211> 14
<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-H3

<400> 100

Ala	Arg	Arg	Asp	Tyr	Gly	Ser	Ser	Phe	Tyr	Ala	Met	Asp	Tyr
1				5					10				

<210> 101

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-H3

<400> 101

Val	Arg	His	Gly	Tyr	His	Glu	Tyr	Phe	Asp	Val
1				5					10	

<210> 102

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-H3

<400> 102

Ser	Arg	Gly	Gly	Thr	Asn	Ser	Trp	Phe	Ala	Tyr
1				5					10	

<210> 103

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-H3

<400> 103

Thr	Gly	Ile	Thr	Arg	Phe	Ala	Tyr
1				5			

<210> 104

<400> 104

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<210> 105
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> VH sequence

<400> 105

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 Gly Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Met 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 Tyr Cys
85 90 95

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 106

<400> 106
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<210> 107

<400> 107
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<210> 108
<211> 122
<212> PRT
<213> Artificial Sequence

<220>

<223> VH sequence

<400> 108

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

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Tyr Lys Tyr Tyr Gly Asp Ser Val
50 55 60

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

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

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

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

<210> 109

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> VH sequence

<400> 109

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

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

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

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

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

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

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

Leu	Val	Thr	Val	Ser	Ser
			115		

<210> 110

<400> 110
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<400> 119

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

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

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

Gly	Tyr	Ile	Asp	Pro	Ser	Thr	Gly	Tyr	Thr	Phe	His	Asn	Gln	Lys	Phe
	50					55				60					

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

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

Ala	Arg	Arg	Asp	Tyr	Gly	Ser	Ser	Phe	Tyr	Ala	Met	Asp	Tyr	Trp	Gly
			100					105					110		

His	Gly	Thr	Ser	Ile	Thr	Val	Ser	Ser
	115						120	

<210> 120

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> VH sequence

<400> 120

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

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

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

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

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

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

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

Thr	Val	Thr	Val	Ser	Ser
			115		

<210> 121
 <211> 118
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VH sequence

<400> 121

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

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

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

Gly	Trp	Ile	Tyr	Pro	Gly	Asn	Val	His	Thr	Gln	Tyr	Asn	Glu	Lys	Phe
	50					55					60				

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

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

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

Leu Val Thr Val Ser Ala
115

<210> 122

<211> 115

<212> PRT

<213> Artificial Sequence

<220>

<223> VH sequence

<400> 122

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

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

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

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

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

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

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

Val Ser Ala
115

<210> 123

<400> 123
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<210> 124

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> VL sequence

<400> 124

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

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

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

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

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

<210> 125

<400> 125
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<210> 126

<400> 126
000

<210> 127

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> VL sequence

<400> 127

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

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

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

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

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

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Trp
85 90 95

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

<210> 128

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> VL sequence

<400> 128

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

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

Asn Tyr Ala Asn Trp Val Gln Glu Lys Pro Asp His Leu Phe Thr Gly
35 40 45

Leu Ile Gly Gly Thr Asn Asn Arg Thr Pro Gly Val Pro Ala Arg Phe
50 55 60

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

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

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

<210> 129

<400> 129
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<210> 130

<400> 130
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<210> 131

<400> 131
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<210> 132

<400> 132
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<210> 133

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<210> 135

<400> 135
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<210> 136

<400> 136
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<210> 137

<400> 137
000

<210> 138
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> VL sequence

<400> 138

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

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

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

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

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

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

Tyr Tyr Ser Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile
100 105 110

Lys

<210> 139
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> VL sequence

<400> 139

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

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile Val His Ser

	20		25		30
Asn Gly	Asn Thr Tyr Leu Glu Trp Tyr Leu Gln Lys	Pro Gly Gln Ser			
	35	40	45		
Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro					
	50	55	60		
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile					
65	70	75	80		
Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Phe Gln Gly					
	85	90	95		
Ser His Phe Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys					
	100	105	110		
<210>	140				
<211>	112				
<212>	PRT				
<213>	Artificial Sequence				
<220>					
<223>	VL sequence				
<400>	140				
Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly					
1	5	10	15		
Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser					
	20	25	30		
Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser					
	35	40	45		
Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro					
	50	55	60		
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile					
65	70	75	80		
Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Ser					
	85	90	95		
Thr His Val Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys					

	100	105	110
<210> 141			
<211> 107			
<212> PRT			
<213> Artificial Sequence			
<220>			
<223> VL sequence			
<400> 141			
Ser Ile Val Met Thr Gln Thr Pro Lys Phe Leu Leu Val Ser Ala Gly			
1 5 10 15			
Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Ser Val Ser Asn Asp			
20 25 30			
Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile			
35 40 45			
Tyr Tyr Ala Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly			
50 55 60			
Ser Gly Tyr Gly Thr Asp Phe Thr Phe Thr Ile Ser Thr Val Gln Ala			
65 70 75 80			
Glu Asp Leu Ala Val Tyr Phe Cys Gln Gln Asp Tyr Ser Ser Pro Trp			
85 90 95			
Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys			
100 105			

<210> 142

<400> 142

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<210> 143

<211> 363

<212> DNA

<213> Artificial Sequence

<220>

<223> VH sequence

<400> 143

caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60

tcctgcaagg cttctggata caccttcacc ggctactata tattctggat gcgacaggcc 120

cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtgggtgg cacagactat 180
gcacagaagt ttcagggcag ggtcaccatg accatggaca cgtccatcag cacagcctac 240
atggaactga gcagactgag atctgacgac acggccgtgt attactgtgc gagagaggat 300
tgtactagta tcagttgctc ttttgactat tggggccagg gaaccctggg caccgtctcc 360
tca 363

<210> 144

<400> 144
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<210> 145

<400> 145
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<210> 146

<211> 366

<212> DNA

<213> Artificial Sequence

<220>

<223> VH sequence

<400> 146

caggtgcagc tgggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt aactatggca tgcactgggt ccgccaggct 120
ccaggcaagg ggccggagtg ggtggcagtt atatggtatg atggaagtta taaatactat 180
ggagactccg tgaagggccg attcaccatt tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attattgtgt gagagagagc 300
gtcgggtata gcagtggctg gtcctttgac tactggggcc agggaatcct ggtcaccgtc 360
tcctca 366

<210> 147

<211> 354

<212> DNA

<213> Artificial Sequence

<220>

<223> VH sequence

<400> 147

gaggtgcagc tggtggagtc tgggggaggc ttggtacagc cgggggggtc cctgagactt 60
tcctgtgcag cctctggatt caccttaagt agctatgcc aagagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcaatt agtagtggtg gtggtgctaa cacatataac 180

gcagactccc tgaagggccg gttcaccatc tccagggaca attccaagaa cacgctgttt 240

ctccaaatga acagcctgag agccgaggac acggccgtat attactgtgc gagattacga 300

ttttttgact ggtttgacta ctggggccag ggggccctgg tcaccgtctc ctca 354

<210> 148

<400> 148
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<210> 149

<400> 149
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<210> 150

<400> 150
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<210> 151

<400> 151
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<210> 152

<400> 152
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<210> 154

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<210> 155

<400> 155
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<210> 156

<400> 156
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<210> 157

<211> 363

<212> DNA

<213> Artificial Sequence

<220>

<223> VH sequence

<400> 157

cagggtccagc ttcagcagtc tggggctgaa ctggcaaagc ctggggcctc agtgaagatg 60

tcctgcaagg cttctggcta cacctttact agctactgga tgactgggt aaaacagagg 120

cctggacagg gtctggaatg gattggatac attgataccta gcactgggta tactttccac 180

aatcagaagt tcaaggacaa ggccacattg actgcagaca aatcctccac cacagcctac 240

atgcaactga gaagcctgac atctgaggac tctgcagtct attactgtgc aagaagggac 300

tacggtagta gcttctatgc tatggactac tggggtcacg gaacctcaat caccgtctcc 360

tca 363

<210> 158

<211> 354

<212> DNA

<213> Artificial Sequence

<220>

<223> VH sequence

<400> 158

gaagtgcagg tgggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaaate 60

tcattgtgcag cctctggatt cgctttcagt agctatgaca tgtcttgggt tcgccagact 120

ccggagaaga ggctggagtg ggtcgcatatc attagtagtg gcggtggtag tatctactat 180

gcagagactg tgaagggccg attcaccatc tccagagaca atgccaagaa caccctgtac 240

ctgcaaatga gcagtctgaa gtctgaggac acagccatgt attactgcgt aagacatggt 300

taccacgagt acttcgatgt ctggggcgca gggaccacgg tcaccgtctc ctca 354

<210> 159

<211> 354

<212> DNA

<213> Artificial Sequence

<220>

<223> VH sequence

<400> 159

cagggtccagc tgcagcagtc tggacctgag ctgggtgaagc ctggggcctc agtgaggata 60

tcctgcaagg cttctggcta caccttcaca agctactata tacactgggt gaagcagagg 120

cctggacagg gacttgagtg gattggatgg atttatcctg gaaatgttca tactcagtac 180

aatgagaagt tcaagggcaa ggccacactg actgcagaca agtcctccac cacagcctac 240
 atgcagctca gcagcctgac ctctgaagac tctgcggtct atttctgttc aagagggcggg 300
 actaactctt ggtttgctta ctggggccaa gggactctgg tcactgtctc tgca 354

<210> 160
 <211> 345
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> VH sequence

<400> 160
 caggttcaac tgcagcagtc tggggctgag ctggtgaggc ctggggcttc agtgacgctg 60
 tcctgcaagg cttcgggcta cacatttact gactatgaaa tgcactgggt gaagcagaca 120
 cctgtgcatg gcctggaatg gattggagct attgatcctg aaactgggtg tactgcctac 180
 aatcagaagt tcaagggcaa ggccacactg actgcagaca aatcctccag cacagcctac 240
 atggagctcc gcagcctgac atctgaggac tctgccgtct attactgtac agggattacg 300
 aggtttgctt actggggcca agggactctg gtcactgtct ctgca 345

<210> 161

<400> 161
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<210> 162
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> VL sequence

<400> 162
 gatattgtga tgactcagtc tccactctcc ctgcccgtca cccttgaga gccggcctcc 60
 atctcctgta ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
 tacctgcaga agccagggca gtctccacag ctctgatct atttgggttc taatcgggcc 180
 tccggggctc ctgacagggt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
 agcagagtgg aggctgagga tgttgggggt tattgctgca tgcaagctct acaaactcct 300
 cggacgttcg gccaaaggac caaggtggaa atcaaa 336

<210> 163

<400> 163
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<210> 164

<400> 164
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<210> 165
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> VL sequence

<400> 165
gacatccaga tgaccagtc tccttcacc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca gcagaaacca 120
gggaaagtcc ctaagctcct gatctataag gcgtctagtt taaaaactgg ggtcccatca 180
aggttcagcg gcaatgggtc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
gatgattttg caacttatta ctgccaacag tataatagtt attcgtggac gtcgggcaa 300
gggaccaaag tggaaatcaa a 321

<210> 166
<211> 327
<212> DNA
<213> Artificial Sequence

<220>
<223> VL sequence

<400> 166
caggctgttg tgactcagga atctgcactc accacatcac ctggtgaaac agtcacactc 60
acttgtcgct caagtactgg ggctgttaca actagtaact atgccaaactg ggtccaagaa 120
aaaccagatc atttattcac tgggtctaata ggtggtacca acaaccgaac tccaggtggt 180
cctgccagat tctcaggctc cctgattgga gacaaggctg cctcaccat cacaggggca 240
cagactgagg atgaggcaat atatttctgt gctctatggt acagcaacca ttgggtgttc 300
ggtggaggaa ccaaactgac tgtccta 327

<210> 167

<400> 167
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<210> 168

<400> 168
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<210> 169

<400> 169
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<210> 170

<400> 170
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<210> 171

<400> 171
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<400> 172
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<210> 173

<400> 173
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<210> 174

<400> 174
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<210> 175

<400> 175
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<210> 176

<211> 339

<212> DNA

<213> Artificial Sequence

<220>

<223> VL sequence

<400> 176

gacattgtga tgtcacagtc tccatcctcc ctagctgtgt cagttggaga gaaggttact 60

atgagctgca agtccagtca gaggctttta tatagtacca atcaaaagaa ctacttggcc 120

tggtaccagc agaaaccggg gcagtctcct aaactgctga ttactgggc atccactagg 180

gaatctgggg tccctgatcg cttcacaggc agtggatctg ggacagattt cactctcacc 240

atcagcagtg tgaaggctga agacctggca gtttattact gtcagcaata ttatagctat 300

ccgtggacgt tcggtggagg caccaagctg gaaatcaaa 339

<210> 177
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> VL sequence

<400> 177
 gatgttttga tgacccaaac tccactctcc ctgcctgtca gtcttggaga tcaagcctcc 60
 atctcttgca gatctagtca gagcattgta catagtaatg gaaacaccta tttagaatgg 120
 tacctgcaga aaccaggcca gtctccaaag ctctgatct acaaagtttc caaccgattt 180
 tctgggggtcc cagacagggt cagtggcagt ggatcaggga cagatttcac actcaagatc 240
 agcagagtgg aggctgagga tctgggagtt tatttctgct ttcaagggtc acattttccg 300
 tacacgttcg gagggggggac caagctggaa ataaaa 336

<210> 178
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> VL sequence

<400> 178
 gatgttgtga tgacccaaac tccactctcc ctgcctgtca gtcttggaga tcaagcctcc 60
 atctcttgca gatctagtca gagccttgta cacagtaatg gaaacaccta ttacattgg 120
 tacctgcaga agccaggcca gtctccaaag ctctgatct acaaagtttc caaccgattt 180
 tctgggggtcc cagacagggt cagtggcagt ggatcaggga cagatttcac actcaagatc 240
 agcagagtgg aggctgagga tctgggagtt tatttctgct ctcaaagtac acatgttcca 300
 ttcacgttcg gctcggggac aaagttggaa ataaaa 336

<210> 179
 <211> 321
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> VL sequence

<400> 179
 agtattgtga tgaccagac tcccaaattc ctgcttgat cagcaggaga cagggttacc 60

ataacctgca aggccagtca gagtgtgagt aatgatgtag ctgggtacca acagaagcca 120
 gggcagtctc ctaaactgct gatatactat gcatccaatc gctacactgg agtccttgat 180
 cgcttcactg gcagtggata tgggacggat ttcactttca ccatcagcac tgtgcaggct 240
 gaagacctgg cagtttattt ctgtcagcag gattatagct ctccgtggac gttcggtgga 300
 ggcaccaagc tggaaatcaa a 321

<210> 180
 <211> 503
 <212> PRT
 <213> Homo sapiens

<400> 180

Met Glu Pro Ala Gly Pro Ala Pro Gly Arg Leu Gly Pro Leu Leu Cys
 1 5 10 15

Leu Leu Leu Ala Ala Ser Cys Ala Trp Ser Gly Val Ala Gly Glu Glu
 20 25 30

Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val Leu Val Ala Ala Gly
 35 40 45

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

Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly Arg Glu Leu Ile Tyr
 65 70 75 80

Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr Thr Val Ser Asp Leu
 85 90 95

Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg Ile Gly Asn Ile Thr
 100 105 110

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

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

Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro Ala Ala Arg Ala Thr
 145 150 155 160

Pro	Gln	His	Thr	Val	Ser	Phe	Thr	Cys	Glu	Ser	His	Gly	Phe	Ser	Pro	
				165					170					175		

Arg	Asp	Ile	Thr	Leu	Lys	Trp	Phe	Lys	Asn	Gly	Asn	Glu	Leu	Ser	Asp	
				180					185					190		

Phe	Gln	Thr	Asn	Val	Asp	Pro	Val	Gly	Glu	Ser	Val	Ser	Tyr	Ser	Ile	
				195					200					205		

His	Ser	Thr	Ala	Lys	Val	Val	Leu	Thr	Arg	Glu	Asp	Val	His	Ser	Gln	
				210					215					220		

Val	Ile	Cys	Glu	Val	Ala	His	Val	Thr	Leu	Gln	Gly	Asp	Pro	Leu	Arg	
				225					230					235		

Gly	Thr	Ala	Asn	Leu	Ser	Glu	Thr	Ile	Arg	Val	Pro	Pro	Thr	Leu	Glu	
				245					250					255		

Val	Thr	Gln	Gln	Pro	Val	Arg	Ala	Glu	Asn	Gln	Val	Asn	Val	Thr	Cys	
				260					265					270		

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

Asn	Gly	Asn	Val	Ser	Arg	Thr	Glu	Thr	Ala	Ser	Thr	Val	Thr	Glu	Asn	
				290					295					300		

Lys	Asp	Gly	Thr	Tyr	Asn	Trp	Met	Ser	Trp	Leu	Leu	Val	Asn	Val	Ser	
				305					310					315		

Ala	His	Arg	Asp	Asp	Val	Lys	Leu	Thr	Cys	Gln	Val	Glu	His	Asp	Gly	
				325					330					335		

Gln	Pro	Ala	Val	Ser	Lys	Ser	His	Asp	Leu	Lys	Val	Ser	Ala	His	Pro	
				340					345					350		

Lys	Glu	Gln	Gly	Ser	Asn	Thr	Ala	Ala	Glu	Asn	Thr	Gly	Ser	Asn	Glu	
				355					360					365		

Arg	Asn	Ile	Tyr	Ile	Val	Val	Gly	Val	Val	Cys	Thr	Leu	Leu	Val	Ala	
				370					375					380		

Leu	Leu	Met	Ala	Ala	Leu	Tyr	Leu	Val	Arg	Ile	Arg	Gln	Lys	Lys	Ala	
				385					390					395		

Gln	Gly	Ser	Thr	Ser	Ser	Thr	Arg	Leu	His	Glu	Pro	Glu	Lys	Asn	Ala
				405					410					415	

Arg	Glu	Ile	Thr	Gln	Asp	Thr	Asn	Asp	Ile	Thr	Tyr	Ala	Asp	Leu	Asn
			420					425					430		

Leu	Pro	Lys	Gly	Lys	Lys	Pro	Ala	Pro	Gln	Ala	Ala	Glu	Pro	Asn	Asn
		435					440					445			

His	Thr	Glu	Tyr	Ala	Ser	Ile	Gln	Thr	Ser	Pro	Gln	Pro	Ala	Ser	Glu
	450					455					460				

Asp	Thr	Leu	Thr	Tyr	Ala	Asp	Leu	Asp	Met	Val	His	Leu	Asn	Arg	Thr
465					470					475					480

Pro	Lys	Gln	Pro	Ala	Pro	Lys	Pro	Glu	Pro	Ser	Phe	Ser	Glu	Tyr	Ala
				485					490					495	

Ser	Val	Gln	Val	Pro	Arg	Lys
			500			