

SEQUENCE LISTING

<110> Affimed GmbH

<120> Cryopreserved NK cells preloaded with an antibody construct

<130> A 3319PCT

<150> EP18191031.6

<151> 2018-08-27

<160> 178

<170> BiSSAP 1.3.6

<210> 1

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 1

Gly Gly Ser Gly Gly Ser
1 5

<210> 2

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 2

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

<210> 3

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

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<400> 3

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
1 5 10 15
Gly Ser Gly Gly Ser
20

<210> 4

<211> 9

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<213> Artificial Sequence

<220>

<223> linker

<400> 4

Gly Gly Ser Gly Gly Ser Gly Gly Ser
1 5

<210> 5

<211> 5

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<213> Artificial Sequence

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<223> linker

<400> 5

Gly Gly Gly Gly Ser
1 5

<210> 6

<211> 10

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<400> 6

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

<210> 7

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<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 7

Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly
1				5					10					15	
Gly	Gly	Gly	Ser												
			20												

<210> 8

<211> 30

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<213> Artificial Sequence

<220>

<223> linker

<400> 8

Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly
1				5					10					15	
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser		
			20					25					30		

<210> 9

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> hinge

<400> 9

Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro
1				5					10					15

<210> 10

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> hinge

<400> 10

Asp Lys Thr His Thr Cys Pro Pro Cys Pro
1 5 10

<210> 11

<211> 328

<212> PRT

<213> Artificial Sequence

<220>

<223> heavy chain constant 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 Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
65 70 75 80
Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
85 90 95
Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
100 105 110
Ala Pro Glu Phe Glu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
115 120 125
Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
130 135 140
Val Val Ala Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
145 150 155 160
Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
165 170 175
Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
180 185 190
Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
195 200 205
Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
210 215 220
Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
225 230 235 240
Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
245 250 255
Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
260 265 270
Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
275 280 285
Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val

290		295		300
Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln				
305		310		315
Lys Ser Leu Ser Leu Ser Pro Gly				320
		325		

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

<220>
 <223> heavy chain constant domain

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

Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu
		275					280					285			
Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val
		290				295					300				
Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln
305					310					315					320
Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly								
				325											

<210> 13
 <211> 106
 <212> PRT
 <213> Homo sapiens

<220>
 <223> light chain constant domain

Gly	Gln	Pro	Lys	Ala	Ala	Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser
1				5					10					15	
Glu	Glu	Leu	Gln	Ala	Asn	Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp
			20					25					30		
Phe	Tyr	Pro	Gly	Ala	Val	Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro
		35					40					45			
Val	Lys	Ala	Gly	Val	Glu	Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn
	50					55					60				
Lys	Tyr	Ala	Ala	Ser	Ser	Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys
65					70					75				80	
Ser	His	Arg	Ser	Tyr	Ser	Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val
			85						90					95	
Glu	Lys	Thr	Val	Ala	Pro	Thr	Glu	Cys	Ser						
			100					105							

<210> 14
 <211> 107
 <212> PRT
 <213> Homo sapiens

<220>
 <223> light chain constant domain

Arg	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu
1				5					10					15	
Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe
			20					25					30		
Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln
		35					40					45			

Ser	Gly	Asn	Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser
50						55					60				
Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu
65					70					75					80
Lys	His	Lys	Val	Tyr	Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser
				85					90					95	
Pro	Val	Thr	Lys	Ser	Phe	Asn	Arg	Gly	Glu	Cys					
			100					105							

<210> 15
 <211> 216
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CH2-CH3 constant domain

Ala	Pro	Glu	Phe	Glu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys
1				5					10					15	
Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val
			20					25					30		
Val	Val	Ala	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr
		35					40					45			
Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu
	50					55					60				
Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His
65					70					75					80
Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys
				85					90					95	
Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln
			100					105					110		
Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met
		115					120					125			
Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro
	130					135					140				
Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn
145					150				155					160	
Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu
				165					170					175	
Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val
			180					185					190		
Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln
		195					200					205			
Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly								
		210				215									

<210> 16
 <211> 215

<212> PRT
<213> Artificial Sequence

<220>
<223> CH2-CH3 constant domain

<400> 16
Ala Pro Glu Phe Glu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
1 5 10 15
Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
20 25 30
Val Val Ala Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
35 40 45
Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
50 55 60
Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
65 70 75 80
Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
85 90 95
Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
100 105 110
Pro Arg Glu Pro Gln Val Tyr Thr Lys Pro Pro Ser Arg Asp Glu Leu
115 120 125
Thr Lys Asn Gln Val Ser Leu Ser Cys Leu Val Lys Gly Phe Tyr Pro
130 135 140
Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
145 150 155 160
Tyr Lys Thr Thr Val Pro Val Leu Asp Ser Asp Gly Ser Phe Arg Leu
165 170 175
Ala Ser Tyr Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
180 185 190
Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
195 200 205
Lys Ser Leu Ser Leu Ser Pro
210 215

<210> 17
<211> 216
<212> PRT
<213> Artificial Sequence

<220>
<223> ch2-ch3 constant domain

<400> 17
Ala Pro Glu Phe Glu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
1 5 10 15
Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val

			20					25				30					
Val	Val	Ala	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr		
		35					40					45					
Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu		
	50					55					60						
Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His		
65					70					75					80		
Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys		
			85						90					95			
Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln		
			100					105						110			
Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met		
		115					120						125				
Thr	Lys	Asn	Gln	Val	Ser	Leu	Tyr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro		
	130					135					140						
Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn		
145					150					155					160		
Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu		
				165				170						175			
Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val		
		180					185						190				
Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln		
	195					200						205					
Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly										
	210					215											

<210> 18

<211> 216

<212> PRT

<213> Artificial Sequence

<220>

<223> ch2-ch3 constant domain

<400> 18

Ala	Pro	Glu	Phe	Glu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys		
1			5					10						15			
Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val		
		20						25				30					
Val	Val	Ala	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr		
		35				40					45						
Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu		
	50					55					60						
Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His		
65					70					75					80		
Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys		
			85					90						95			
Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln		
			100					105						110			

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

<210> 19
 <211> 98
 <212> PRT
 <213> Homo sapiens

<220>
 <223> ch1 domain

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														

<210> 20
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> c1 domain

<400> 20

Gly	Gln	Pro	Lys	Ala	Ala	Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser
1				5					10					15	
Glu	Glu	Leu	Gln	Ala	Asn	Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp
			20					25					30		
Phe	Tyr	Pro	Gly	Ala	Val	Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro
		35					40					45			
Val	Lys	Ala	Gly	Val	Glu	Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn
	50					55					60				
Lys	Tyr	Ala	Ala	Ser	Ser	Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys
65					70					75					80
Ser	His	Arg	Ser	Tyr	Ser	Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val
			85						90					95	
Glu	Lys	Thr	Val	Ala	Pro	Thr	Glu	Ser	Ser						
			100					105							

<210> 21
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> c1 domain

Arg	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu
1				5					10					15	
Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe
			20					25					30		
Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln
		35					40					45			
Ser	Gly	Asn	Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser
	50					55					60				
Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu
65					70					75					80
Lys	His	Lys	Val	Tyr	Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser
			85						90					95	
Pro	Val	Thr	Lys	Ser	Phe	Asn	Arg	Gly	Glu	Ser					
			100					105							

<210> 22
 <211> 216
 <212> PRT
 <213> Homo sapiens

<220>
 <223> ch2-ch3 domain

<400> 22

Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys
1				5					10					15	
Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val
			20					25					30		
Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr
		35					40					45			
Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu
	50					55					60				
Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His
65					70					75				80	
Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys
				85					90					95	
Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln
			100					105					110		
Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met
		115					120					125			
Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro
	130					135					140				
Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn
145					150					155					160
Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu
				165				170						175	
Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val
			180				185						190		
Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln
		195					200					205			
Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly								
	210					215									

<210> 23
 <211> 192
 <212> PRT
 <213> Homo sapiens

<220>
 <223> CD16a

<400> 23

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

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

<210> 24
 <211> 192
 <212> PRT
 <213> Cynomolgus

<220>
 <223> CD16a

<400> 24

Gly	Met	Arg	Ala	Glu	Asp	Leu	Pro	Lys	Ala	Val	Val	Phe	Leu	Glu	Pro		
1				5				10					15				
Gln	Trp	Tyr	Arg	Val	Leu	Glu	Lys	Asp	Arg	Val	Thr	Leu	Lys	Cys	Gln		
			20					25					30				
Gly	Ala	Tyr	Ser	Pro	Glu	Asp	Asn	Ser	Thr	Arg	Trp	Phe	His	Asn	Glu		
		35				40						45					
Ser	Leu	Ile	Ser	Ser	Gln	Thr	Ser	Ser	Tyr	Phe	Ile	Ala	Ala	Ala	Arg		
	50				55						60						
Val	Asn	Asn	Ser	Gly	Glu	Tyr	Arg	Cys	Gln	Thr	Ser	Leu	Ser	Thr	Leu		
65				70					75					80			
Ser	Asp	Pro	Val	Gln	Leu	Glu	Val	His	Ile	Gly	Trp	Leu	Leu	Leu	Gln		
			85					90					95				
Ala	Pro	Arg	Trp	Val	Phe	Lys	Glu	Glu	Glu	Ser	Ile	His	Leu	Arg	Cys		
			100				105						110				
His	Ser	Trp	Lys	Asn	Thr	Leu	Leu	His	Lys	Val	Thr	Tyr	Leu	Gln	Asn		
		115				120						125					
Gly	Lys	Gly	Arg	Lys	Tyr	Phe	His	Gln	Asn	Ser	Asp	Phe	Tyr	Ile	Pro		
	130					135					140						
Lys	Ala	Thr	Leu	Lys	Asp	Ser	Gly	Ser	Tyr	Phe	Cys	Arg	Gly	Leu	Ile		
145				150						155					160		
Gly	Ser	Lys	Asn	Val	Ser	Ser	Glu	Thr	Val	Asn	Ile	Thr	Ile	Thr	Gln		
			165					170						175			
Asp	Leu	Ala	Val	Ser	Ser	Ile	Ser	Ser	Phe	Phe	Pro	Pro	Gly	Tyr	Gln		
			180				185							190			

<210> 25
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide tag

<400> 25
His His His His His His
1 5

<210> 26
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide tag

<400> 26
Glu Pro Glu Ala
1

<210> 27
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> variable domain

<400> 27
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Ile Asp Leu Ser Asn Tyr
20 25 30
Ala Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45
Gly Ile Ile Trp Ala Ser Gly Thr Thr Phe Tyr Ala Thr Trp Ala Lys
50 55 60
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr Leu
65 70 75 80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala

				85					90					95			
Arg	Thr	Val	Pro	Gly	Tyr	Ser	Thr	Ala	Pro	Tyr	Phe	Asp	Leu	Trp	Gly		
			100					105					110				
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser									
		115					120										

<210> 28
 <211> 110
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> variable domain

<400> 28																	
Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Val	Ser	Ala	Ser	Val	Gly		
1				5				10					15				
Asp	Arg	Val	Thr	Ile	Thr	Cys	Gln	Ser	Ser	Pro	Ser	Val	Trp	Ser	Asn		
			20					25					30				
Phe	Leu	Ser	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu		
		35					40					45					
Ile	Tyr	Glu	Ala	Ser	Lys	Leu	Thr	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser		
	50					55					60						
Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln		
65					70				75						80		
Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gly	Gly	Gly	Tyr	Ser	Ser	Ile		
				85					90					95			
Ser	Asp	Thr	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys				
			100					105					110				

<210> 29
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 29									
Gly	Tyr	Thr	Phe	Thr	Ser	Tyr	Tyr		
1				5					

<210> 30
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>

<223> cdr

<400> 30

Ile Asn Pro Ser Gly Gly Ser Thr
1 5

<210> 31

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 31

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

<210> 32

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 32

Asn Ile Gly Ser Lys Asn
1 5

<210> 33

<400> 33

000

<210> 34

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 34

Gln Val Trp Asp Asn Tyr Ser Val Leu
1 5

<210> 35
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> variable domain

<400> 35
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15
Ser Leu Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30
Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe
50 55 60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr Trp Gly Gln
100 105 110
Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 36
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> variable domain

<400> 36
Ser Tyr Val Leu Thr Gln Pro Ser Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Thr Ala Thr Ile Ser Cys Gly Gly His Asn Ile Gly Ser Lys Asn Val
20 25 30
His Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Val Leu Val Ile Tyr
35 40 45
Gln Asp Asn Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Tyr Ser Val Leu
85 90 95
Phe Gly Gly Gly Thr Lys Leu Thr Val Leu

100

105

<210> 37
 <211> 255
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> scFv

<400> 37
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
 1 5 10 15
 Ser Leu Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
 20 25 30
 Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr Trp Gly Gln
 100 105 110
 Gly Thr Leu Val Thr Val Ser Ser Gly Gly Ser Gly Gly Ser Gly Gly
 115 120 125
 Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Ser Tyr Val Leu Thr Gln
 130 135 140
 Pro Ser Ser Val Ser Val Ala Pro Gly Gln Thr Ala Thr Ile Ser Cys
 145 150 155 160
 Gly Gly His Asn Ile Gly Ser Lys Asn Val His Trp Tyr Gln Gln Arg
 165 170 175
 Pro Gly Gln Ser Pro Val Leu Val Ile Tyr Gln Asp Asn Lys Arg Pro
 180 185 190
 Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser Gly Asn Thr Ala
 195 200 205
 Thr Leu Thr Ile Ser Gly Thr Gln Ala Met Asp Glu Ala Asp Tyr Tyr
 210 215 220
 Cys Gln Val Trp Asp Asn Tyr Ser Val Leu Phe Gly Gly Gly Thr Lys
 225 230 235 240
 Leu Thr Val Leu Ala Ala Ala Gly Ser His His His His His His
 245 250 255

<210> 38
 <211> 218
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Fab VH

<400> 38

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1			5						10					15	
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Tyr
		20					25					30			
Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35				40						45			
Gly	Ile	Ile	Asn	Pro	Ser	Gly	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
	50					55					60				
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70				75						80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
		100						105					110		
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val
	115					120						125			
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala
	130				135						140				
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser
145					150				155						160
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val
			165					170						175	
Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro
		180					185						190		
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys
	195					200						205			
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val						
	210					215									

<210> 39

<211> 212

<212> PRT

<213> Artificial Sequence

<220>

<223> Fab VL

<400> 39

Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln
1			5						10					15	
Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val
			20					25					30		
His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr
		35					40					45			

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

<210> 40
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 40
 Gly Tyr Thr Phe Thr Ser Tyr Tyr
 1 5

<210> 41
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 41
 Ile Glu Pro Met Tyr Gly Ser Thr
 1 5

<210> 42

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

<220>
<223> cdr

<400> 42
Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr
1 5 10

<210> 43
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 43
Asn Ile Gly Ser Lys Asn
1 5

<210> 44
<400> 44
000

<210> 45
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 45
Gln Val Trp Asp Asn Tyr Ser Val Leu
1 5

<210> 46
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> variable domain

<400> 46

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1				5					10					15	
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Tyr
			20					25					30		
Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			
Gly	Ala	Ile	Glu	Pro	Met	Tyr	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
	50					55					60				
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70				75						80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
			100					105						110	
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser								
		115					120								

<210> 47

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 47

Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln
1				5					10					15	
Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val
			20					25					30		
His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr
		35					40					45			
Gln	Asp	Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met
65					70				75						80
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu
				85					90					95	
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu						
			100					105							

<210> 48

<211> 255

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv

<400> 48

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1				5					10					15	
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Tyr
			20					25					30		
Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			
Gly	Ala	Ile	Glu	Pro	Met	Tyr	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
	50					55					60				
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70				75						80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
			100					105					110		
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly
		115					120					125			
Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Ser	Tyr	Val	Leu	Thr	Gln
	130					135					140				
Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln	Thr	Ala	Thr	Ile	Ser	Cys
145					150					155					160
Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val	His	Trp	Tyr	Gln	Gln	Arg
			165					170						175	
Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr	Gln	Asp	Asn	Lys	Arg	Pro
			180					185					190		
Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser	Asn	Ser	Gly	Asn	Thr	Ala
	195						200					205			
Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met	Asp	Glu	Ala	Asp	Tyr	Tyr
	210					215					220				
Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu	Phe	Gly	Gly	Gly	Thr	Lys
225					230					235					240
Leu	Thr	Val	Leu	Ala	Ala	Ala	Gly	Ser	His	His	His	His	His	His	
			245						250					255	

<210> 49

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Fab VH

<400> 49

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

			20					25					30				
Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met		
		35					40					45					
Gly	Ala	Ile	Glu	Pro	Met	Tyr	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe		
	50					55					60						
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr		
65					70					75					80		
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys		
			85						90					95			
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln		
		100						105					110				
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val		
	115						120					125					
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala		
	130					135					140						
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser		
145					150					155					160		
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val		
			165					170						175			
Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro		
		180						185					190				
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys		
	195					200						205					
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val								
	210					215											

<210> 50
 <211> 212
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Fab VL

<400> 50

Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln		
1			5					10				15					
Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val		
		20					25					30					
His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr		
	35					40					45						
Gln	Asp	Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser		
	50				55					60							
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met		
65				70					75					80			
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu		
		85						90					95				
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln	Pro	Lys	Ala	Ala		
	100						105					110					

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

<210> 51
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 51
 Gly Tyr Thr Phe Thr Asn Tyr Tyr
 1 5

<210> 52
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 52
 Ile Asn Pro Gly Gly Gly Ser Thr
 1 5

<210> 53
 <211> 13
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 53
Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr
1 5 10

<210> 54
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 54
Asn Ile Gly Ser Gln Ser
1 5

<210> 55
<400> 55
000

<210> 56
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 56
Gln Val Trp Asp Asn Tyr Ser Val Val
1 5

<210> 57
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> variable domain

<400> 57
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15
Ser Leu Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
20 25 30
Tyr Met Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly	Val	Ile	Asn	Pro	Gly	Gly	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
50					55					60					
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70					75					80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85						90					95	
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
			100					105					110		
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser								
		115				120									

<210> 58
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> variable domain

Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln
1			5						10					15	
Thr	Ala	Arg	Ile	Thr	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Gln	Ser	Val
			20					25					30		
His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr
		35					40					45			
Gln	Asp	Ser	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50					55				60					
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met
65					70					75					80
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Val
			85						90					95	
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu						
			100					105							

<210> 59
 <211> 255
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> scFv

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

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

<210> 60

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Fab VH

<400> 60

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

				85				90					95			
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln	
			100					105					110			
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	
		115					120					125				
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	
	130					135					140					
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	
145					150					155					160	
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	
			165					170					175			
Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	
		180					185						190			
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	
	195					200						205				
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val							
	210					215										

<210> 61

<211> 212

<212> PRT

<213> Artificial Sequence

<220>

<223> Fab VL

<400> 61

Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln	
1				5					10					15		
Thr	Ala	Arg	Ile	Thr	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Gln	Ser	Val	
		20						25					30			
His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr	
	35					40					45					
Gln	Asp	Ser	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser	
	50				55					60						
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met	
65				70					75					80		
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Val	
			85					90					95			
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln	Pro	Lys	Ala	Ala	
	100						105					110				
Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser	Glu	Glu	Leu	Gln	Ala	Asn	
	115					120						125				
Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp	Phe	Tyr	Pro	Gly	Ala	Val	
	130				135					140						
Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro	Val	Lys	Ala	Gly	Val	Glu	
145				150						155					160	
Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn	Lys	Tyr	Ala	Ala	Ser	Ser	
			165					170						175		

Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys	Ser	His	Arg	Ser	Tyr	Ser
			180					185					190		
Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Glu	Lys	Thr	Val	Ala	Pro
		195					200					205			
Thr	Glu	Cys	Ser												
	210														

<210> 62
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 62															
Gly	Tyr	Ser	Phe	Ser	Asp	Phe	Tyr								
1				5											

<210> 63
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 63															
Ile	Asn	Pro	Gly	Gly	Ala	Ser	Thr								
1				5											

<210> 64
 <211> 13
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 64															
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr			
1				5					10						

<210> 65
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>

<223> cdr

<400> 65

Asn Ile Gly Arg Gln Ser
1 5

<210> 66

<400> 66

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<210> 67

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 67

Gln Val Trp Asp Asn Tyr Thr Val Val
1 5

<210> 68

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 68

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1			5						10				15		
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Ser	Asp	Phe
		20					25					30			
Tyr	Ile	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
	35					40					45				
Gly	Ile	Ile	Asn	Pro	Gly	Gly	Ala	Ser	Thr	Thr	Tyr	Ala	Gln	Lys	Phe
	50				55					60					
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65				70				75						80	
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
			100					105					110		

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 69

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 69

Ser Tyr Val Leu Thr Gln Pro Ser Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Thr Ala Arg Ile Thr Cys Gly Gly Tyr Asn Ile Gly Arg Gln Ser Val
20 25 30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45
Gln Asp Ser Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Tyr Thr Val Val
85 90 95
Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 70

<211> 255

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv

<400> 70

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15
Ser Leu Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Ser Asp Phe
20 25 30
Tyr Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Ile Ile Asn Pro Gly Gly Ala Ser Thr Thr Tyr Ala Gln Lys Phe
50 55 60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

<210> 71
 <211> 218
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Fab VH

<400> 71															
Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1				5					10					15	
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Ser	Asp	Phe
			20					25					30		
Tyr	Ile	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
	35					40						45			
Gly	Ile	Ile	Asn	Pro	Gly	Gly	Ala	Ser	Thr	Thr	Tyr	Ala	Gln	Lys	Phe
	50				55						60				
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70				75						80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
			100					105					110		
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val
		115				120						125			
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala
	130					135					140				
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser

145					150					155					160
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val
				165					170					175	
Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro
			180					185					190		
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys
	195						200					205			
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val						
	210					215									

<210> 72
 <211> 212
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Fab VL

<400> 72

Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln
1			5					10					15		
Thr	Ala	Arg	Ile	Thr	Cys	Gly	Gly	Tyr	Asn	Ile	Gly	Arg	Gln	Ser	Val
		20				25					30				
His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr
	35				40					45					
Gln	Asp	Ser	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50				55					60					
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met
65				70				75						80	
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Thr	Val	Val
			85					90					95		
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln	Pro	Lys	Ala	Ala
	100						105						110		
Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser	Glu	Glu	Leu	Gln	Ala	Asn
	115					120						125			
Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp	Phe	Tyr	Pro	Gly	Ala	Val
	130				135					140					
Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro	Val	Lys	Ala	Gly	Val	Glu
145				150				155						160	
Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn	Lys	Tyr	Ala	Ala	Ser	Ser
			165					170						175	
Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys	Ser	His	Arg	Ser	Tyr	Ser
		180					185						190		
Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Glu	Lys	Thr	Val	Ala	Pro
	195					200						205			
Thr	Glu	Cys	Ser												
	210														

<210> 73

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

<220>
<223> cdr

<400> 73
Gly Tyr Thr Phe Ser Ser Tyr Tyr
1 5

<210> 74
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 74
Ile Glu Pro Arg Gly Val Arg Ile
1 5

<210> 75
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 75
Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr
1 5 10

<210> 76
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 76
Asn Ile Gly Ser Thr Asn
1 5

<210> 77
<400> 77
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<210> 78
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 78
Gln Val Trp Asp Asn Tyr Ser Val Gln
1 5

<210> 79
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> variable domain

<400> 79
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15
Ser Leu Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Ser Tyr
20 25 30
Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Ala Ile Glu Pro Arg Gly Val Arg Ile Ser Tyr Ala Gln Lys Phe
50 55 60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr Trp Gly Gln
100 105 110
Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 80
<211> 106
<212> PRT
<213> Artificial Sequence

<220>

<223> variable domain

<400> 80

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Ser Tyr Val Leu Thr Gln Pro Ser Ser Val Ser Val Ala Pro Gly Gln
1          5          10          15
Thr Ala Arg Ile Thr Cys Gly Gly His Asn Ile Gly Ser Thr Asn Val
          20          25          30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
          35          40          45
Gln Asp Ser Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
          50          55          60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met
65          70          75          80
Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Tyr Ser Val Gln
          85          90          95
Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
          100          105
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<210> 81

<211> 255

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv

<400> 81

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Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1          5          10          15
Ser Leu Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Ser Tyr
          20          25          30
Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
          35          40          45
Gly Ala Ile Glu Pro Arg Gly Val Arg Ile Ser Tyr Ala Gln Lys Phe
          50          55          60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65          70          75          80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
          85          90          95
Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr Trp Gly Gln
          100          105          110
Gly Thr Leu Val Thr Val Ser Ser Gly Gly Ser Gly Gly Ser Gly Gly
          115          120          125
Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Ser Tyr Val Leu Thr Gln
          130          135          140
Pro Ser Ser Val Ser Val Ala Pro Gly Gln Thr Ala Arg Ile Thr Cys
145          150          155          160
```

Gly	Gly	His	Asn	Ile	Gly	Ser	Thr	Asn	Val	His	Trp	Tyr	Gln	Gln	Lys
				165					170					175	
Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr	Gln	Asp	Ser	Lys	Arg	Pro
			180					185					190		
Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser	Asn	Ser	Gly	Asn	Thr	Ala
		195					200					205			
Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met	Asp	Glu	Ala	Asp	Tyr	Tyr
		210				215					220				
Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Gln	Phe	Gly	Gly	Gly	Thr	Lys
225					230					235					240
Leu	Thr	Val	Leu	Ala	Ala	Ala	Gly	Ser	His	His	His	His	His	His	
			245						250					255	

<210> 82

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Fab VH

<400> 82

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1			5					10					15		
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Ser	Ser	Tyr
			20				25					30			
Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35				40						45			
Gly	Ala	Ile	Glu	Pro	Arg	Gly	Val	Arg	Ile	Ser	Tyr	Ala	Gln	Lys	Phe
	50					55				60					
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70				75						80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
		100					105					110			
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val
		115				120					125				
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala
	130				135					140					
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser
145					150				155						160
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val
			165					170						175	
Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro
		180					185					190			
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys
		195				200						205			
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val						

210

215

<210> 83

<211> 212

<212> PRT

<213> Artificial Sequence

<220>

<223> Fab VL

<400> 83

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Ser Tyr Val Leu Thr Gln Pro Ser Ser Val Ser Val Ala Pro Gly Gln
1      5      10      15
Thr Ala Arg Ile Thr Cys Gly Gly His Asn Ile Gly Ser Thr Asn Val
20     25     30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35     40     45
Gln Asp Ser Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50     55     60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met
65     70     75     80
Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Tyr Ser Val Gln
85     90     95
Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala
100    105    110
Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn
115    120    125
Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val
130    135    140
Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu
145    150    155    160
Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser
165    170    175
Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser
180    185    190
Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro
195    200    205
Thr Glu Cys Ser
210

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<210> 84

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 84

Gly Tyr Thr Phe Thr Asn Tyr Tyr
1 5

<210> 85

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 85

Ile Asn Pro Ser Gly Gly Val Thr
1 5

<210> 86

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 86

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

<210> 87

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 87

Asn Ile Gly Ser Lys Ser
1 5

<210> 88

<400> 88

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<210> 89

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 89

Gln Val Trp Asp Asp Tyr Ile Val Leu
1 5

<210> 90

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 90

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15
Ser Leu Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
20 25 30
Tyr Met Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Ile Ile Asn Pro Ser Gly Gly Val Thr Ser Tyr Ala Gln Lys Phe
50 55 60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr Trp Gly Gln
100 105 110
Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 91

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 91

Ser Tyr Val Leu Thr Gln Pro Ser Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Lys Ser Val

			20					25				30			
His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr
		35					40					45			
Gln	Asp	Lys	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met
65					70					75					80
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asp	Tyr	Ile	Val	Leu
			85						90					95	
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu						
			100					105							

<210> 92

<211> 255

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv

<400> 92

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1			5					10					15		
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asn	Tyr
		20					25					30			
Tyr	Met	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			
Gly	Ile	Ile	Asn	Pro	Ser	Gly	Gly	Val	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
	50				55					60					
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70				75						80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
		100						105					110		
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly
	115					120					125				
Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Ser	Tyr	Val	Leu	Thr	Gln
	130					135					140				
Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln	Thr	Ala	Arg	Ile	Thr	Cys
145					150					155					160
Gly	Gly	Asn	Asn	Ile	Gly	Ser	Lys	Ser	Val	His	Trp	Tyr	Gln	Gln	Lys
			165					170						175	
Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr	Gln	Asp	Lys	Lys	Arg	Pro
		180						185					190		
Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser	Asn	Ser	Gly	Asn	Thr	Ala
	195						200					205			
Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met	Asp	Glu	Ala	Asp	Tyr	Tyr
	210					215					220				

Cys	Gln	Val	Trp	Asp	Asp	Tyr	Ile	Val	Leu	Phe	Gly	Gly	Gly	Thr	Lys
225					230					235					240
Leu	Thr	Val	Leu	Ala	Ala	Ala	Gly	Ser	His	His	His	His	His	His	
				245					250						255

<210> 93
 <211> 218
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Fab VH

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1			5						10					15	
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asn	Tyr
			20					25					30		
Tyr	Met	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			
Gly	Ile	Ile	Asn	Pro	Ser	Gly	Gly	Val	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
	50					55					60				
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70				75						80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
			100					105					110		
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val
		115					120					125			
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala
		130				135					140				
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser
145					150					155					160
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val
			165					170						175	
Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro
			180				185						190		
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys
		195				200						205			
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val						
		210				215									

<210> 94
 <211> 212
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Fab VL

<400> 94

Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln
1				5					10					15	
Thr	Ala	Arg	Ile	Thr	Cys	Gly	Gly	Asn	Ile	Gly	Ser	Lys	Ser	Val	
			20					25				30			
His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr
		35					40					45			
Gln	Asp	Lys	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met
65					70					75				80	
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asp	Tyr	Ile	Val	Leu
				85					90					95	
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln	Pro	Lys	Ala	Ala
			100					105					110		
Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser	Glu	Glu	Leu	Gln	Ala	Asn
		115					120					125			
Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp	Phe	Tyr	Pro	Gly	Ala	Val
	130					135					140				
Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro	Val	Lys	Ala	Gly	Val	Glu
145					150					155					160
Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn	Lys	Tyr	Ala	Ala	Ser	Ser
			165					170						175	
Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys	Ser	His	Arg	Ser	Tyr	Ser
			180					185					190		
Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Glu	Lys	Thr	Val	Ala	Pro
		195					200					205			
Thr	Glu	Cys	Ser												
	210														

<210> 95

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 95

Gly	Tyr	Thr	Phe	Thr	Asn	Tyr	Tyr
1				5			

<210> 96

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 96

Ile Glu Pro Asp Gly Gly Arg Arg
1 5

<210> 97

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 97

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

<210> 98

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 98

Gln Gly Val Ser Gly Asp
1 5

<210> 99

<400> 99

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<210> 100

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 100

Gln Gln Trp Asp Asn Tyr Ser Val Thr

1

5

<210> 101

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 101

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1				5					10					15	
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asn	Tyr
			20				25						30		
Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			
Gly	Val	Ile	Glu	Pro	Asp	Gly	Gly	Arg	Arg	Thr	Tyr	Ala	Gln	Lys	Phe
	50					55					60				
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70					75					80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
			100					105					110		
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser								
		115					120								

<210> 102

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 102

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

				85					90					95
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys				
			100					105						

<210> 103
 <211> 256
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> scFv

<400> 103

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1				5					10					15	
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asn	Tyr
			20					25					30		
Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			
Gly	Val	Ile	Glu	Pro	Asp	Gly	Gly	Arg	Arg	Thr	Tyr	Ala	Gln	Lys	Phe
	50					55					60				
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70					75					80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
			100					105					110		
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly
		115					120					125			
Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Glu	Ile	Val	Leu	Thr	Gln
	130					135					140				
Ser	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Pro	Gly	Glu	Arg	Ala	Thr	Leu	Ser
145					150					155					160
Cys	Arg	Gly	His	Gln	Gly	Val	Ser	Gly	Asp	Val	His	Trp	Tyr	Gln	Gln
			165						170					175	
Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	Tyr	Gln	Ala	Asn	Lys	Arg
			180					185					190		
Ala	Ser	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Glu
		195					200					205			
Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Glu	Pro	Glu	Asp	Phe	Ala	Val	Tyr
	210					215					220				
Tyr	Cys	Gln	Gln	Trp	Asp	Asn	Tyr	Ser	Val	Thr	Phe	Gly	Gln	Gly	Thr
225					230					235					240
Lys	Val	Glu	Ile	Lys	Ala	Ala	Ala	Gly	Ser	His	His	His	His	His	His
				245					250					255	

<210> 104

<211> 218
<212> PRT
<213> Artificial Sequence

<220>
<223> Fab VH

<400> 104
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15
Ser Leu Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
20 25 30
Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Val Ile Glu Pro Asp Gly Gly Arg Arg Thr Tyr Ala Gln Lys Phe
50 55 60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr Trp Gly Gln
100 105 110
Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
115 120 125
Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
130 135 140
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145 150 155 160
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
165 170 175
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
180 185 190
Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
195 200 205
Pro Ser Asn Thr Lys Val Asp Lys Lys Val
210 215

<210> 105
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Fab VL

<400> 105
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Gly	His	Gln	Gly	Val	Ser	Gly	Asp
			20					25					30		
Val	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile
		35					40					45			
Tyr	Gln	Ala	Asn	Lys	Arg	Ala	Ser	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Gly
	50					55					60				
Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Glu	Pro
65					70					75				80	
Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Trp	Asp	Asn	Tyr	Ser	Val
			85						90				95		
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala
			100					105					110		
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly
		115					120					125			
Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala
	130					135					140				
Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln
145					150					155					160
Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser
				165					170					175	
Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr
		180						185					190		
Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser
	195						200					205			
Phe	Asn	Arg	Gly	Glu	Cys										
	210														

<210> 106
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 106
 Gly Phe Thr Phe Ser Asn Tyr Asp
 1 5

<210> 107
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 107

Ile Ser Thr Arg Gly Asp Ile Thr
1 5

<210> 108
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 108
Ala Arg Gln Asp Tyr Tyr Thr Asp Tyr Met Gly Phe Ala Tyr
1 5 10

<210> 109
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 109
Glu Asp Ile Tyr Asn Gly
1 5

<210> 110
<400> 110
000

<210> 111
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 111
Ala Gly Pro His Lys Tyr Pro Leu Thr
1 5

<210> 112
<211> 121
<212> PRT
<213> Artificial Sequence

<220>

<223> variable domain

<400> 112

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	Phe	Ser	Asn	Tyr
		20						25					30		
Asp	Met	Ala	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35					40					45			
Ser	Ser	Ile	Ser	Thr	Arg	Gly	Asp	Ile	Thr	Ser	Tyr	Arg	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		
Ala	Arg	Gln	Asp	Tyr	Tyr	Thr	Asp	Tyr	Met	Gly	Phe	Ala	Tyr	Trp	Gly
			100					105					110		
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser							
		115					120								

<210> 113

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 113

Ala	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1			5					10						15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Glu	Asp	Ile	Tyr	Asn	Gly
		20						25					30		
Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile
		35					40					45			
Tyr	Gly	Ala	Ser	Ser	Leu	Gln	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
	50					55					60				
Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75				80	
Glu	Asp	Glu	Ala	Thr	Tyr	Tyr	Cys	Ala	Gly	Pro	His	Lys	Tyr	Pro	Leu
			85						90					95	
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys					
		100						105							

<210> 114

<211> 254

<212> PRT
<213> Artificial Sequence

<220>
<223> scFv

<400> 114
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 Phe Ser Asn Tyr
20 25 30
Asp Met Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ser Ile Ser Thr Arg Gly Asp Ile Thr Ser Tyr Arg 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
Ala Arg Gln Asp Tyr Tyr Thr Asp Tyr Met Gly Phe Ala Tyr Trp Gly
100 105 110
Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125
Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Met Thr Gln Ser Pro
130 135 140
Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
145 150 155 160
Ala Ser Glu Asp Ile Tyr Asn Gly Leu Ala Trp Tyr Gln Gln Lys Pro
165 170 175
Gly Lys Ala Pro Lys Leu Leu Ile Tyr Gly Ala Ser Ser Leu Gln Asp
180 185 190
Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr
195 200 205
Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Glu Ala Thr Tyr Tyr Cys
210 215 220
Ala Gly Pro His Lys Tyr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val
225 230 235 240
Glu Ile Lys Ala Ala Ala Gly Ser His His His His His His
245 250

<210> 115
<211> 218
<212> PRT
<213> Artificial Sequence

<220>
<223> Fab VH

<400> 115

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	Phe	Ser	Asn	Tyr	
			20					25						30		
Asp	Met	Ala	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	
		35					40						45			
Ser	Ser	Ile	Ser	Thr	Arg	Gly	Asp	Ile	Thr	Ser	Tyr	Arg	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		
Ala	Arg	Gln	Asp	Tyr	Tyr	Thr	Asp	Tyr	Met	Gly	Phe	Ala	Tyr	Trp	Gly	
			100					105						110		
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	
		115					120						125			
Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	
	130					135						140				
Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	
145					150					155					160	
Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	
				165					170					175		
Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Val	Pro	
			180					185					190			
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	
		195					200					205				
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val							
		210				215										

<210> 116

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> Fab VL

<400> 116

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

Glu	Asp	Glu	Ala	Thr	Tyr	Tyr	Cys	Ala	Gly	Pro	His	Lys	Tyr	Pro	Leu
				85					90					95	
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala
			100					105					110		
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly
		115					120					125			
Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala
	130					135					140				
Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln
145					150				155						160
Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser
			165					170						175	
Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr
			180					185					190		
Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser
	195						200					205			
Phe	Asn	Arg	Gly	Glu	Cys										
	210														

<210> 117
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 117
 Gly Phe Thr Phe Ser Asn Phe Asp
 1 5

<210> 118
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 118
 Ile Thr Thr Gly Gly Gly Asp Thr
 1 5

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

<220>

<223> cdr

<400> 119

Val	Arg	His	Gly	Tyr	Tyr	Asp	Gly	Tyr	His	Leu	Phe	Asp	Tyr	Trp	Gly
1				5					10					15	

<210> 120

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 120

Gln	Gly	Ile	Ser	Asn	Asn
1				5	

<210> 121

<400> 121

000

<210> 122

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 122

Gln	Gln	Phe	Thr	Ser	Leu	Pro	Tyr	Thr
1				5				

<210> 123

<211> 121

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 123

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly
1				5				10						15	
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Asn	Phe
			20					25						30	
Asp	Met	Ala	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Val	Trp	Val
		35					40						45		
Ser	Ser	Ile	Thr	Thr	Gly	Gly	Gly	Asp	Thr	Tyr	Tyr	Ala	Asp	Ser	Val
	50					55					60				
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Ser	Thr	Leu	Tyr
65					70					75					80
Leu	Gln	Met	Asp	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	
Val	Arg	His	Gly	Tyr	Tyr	Asp	Gly	Tyr	His	Leu	Phe	Asp	Tyr	Trp	Gly
			100					105						110	
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser							
		115					120								

<210> 124

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 124

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10						15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Asn	Gln	Gly	Ile	Ser	Asn	Asn
			20					25						30	
Leu	Asn	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Pro	Leu	Ile
		35					40					45			
Tyr	Tyr	Thr	Ser	Asn	Leu	Gln	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
	50					55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Phe	Thr	Ser	Leu	Pro	Tyr
				85					90					95	
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
			100					105							

<210> 125

<211> 254

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv

<400> 125

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly
1				5				10					15		
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Asn	Phe
			20					25					30		
Asp	Met	Ala	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Val	Trp	Val
		35					40					45			
Ser	Ser	Ile	Thr	Thr	Gly	Gly	Gly	Asp	Thr	Tyr	Tyr	Ala	Asp	Ser	Val
	50					55					60				
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Ser	Thr	Leu	Tyr
65					70				75						80
Leu	Gln	Met	Asp	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	
Val	Arg	His	Gly	Tyr	Tyr	Asp	Gly	Tyr	His	Leu	Phe	Asp	Tyr	Trp	Gly
			100					105					110		
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly
		115					120					125			
Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro
	130					135					140				
Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg
145					150					155					160
Ala	Asn	Gln	Gly	Ile	Ser	Asn	Asn	Leu	Asn	Trp	Tyr	Gln	Gln	Lys	Pro
				165					170					175	
Gly	Lys	Ala	Pro	Lys	Pro	Leu	Ile	Tyr	Tyr	Thr	Ser	Asn	Leu	Gln	Ser
			180					185					190		
Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr
		195					200					205			
Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys
	210					215					220				
Gln	Gln	Phe	Thr	Ser	Leu	Pro	Tyr	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu
225					230					235					240
Glu	Ile	Lys	Ala	Ala	Ala	Gly	Ser	His	His	His	His	His	His		
				245					250						

<210> 126

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Fab VH

<400> 126

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

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

<210> 127
 <211> 214
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Fab VL

<400> 127															
Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10						15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Asn	Gln	Gly	Ile	Ser	Asn	Asn
		20					25					30			
Leu	Asn	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Pro	Leu	Ile
		35					40					45			
Tyr	Tyr	Thr	Ser	Asn	Leu	Gln	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
	50					55				60					
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Phe	Thr	Ser	Leu	Pro	Tyr
				85					90					95	
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala
		100						105					110		
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly
		115					120					125			

Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala
130						135					140				
Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln
145				150						155					160
Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser
				165					170					175	
Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr
		180						185					190		
Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser
	195						200					205			
Phe	Asn	Arg	Gly	Glu	Cys										
210															

<210> 128
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 128
 Gly Ser Val Ser Ser Gly Ser Tyr Tyr
 1 5

<210> 129
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 129
 Ile Tyr Tyr Ser Gly Ser Thr
 1 5

<210> 130
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 130
 Ala Arg Asn Pro Ile Ser Ile Pro Ala Phe Asp Ile

1 5 10

<210> 131
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 131
Asn Ile Gly Ser Lys Ser
1 5

<210> 132
<400> 132
000

<210> 133
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 133
Gln Val Trp Asp Thr Ser Ser Asp His Val Leu
1 5 10

<210> 134
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> variable domain

<400> 134
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Val Ser Ser Gly
20 25 30
Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
35 40 45
Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser
50 55 60

Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Val	Asp	Thr	Ser	Lys	Asn	Gln	Phe
65					70					75					80
Ser	Leu	Lys	Leu	Ser	Ser	Val	Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr
				85					90					95	
Cys	Ala	Arg	Asn	Pro	Ile	Ser	Ile	Pro	Ala	Phe	Asp	Ile	Trp	Gly	Gln
			100					105					110		
Gly	Thr	Met	Val	Thr	Val	Ser	Ser								
		115					120								

<210> 135
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> variable domain

Gln	Pro	Val	Leu	Thr	Gln	Pro	Pro	Ser	Val	Ser	Val	Ala	Pro	Gly	Lys
1				5					10					15	
Thr	Ala	Arg	Ile	Thr	Cys	Gly	Gly	Asn	Asn	Ile	Gly	Ser	Lys	Ser	Val
			20					25					30		
His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr
		35					40					45			
Tyr	Asp	Ser	Asp	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Arg	Val	Glu	Ala	Gly
65					70					75					80
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Thr	Ser	Ser	Asp	His
			85						90					95	
Val	Leu	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu				
			100					105							

<210> 136
 <211> 257
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> scFv

Gln	Val	Gln	Leu	Gln	Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser	Glu
1				5					10					15	
Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser	Val	Ser	Ser	Gly
			20					25					30		
Ser	Tyr	Tyr	Trp	Ser	Trp	Ile	Arg	Gln	Pro	Pro	Gly	Lys	Gly	Leu	Glu
		35					40					45			

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

His

<210> 137
 <211> 217
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Fab VH

<400> 137

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

Ser	Ser	Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys	Ser	His	Arg	Ser
			180					185					190		
Tyr	Ser	Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Glu	Lys	Thr	Val
		195					200					205			
Ala	Pro	Thr	Glu	Cys	Ser										
	210														

<210> 139
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 139
 Gly Tyr Met Phe Ser Thr Phe Trp
 1 5

<210> 140
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 140
 Ile Tyr Pro Gly Asp Ser Asn Thr
 1 5

<210> 141
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> cdr

<400> 141
 Ala Lys Ile Arg Asp Gly Tyr Ser Tyr Asp Ala Phe Asp Leu
 1 5 10

<210> 142
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>

<223> cdr

<400> 142

Ser Ser Asp Val Gly Gly Tyr Asn Tyr
1 5

<210> 143

<400> 143

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<210> 144

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 144

Ser Ser Tyr Thr Ser Ser Ser Thr Leu Ala Tyr Val
1 5 10

<210> 145

<211> 121

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 145

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Ala Lys Lys Pro Gly Glu
1 5 10 15
Ser Leu Arg Ile Ser Cys Arg Ala Ser Gly Tyr Met Phe Ser Thr Phe
20 25 30
Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Ser Ile Tyr Pro Gly Asp Ser Asn Thr Ile Tyr Ser Pro Ser Phe
50 55 60
Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Asn Thr Thr Tyr
65 70 75 80
Leu Gln Trp Ser Gly Leu Lys Ala Ser Asp Thr Ala Thr Tyr Tyr Cys
85 90 95
Ala Lys Ile Arg Asp Gly Tyr Ser Tyr Asp Ala Phe Asp Leu Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 146
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> variable domain

<400> 146
Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15
Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
20 25 30
Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
35 40 45
Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
50 55 60
Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80
Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Thr Ser Ser
85 90 95
Ser Thr Leu Ala Tyr Val Phe Gly Thr Gly Thr Lys Leu Thr Val Leu
100 105 110

<210> 147
<211> 262
<212> PRT
<213> Artificial Sequence

<220>
<223> scFv

<400> 147
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Ala Lys Lys Pro Gly Glu
1 5 10 15
Ser Leu Arg Ile Ser Cys Arg Ala Ser Gly Tyr Met Phe Ser Thr Phe
20 25 30
Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Ser Ile Tyr Pro Gly Asp Ser Asn Thr Ile Tyr Ser Pro Ser Phe
50 55 60
Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Asn Thr Thr Tyr
65 70 75 80

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

<210> 148
 <211> 218
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Fab VH

<400> 148															
Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Ala	Lys	Lys	Pro	Gly	Glu
1			5					10					15		
Ser	Leu	Arg	Ile	Ser	Cys	Arg	Ala	Ser	Gly	Tyr	Met	Phe	Ser	Thr	Phe
		20					25					30			
Trp	Ile	Gly	Trp	Val	Arg	Gln	Met	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35				40						45			
Ala	Ser	Ile	Tyr	Pro	Gly	Asp	Ser	Asn	Thr	Ile	Tyr	Ser	Pro	Ser	Phe
	50				55				60						
Gln	Gly	Gln	Val	Thr	Ile	Ser	Ala	Asp	Lys	Ser	Ile	Asn	Thr	Thr	Tyr
65			70					75						80	
Leu	Gln	Trp	Ser	Gly	Leu	Lys	Ala	Ser	Asp	Thr	Ala	Thr	Tyr	Tyr	Cys
			85					90					95		
Ala	Lys	Ile	Arg	Asp	Gly	Tyr	Ser	Tyr	Asp	Ala	Phe	Asp	Leu	Trp	Gly
			100					105					110		
Gln	Gly	Thr	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser

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

<210> 149

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Fab VL

<400> 149

Gln	Ser	Ala	Leu	Thr	Gln	Pro	Ala	Ser	Val	Ser	Gly	Ser	Pro	Gly	Gln
1			5					10					15		
Ser	Ile	Thr	Ile	Ser	Cys	Thr	Gly	Thr	Ser	Ser	Asp	Val	Gly	Gly	Tyr
			20				25					30			
Asn	Tyr	Val	Ser	Trp	Tyr	Gln	Gln	His	Pro	Gly	Lys	Ala	Pro	Lys	Leu
		35				40					45				
Met	Ile	Tyr	Asp	Val	Ser	Asn	Arg	Pro	Ser	Gly	Val	Ser	Asn	Arg	Phe
	50					55				60					
Ser	Gly	Ser	Lys	Ser	Gly	Asn	Thr	Ala	Ser	Leu	Thr	Ile	Ser	Gly	Leu
65					70					75					80
Gln	Ala	Glu	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Ser	Ser	Tyr	Thr	Ser	Ser
			85						90					95	
Ser	Thr	Leu	Ala	Tyr	Val	Phe	Gly	Thr	Gly	Thr	Lys	Leu	Thr	Val	Leu
		100					105					110			
Gly	Gln	Pro	Lys	Ala	Ala	Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser
		115				120						125			
Glu	Glu	Leu	Gln	Ala	Asn	Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp
	130					135					140				
Phe	Tyr	Pro	Gly	Ala	Val	Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro
145					150					155					160
Val	Lys	Ala	Gly	Val	Glu	Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn
			165						170					175	
Lys	Tyr	Ala	Ala	Ser	Ser	Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys
		180						185					190		
Ser	His	Arg	Ser	Tyr	Ser	Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val
	195						200					205			

Glu Lys Thr Val Ala Pro Thr Glu Cys Ser
210 215

<210> 150
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 150
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 151
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 151
Ile Ser Tyr Asp Gly Ser Asn Lys
1 5

<210> 152
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 152
Ala Arg Asp Gly Gly Tyr Tyr His Tyr Gly Leu Asp Val
1 5 10

<210> 153
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> cdr

<400> 153

Lys Leu Gly Asp Lys Tyr

1 5

<210> 154

<400> 154

000

<210> 155

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> cdr

<400> 155

Gln Ala Trp Asp Ser Ser Thr Gly Val

1 5

<210> 156

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> variable domain

<400> 156

Glu 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 Ser Tyr

20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

35 40 45

Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val

50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr

65 70 75 80

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

85 90 95

Ala Arg Asp Gly Gly Tyr Tyr His Tyr Gly Leu Asp Val Trp Gly Gln

100 105 110

Gly Thr Thr Val Thr Val Ser Ser

115 120

<210> 157

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

<220>
<223> variable domain

<400> 157
Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15
Thr Ala Ser Ile Thr Cys Ser Gly Asp Lys Leu Gly Asp Lys Tyr Ala
20 25 30
Ser Trp Tyr Gln Arg Lys Pro Gly Gln Ser Pro Val Leu Leu Ile Tyr
35 40 45
Gln Asp Ala Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Ser Thr Gly Val
85 90 95
Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 158
<211> 255
<212> PRT
<213> Artificial Sequence

<220>
<223> scFv

<400> 158
Glu 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 Ser Tyr
20 25 30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Asp Gly Gly Tyr Tyr His Tyr Gly Leu Asp Val Trp Gly Gln
100 105 110
Gly Thr Thr Val Thr Val Ser Ser Gly Gly Ser Gly Gly Ser Gly Gly
115 120 125

Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Ser	Tyr	Glu	Leu	Thr	Gln
130						135					140				
Pro	Pro	Ser	Val	Ser	Val	Ser	Pro	Gly	Gln	Thr	Ala	Ser	Ile	Thr	Cys
145					150					155					160
Ser	Gly	Asp	Lys	Leu	Gly	Asp	Lys	Tyr	Ala	Ser	Trp	Tyr	Gln	Arg	Lys
				165					170					175	
Pro	Gly	Gln	Ser	Pro	Val	Leu	Leu	Ile	Tyr	Gln	Asp	Ala	Lys	Arg	Pro
			180					185					190		
Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser	Asn	Ser	Gly	Asn	Thr	Ala
		195				200						205			
Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met	Asp	Glu	Ala	Asp	Tyr	Tyr
		210				215					220				
Cys	Gln	Ala	Trp	Asp	Ser	Ser	Thr	Gly	Val	Phe	Gly	Gly	Gly	Thr	Lys
225					230					235					240
Leu	Thr	Val	Leu	Ala	Ala	Ala	Gly	Ser	His	His	His	His	His	His	
				245					250						255

<210> 159
 <211> 217
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Fab VH

<400> 159

Glu	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	Ser	Tyr
			20					25					30		
Ala	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35				40						45			
Ala	Val	Ile	Ser	Tyr	Asp	Gly	Ser	Asn	Lys	Tyr	Tyr	Ala	Asp	Ser	Val
	50					55					60				
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr
65					70				75					80	
Leu	Gln	Met	Asn	Ser	Leu	Arg	Thr	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85						90				95		
Ala	Arg	Asp	Gly	Gly	Tyr	Tyr	His	Tyr	Gly	Leu	Asp	Val	Trp	Gly	Gln
			100					105					110		
Gly	Thr	Thr	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val
		115				120						125			
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala
	130					135					140				
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser
145					150					155					160
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val
				165					170					175	
Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Val	Pro	Ser

			180				185				190				
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro
		195					200					205			
Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val							
	210					215									

<210> 160
 <211> 212
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Fab VL

<400> 160

Ser	Tyr	Glu	Leu	Thr	Gln	Pro	Pro	Ser	Val	Ser	Val	Ser	Pro	Gly	Gln
1				5				10					15		
Thr	Ala	Ser	Ile	Thr	Cys	Ser	Gly	Asp	Lys	Leu	Gly	Asp	Lys	Tyr	Ala
			20				25						30		
Ser	Trp	Tyr	Gln	Arg	Lys	Pro	Gly	Gln	Ser	Pro	Val	Leu	Leu	Ile	Tyr
	35						40					45			
Gln	Asp	Ala	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50					55				60					
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met
65				70					75					80	
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Ala	Trp	Asp	Ser	Ser	Thr	Gly	Val
			85					90					95		
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln	Pro	Lys	Ala	Ala
			100					105					110		
Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser	Glu	Glu	Leu	Gln	Ala	Asn
		115					120					125			
Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp	Phe	Tyr	Pro	Gly	Ala	Val
	130					135					140				
Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro	Val	Lys	Ala	Gly	Val	Glu
145				150					155						160
Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn	Lys	Tyr	Ala	Ala	Ser	Ser
			165					170						175	
Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys	Ser	His	Arg	Ser	Tyr	Ser
		180						185				190			
Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Glu	Lys	Thr	Val	Ala	Pro
	195						200					205			
Thr	Glu	Cys	Ser												
	210														

<210> 161
 <211> 489
 <212> PRT
 <213> Artificial Sequence

<220>

<223> tandem diabody construct

<400> 161

Gln	Val	Gln	Leu	Gln	Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser	Glu
1			5					10					15		
Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser	Val	Ser	Ser	Gly
		20					25					30			
Ser	Tyr	Tyr	Trp	Ser	Trp	Ile	Arg	Gln	Pro	Pro	Gly	Lys	Gly	Leu	Glu
		35				40						45			
Trp	Ile	Gly	Tyr	Ile	Tyr	Tyr	Ser	Gly	Ser	Thr	Asn	Tyr	Asn	Pro	Ser
	50					55					60				
Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Val	Asp	Thr	Ser	Lys	Asn	Gln	Phe
65					70				75					80	
Ser	Leu	Lys	Leu	Ser	Ser	Val	Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr
			85					90					95		
Cys	Ala	Arg	Asn	Pro	Ile	Ser	Ile	Pro	Ala	Phe	Asp	Ile	Trp	Gly	Gln
			100					105					110		
Gly	Thr	Met	Val	Thr	Val	Ser	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly
		115					120					125			
Ser	Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly
	130					135					140				
Gln	Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn
145					150					155					160
Val	His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile
				165					170					175	
Tyr	Gln	Asp	Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly
			180					185					190		
Ser	Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala
	195					200						205			
Met	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val
	210					215					220				
Leu	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gly	Ser	Gly	Gly
225					230					235					240
Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly
			245						250					255	
Glu	Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Ser
			260					265					270		
Tyr	Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp
		275					280					285			
Met	Gly	Ile	Ile	Asn	Pro	Ser	Gly	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys
	290					295					300				
Phe	Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val
305					310					315					320
Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr
			325						330					335	
Cys	Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly
			340					345					350		
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly

		355					360					365					
Gly	Ser	Gln	Pro	Val	Leu	Thr	Gln	Pro	Pro	Ser	Val	Ser	Val	Ala	Pro		
	370						375					380					
Gly	Lys	Thr	Ala	Arg	Ile	Thr	Cys	Gly	Gly	Asn	Asn	Ile	Gly	Ser	Lys		
385					390					395					400		
Ser	Val	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val		
			405						410					415			
Ile	Tyr	Tyr	Asp	Ser	Asp	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser		
			420					425					430				
Gly	Ser	Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Arg	Val	Glu		
		435					440					445					
Ala	Gly	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Thr	Ser	Ser		
	450					455					460						
Asp	His	Val	Leu	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Ala	Ala		
465					470					475					480		
Ala	Gly	Ser	His	His	His	His	His	His									
			485														

<210> 162

<211> 705

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv-IgAb polypeptide chain

<400> 162

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu		
1			5						10					15			
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Tyr		
			20					25					30				
Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met		
		35					40					45					
Gly	Ile	Ile	Asn	Pro	Ser	Gly	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe		
	50					55					60						
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr		
65					70					75					80		
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys		
			85						90				95				
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln		
			100					105					110				
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val		
		115						120				125					
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala		
	130					135					140						
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser		
145					150					155					160		
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val		
			165						170					175			

Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro
			180					185					190		
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys
		195					200					205			
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp
	210					215					220				
Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Phe	Glu	Gly	Gly
225				230					235					240	
Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile
			245					250					255		
Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Ala	Val	Ser	His	Glu
			260				265						270		
Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His
		275				280						285			
Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg
	290					295					300				
Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys
305				310					315					320	
Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu
			325					330						335	
Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr
			340				345					350			
Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu
		355				360						365			
Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp
	370					375				380					
Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val
385				390					395					400	
Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp
			405					410						415	
Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His
		420					425					430			
Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro
	435					440					445				
Gly	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln
	450					455					460				
Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser	Glu	Thr	Leu	Ser	Leu	Thr
465				470						475				480	
Cys	Thr	Val	Ser	Gly	Gly	Ser	Val	Ser	Ser	Gly	Ser	Tyr	Tyr	Trp	Ser
			485					490						495	
Trp	Ile	Arg	Gln	Pro	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile
		500					505					510			
Tyr	Tyr	Ser	Gly	Ser	Thr	Asn	Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val
		515				520					525				
Thr	Ile	Ser	Val	Asp	Thr	Ser	Lys								

Val	Ser	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly
			580					585					590		
Gly	Ser	Gly	Gly	Ser	Gln	Pro	Val	Leu	Thr	Gln	Pro	Pro	Ser	Val	Ser
		595					600					605			
Val	Ala	Pro	Gly	Lys	Thr	Ala	Arg	Ile	Thr	Cys	Gly	Gly	Asn	Asn	Ile
	610					615					620				
Gly	Ser	Lys	Ser	Val	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro
625					630					635					640
Val	Leu	Val	Ile	Tyr	Tyr	Asp	Ser	Asp	Arg	Pro	Ser	Gly	Ile	Pro	Glu
			645						650					655	
Arg	Phe	Ser	Gly	Ser	Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser
		660					665						670		
Arg	Val	Glu	Ala	Gly	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp
	675						680					685			
Thr	Ser	Ser	Asp	His	Val	Leu	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val
	690					695					700				
Leu															
705															

<210> 163
 <211> 212
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> scFv-IgAb polypeptide chain

<400> 163															
Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln
1				5					10					15	
Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val
			20					25					30		
His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr
	35						40					45			
Gln	Asp	Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met
65				70						75				80	
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu
			85						90					95	
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln	Pro	Lys	Ala	Ala
			100					105					110		
Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser	Glu	Glu	Leu	Gln	Ala	Asn
	115						120						125		
Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp	Phe	Tyr	Pro	Gly	Ala	Val
	130					135					140				
Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro	Val	Lys	Ala	Gly	Val	Glu
145					150						155				160
Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn	Lys	Tyr	Ala	Ala	Ser	Ser

				165					170					175			
Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys	Ser	His	Arg	Ser	Tyr	Ser		
			180					185					190				
Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Glu	Lys	Thr	Val	Ala	Pro		
		195					200					205					
Thr	Glu	Cys	Ser														
	210																

<210> 164
 <211> 481
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> tandem diabody construct

<400> 164

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	Phe	Ser	Asn	Tyr		
		20					25					30					
Asp	Met	Ala	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val		
	35					40					45						
Ser	Ser	Ile	Ser	Thr	Arg	Gly	Asp	Ile	Thr	Ser	Tyr	Arg	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				
Ala	Arg	Gln	Asp	Tyr	Tyr	Thr	Asp	Tyr	Met	Gly	Phe	Ala	Tyr	Trp	Gly		
		100					105					110					
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly		
	115					120						125					
Gly	Ser	Gly	Gly	Ser	Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser		
	130				135					140							
Val	Ala	Pro	Gly	Gln	Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly	His	Asn	Ile		
145				150				155						160			
Gly	Ser	Lys	Asn	Val	His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro		
			165					170						175			
Val	Leu	Val	Ile	Tyr	Gln	Asp	Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu		
		180					185					190					
Arg	Phe	Ser	Gly	Ser	Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser		
	195					200						205					
Gly	Thr	Gln	Ala	Met	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp		
	210				215					220							
Asn	Tyr	Ser	Val	Leu	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly		
225				230						235					240		
Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro		
			245					250						255			

Gly Glu Ser Leu Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
 260 265 270
 Ser Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu
 275 280 285
 Trp Met Gly Ala Ile Glu Pro Met Tyr Gly Ser Thr Ser Tyr Ala Gln
 290 295 300
 Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr
 305 310 315 320
 Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr
 325 330 335
 Tyr Cys Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr Trp
 340 345 350
 Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Ser Gly Gly Ser
 355 360 365
 Gly Gly Ser Gly Gly Ser Ala Ile Gln Met Thr Gln Ser Pro Ser Ser
 370 375 380
 Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
 385 390 395 400
 Glu Asp Ile Tyr Asn Gly Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
 405 410 415
 Ala Pro Lys Leu Leu Ile Tyr Gly Ala Ser Ser Leu Gln Asp Gly Val
 420 425 430
 Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
 435 440 445
 Ile Ser Ser Leu Gln Pro Glu Asp Glu Ala Thr Tyr Tyr Cys Ala Gly
 450 455 460
 Pro His Lys Tyr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
 465 470 475 480
 Lys

<210> 165
 <211> 727
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> scFv-IgAb polypeptide chain

<400> 165
 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 Phe Ser Asn Tyr
 20 25 30
 Asp Met Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Thr Arg Gly Asp Ile Thr Ser Tyr Arg 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	
Ala	Arg	Gln	Asp	Tyr	Tyr	Thr	Asp	Tyr	Met	Gly	Phe	Ala	Tyr	Trp	Gly
			100					105					110		
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser
		115					120					125			
Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala
	130					135					140				
Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val
145					150					155					160
Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala
			165						170					175	
Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val
		180						185				190			
Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His
	195					200						205			
Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys
	210					215					220				
Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Phe	Glu	Gly
225					230					235					240
Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met
			245						250					255	
Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Ala	Val	Ser	His
		260						265					270		
Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val
	275						280					285			
His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr
	290					295					300				
Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly
305					310					315					320
Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile
			325						330					335	
Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val
		340						345					350		
Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser
	355					360						365			
Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu
	370				375					380					
Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro
385				390						395					400
Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val
			405					410						415	
Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met
			420				425					430			
His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser
	435					440					445				
Pro	Gly	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
	450				455						460				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser

465					470					475				480	
Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln
				485					490					495	
Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val
			500					505					510		
His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr
	515						520					525			
Gln	Asp	Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	530					535				540					
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met
545					550					555					560
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu
			565						570					575	
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gly	Ser	Gly	Gly	Ser
			580					585					590		
Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gln
	595					600						605			
Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu	Ser
	610					615						620			
Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Tyr	Tyr
625					630					635					640
Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met	Gly
			645					650						655	
Ala	Ile	Glu	Pro	Met	Tyr	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe	Gln
			660					665					670		
Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr	Met
	675						680						685		
Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala
	690					695				700					
Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln	Gly
705				710						715					720
Thr	Leu	Val	Thr	Val	Ser	Ser									
				725											

<210> 166

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv-IgAb polypeptide chain

<400> 166

Ala	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10					15		
Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Glu	Asp	Ile	Tyr	Asn	Gly
			20					25					30		
Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile
	35						40					45			

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

<210> 167

<211> 729

<212> PRT

<213> Artificial Sequence

<220>

<223> KiH-scDb-Fc polypeptide chain

<400> 167

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Phe Glu Gly
 1 5 10 15
 Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 20 25 30
 Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Ala Val Ser His
 35 40 45
 Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 50 55 60
 His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80
 Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95
 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110
 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125
 Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser

130					135					140					
Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu
145					150					155					160
Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro
				165						170					175
Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Thr	Ser	Lys	Leu	Thr	Val
			180					185					190		
Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met
		195					200					205			
His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser
	210					215					220				
Pro	Gly	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Ser	Tyr	Val	Leu
225					230					235					240
Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln	Thr	Ala	Thr	Ile
				245					250						255
Ser	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val	His	Trp	Tyr	Gln
			260				265						270		
Gln	Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr	Gln	Asp	Asn	Lys
	275						280					285			
Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser	Asn	Ser	Gly	Asn
	290					295					300				
Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met	Asp	Glu	Ala	Asp
305					310					315					320
Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu	Phe	Gly	Gly	Gly
			325						330					335	
Thr	Lys	Leu	Thr	Val	Leu	Gly	Gly	Ser	Gly	Gly	Ser	Gln	Val	Gln	Leu
			340				345						350		
Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu	Ser	Leu	Lys	Val
	355						360				365				
Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Tyr	Tyr	Met	His	Trp
	370					375					380				
Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met	Gly	Ala	Ile	Glu
385					390					395					400
Pro	Met	Tyr	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe	Gln	Gly	Arg	Val
			405						410					415	
Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr	Met	Glu	Leu	Ser
			420					425					430		
Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Gly	Ser
	435						440					445			
Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val
	450					455					460				
Thr	Val	Ser	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser
465					470					475					480
Gly	Gly	Ser	Gly	Gly	Ser	Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val
			485						490					495	
Ser	Val	Ala	Pro	Gly	Gln	Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly	His	Asn
			500					505					510		
Ile	Gly	Ser	Lys	Asn	Val	His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser
	515						520					525			
Pro	Val	Leu	Val	Ile	Tyr	Gln	Asp	Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro

530		535		540	
Glu Arg Phe Ser Gly	Ser Asn Ser Gly Asn Thr	Ala Thr Leu Thr Ile			
545	550	555		560	
Ser Gly Thr Gln Ala Met Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp					
	565	570		575	
Asp Asn Tyr Ser Val Leu Phe Gly Gly Gly Thr Lys Leu Thr Val Leu					
	580	585		590	
Gly Gly Ser Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu					
	595	600		605	
Val Lys Lys Pro Gly Glu Ser Leu Lys Val Ser Cys Lys Ala Ser Gly					
	610	615		620	
Tyr Thr Phe Thr Ser Tyr Tyr Met His Trp Val Arg Gln Ala Pro Gly					
625	630	635		640	
Gln Gly Leu Glu Trp Met Gly Ala Ile Glu Pro Met Tyr Gly Ser Thr					
	645	650		655	
Ser Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr					
	660	665		670	
Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp					
	675	680		685	
Thr Ala Val Tyr Tyr Cys Ala Arg Gly Ser Ala Tyr Tyr Tyr Asp Phe					
	690	695		700	
Ala Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ala					
705	710	715		720	
Ala Gly Ser His His His His His His					
	725				

<210> 168

<211> 469

<212> PRT

<213> Artificial Sequence

<220>

<223> KiH-scDb-Fc polypeptide chain

<400> 168

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly		
1	5	10
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr		
	20	25
Asp Met Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val		
	35	40
Ser Ser Ile Ser Thr Arg Gly Asp Ile Thr Ser Tyr Arg Asp Ser Val		
	50	55
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr		
65	70	75
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys		
	85	90
Ala Arg Gln Asp Tyr Tyr Thr Asp Tyr Met Gly Phe Ala Tyr Trp Gly		
	100	105
		110

Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly		
		115					120					125					
Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Ala	Ile	Gln	Met	Thr	Gln	Ser	Pro		
	130					135					140						
Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg		
145					150					155					160		
Ala	Ser	Glu	Asp	Ile	Tyr	Asn	Gly	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro		
			165						170					175			
Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile	Tyr	Gly	Ala	Ser	Ser	Leu	Gln	Asp		
		180						185					190				
Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr		
	195						200					205					
Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Glu	Ala	Thr	Tyr	Tyr	Cys		
	210					215					220						
Ala	Gly	Pro	His	Lys	Tyr	Pro	Leu	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Val		
225					230					235					240		
Glu	Ile	Lys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu		
			245						250					255			
Phe	Glu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp		
		260						265					270				
Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Ala		
	275						280					285					
Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly		
	290					295				300							
Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn		
305					310					315					320		
Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp		
			325						330					335			
Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro		
		340						345					350				
Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu		
	355						360					365					
Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn		
	370					375					380						
Gln	Val	Ser	Leu	Tyr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile		
385					390					395					400		
Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr		
			405						410					415			
Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys		
			420					425					430				
Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys		
		435					440					445					
Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu		
	450					455					460						
Ser	Leu	Ser	Pro	Gly													
465																	

<210> 169

<211> 721

<212> PRT

<213> Artificial Sequence

<220>

<223> Db-Fc polypeptide chain

<400> 169

Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln
1				5					10					15	
Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val
			20					25					30		
His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr
		35					40					45			
Gln	Asp	Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met
65					70					75					80
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu
			85						90					95	
Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gly	Ser	Gly	Gly	Ser
			100					105						110	
Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
		115					120					125			
Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Tyr
	130					135						140			
Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
145					150					155					160
Gly	Ala	Ile	Glu	Pro	Met	Tyr	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
				165					170					175	
Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
			180					185						190	
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
		195					200					205			
Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln
	210					215					220				
Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly
225					230					235					240
Gly	Ser	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Phe
			245					250						255	
Glu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr
			260					265						270	
Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Ala	Val
		275					280						285		
Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val
	290					295					300				
Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser
305					310					315					320
Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu
			325						330					335	
Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala

			340					345				350			
Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro
		355					360					365			
Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln
		370				375					380				
Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala
385					390					395					400
Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr
				405					410					415	
Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu
			420					425					430		
Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser
		435					440					445			
Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser
		450				455					460				
Leu	Ser	Pro	Gly	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val
465					470					475					480
Gln	Leu	Leu	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly	Ser	Leu
				485					490					495	
Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Asn	Tyr	Asp	Met
			500					505					510		
Ala	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	Ser	Ser
		515					520					525			
Ile	Ser	Thr	Arg	Gly	Asp	Ile	Thr	Ser	Tyr	Arg	Asp	Ser	Val	Lys	Gly
		530				535					540				
Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr	Leu	Gln
545					550					555					560
Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg
				565					570					575	
Gln	Asp	Tyr	Tyr	Thr	Asp	Tyr	Met	Gly	Phe	Ala	Tyr	Trp	Gly	Gln	Gly
			580					585					590		
Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
		595					600					605			
Ser	Gly	Gly	Gly	Gly	Ser	Ala	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser
		610				615					620				
Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser
625					630					635					640
Glu	Asp	Ile	Tyr	Asn	Gly	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys
				645					650					655	
Ala	Pro	Lys	Leu	Leu	Ile	Tyr	Gly	Ala	Ser	Ser	Leu	Gln	Asp	Gly	Val
			660					665					670		
Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr
		675					680					685			
Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Glu	Ala	Thr	Tyr	Tyr	Cys	Ala	Gly
		690				695									

<210> 170
 <211> 960
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> scDb-mFc polypeptide chain

<400> 170
 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 Phe Ser Asn Tyr
 20 25 30
 Asp Met Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Thr Arg Gly Asp Ile Thr Ser Tyr Arg 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
 Ala Arg Gln Asp Tyr Tyr Thr Asp Tyr Met Gly Phe Ala Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
 115 120 125
 Gly Gly Ser Gly Gly Gly Gly Ser Ala Ile Gln Met Thr Gln Ser Pro
 130 135 140
 Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
 145 150 155 160
 Ala Ser Glu Asp Ile Tyr Asn Gly Leu Ala Trp Tyr Gln Gln Lys Pro
 165 170 175
 Gly Lys Ala Pro Lys Leu Leu Ile Tyr Gly Ala Ser Ser Leu Gln Asp
 180 185 190
 Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr
 195 200 205
 Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Glu Ala Thr Tyr Tyr Cys
 210 215 220
 Ala Gly Pro His Lys Tyr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val
 225 230 235 240
 Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Pro Glu
 245 250 255
 Phe Glu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
 260 265 270
 Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Ala
 275 280 285
 Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
 290 295 300
 Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
 305 310 315 320

Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp
				325					330					335	
Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro
			340					345					350		
Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu
		355					360					365			
Pro	Gln	Val	Tyr	Thr	Lys	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn
	370					375					380				
Gln	Val	Ser	Leu	Ser	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile
385					390					395					400
Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr
			405					410						415	
Thr	Val	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Arg	Leu	Ala	Ser	Tyr
			420					425					430		
Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys
	435						440					445			
Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu
	450					455					460				
Ser	Leu	Ser	Pro	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Ser	Tyr
465					470					475					480
Val	Leu	Thr	Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln	Thr	Ala
			485					490						495	
Thr	Ile	Ser	Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val	His	Trp
			500				505						510		
Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr	Gln	Asp
	515						520					525			
Asn	Lys	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser	Asn	Ser
	530					535					540				
Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met	Asp	Glu
545					550					555					560
Ala	Asp	Tyr	Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu	Phe	Gly
			565					570						575	
Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gly	Ser	Gly	Gly	Ser	Gln	Val
			580					585					590		
Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu	Ser	Leu
	595						600					605			
Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Tyr	Tyr	Met
	610					615					620				
His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met	Gly	Ala
625					630					635					640
Ile	Glu	Pro	Met	Tyr	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe	Gln	Gly
			645					650						655	
Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr	Met	Glu
	660						665						670		
Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg
	675					680					685				
Gly	Ser	Ala	Tyr	Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln	Gly	Thr
	690					695					700				
Leu	Val	Thr	Val	Ser	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly
705					710				715						720

Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Ser	Tyr	Val	Leu	Thr	Gln	Pro	Ser
				725					730					735	
Ser	Val	Ser	Val	Ala	Pro	Gly	Gln	Thr	Ala	Thr	Ile	Ser	Cys	Gly	Gly
			740					745					750		
His	Asn	Ile	Gly	Ser	Lys	Asn	Val	His	Trp	Tyr	Gln	Gln	Arg	Pro	Gly
		755					760					765			
Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr	Gln	Asp	Asn	Lys	Arg	Pro	Ser	Gly
	770					775					780				
Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser	Asn	Ser	Gly	Asn	Thr	Ala	Thr	Leu
785					790					795					800
Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln
			805					810						815	
Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr
			820					825					830		
Val	Leu	Gly	Gly	Ser	Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly
		835					840					845			
Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu	Ser	Leu	Lys	Val	Ser	Cys	Lys	Ala
	850					855					860				
Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Tyr	Tyr	Met	His	Trp	Val	Arg	Gln	Ala
865					870					875					880
Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met	Gly	Ala	Ile	Glu	Pro	Met	Tyr	Gly
			885					890						895	
Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe	Gln	Gly	Arg	Val	Thr	Met	Thr	Arg
			900					905					910		
Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser
		915					920					925			
Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Gly	Ser	Ala	Tyr	Tyr	Tyr
	930					935					940				
Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser
945					950					955					960

<210> 171

<211> 960

<212> PRT

<213> Artificial Sequence

<220>

<223> Bi-scFv-Fc polypeptide chain

<400> 171

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	Phe	Ser	Asn	Tyr
			20					25					30		
Asp	Met	Ala	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35					40					45			
Ser	Ser	Ile	Ser	Thr	Arg	Gly	Asp	Ile	Thr	Ser	Tyr	Arg	Asp	Ser	Val

	50					55					60				
Lys 65	Gly	Arg	Phe	Thr	Ile 70	Ser	Arg	Asp	Asn 75	Ser	Lys	Asn	Thr	Leu 80	Tyr
Leu	Gln	Met	Asn	Ser 85	Leu	Arg	Ala	Glu	Asp 90	Thr	Ala	Val	Tyr 95	Tyr	Cys
Ala	Arg	Gln	Asp 100	Tyr	Tyr	Thr	Asp	Tyr 105	Met	Gly	Phe	Ala	Tyr 110	Trp	Gly
Gln	Gly	Thr 115	Leu	Val	Thr	Val	Ser 120	Ser	Gly	Gly	Gly	Gly 125	Ser	Gly	Gly
Gly	Gly 130	Ser	Gly	Gly	Gly	Gly 135	Ser	Ala	Ile	Gln	Met 140	Thr	Gln	Ser	Pro
Ser 145	Ser	Leu	Ser	Ala	Ser 150	Val	Gly	Asp	Arg	Val 155	Thr	Ile	Thr	Cys	Arg 160
Ala	Ser	Glu	Asp	Ile 165	Tyr	Asn	Gly	Leu	Ala 170	Trp	Tyr	Gln	Gln	Lys 175	Pro
Gly	Lys	Ala	Pro 180	Lys	Leu	Leu	Ile	Tyr 185	Gly	Ala	Ser	Ser	Leu 190	Gln	Asp
Gly	Val	Pro 195	Ser	Arg	Phe	Ser	Gly 200	Ser	Gly	Ser	Gly	Thr 205	Glu	Phe	Thr
Leu	Thr 210	Ile	Ser	Ser	Leu	Gln 215	Pro	Glu	Asp	Glu	Ala 220	Thr	Tyr	Tyr	Cys
Ala 225	Gly	Pro	His	Lys	Tyr 230	Pro	Leu	Thr	Phe	Gly 235	Gly	Gly	Thr	Lys	Val 240
Glu	Ile	Lys	Gly 245	Gly	Gly	Gly	Ser	Gly	Gly 250	Gly	Gly	Ser	Ala	Pro 255	Glu
Phe	Glu	Gly	Gly 260	Pro	Ser	Val	Phe	Leu	Phe 265	Pro	Pro	Lys	Pro 270	Lys	Asp
Thr	Leu	Met 275	Ile	Ser	Arg	Thr	Pro 280	Glu	Val	Thr	Cys	Val 285	Val	Val	Ala
Val	Ser 290	His	Glu	Asp	Pro	Glu 295	Val	Lys	Phe	Asn	Trp 300	Tyr	Val	Asp	Gly
Val 305	Glu	Val	His	Asn	Ala 310	Lys	Thr	Lys	Pro	Arg	Glu 315	Glu	Gln	Tyr	Asn 320
Ser	Thr	Tyr	Arg 325	Val	Val	Ser	Val	Leu	Thr 330	Val	Leu	His	Gln	Asp 335	Trp
Leu	Asn	Gly 340	Lys	Glu	Tyr	Lys	Cys	Lys 345	Val	Ser	Asn	Lys	Ala 350	Leu	Pro
Ala	Pro	Ile 355	Glu	Lys	Thr	Ile	Ser 360	Lys	Ala	Lys	Gly	Gln 365	Pro	Arg	Glu
Pro	Gln 370	Val	Tyr	Thr	Lys	Pro	Pro 375	Ser	Arg	Asp	Glu 380	Leu	Thr	Lys	Asn
Gln 385	Val	Ser	Leu	Ser	Cys 390	Leu	Val	Lys	Gly	Phe	Tyr 395	Pro	Ser	Asp	Ile 400
Ala	Val	Glu	Trp 405	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr 415
Thr	Val	Pro 420	Val	Leu	Asp	Ser	Asp	Gly 425	Ser	Phe	Arg	Leu	Ala 430	Ser	Tyr
Leu	Thr 435	Val	Asp	Lys	Ser	Arg	Trp 440	Gln	Gln	Gly	Asn	Val 445	Phe	Ser	Cys
Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu

450		455		460
Ser Leu Ser Pro Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Tyr				
465		470		480
Val Leu Thr Gln Pro Ser Ser Val Ser Val Ala Pro Gly Gln Thr Ala				
	485		490	495
Thr Ile Ser Cys Gly Gly His Asn Ile Gly Ser Lys Asn Val His Trp				
	500		505	510
Tyr Gln Gln Arg Pro Gly Gln Ser Pro Val Leu Val Ile Tyr Gln Asp				
	515		520	525
Asn Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser				
	530		535	540
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met Asp Glu				
545		550		560
Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Tyr Ser Val Leu Phe Gly				
	565		570	575
Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Ser Gly Gly Ser Gln Val				
	580		585	590
Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu Ser Leu				
	595		600	605
Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Tyr Met				
	610		615	620
His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Ala				
625		630		640
Ile Glu Pro Met Tyr Gly Ser Thr Ser Tyr Ala Gln Lys Phe Gln Gly				
	645		650	655
Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu				
	660		665	670
Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg				
	675		680	685
Gly Ser Ala Tyr Tyr Tyr Asp Phe Ala Asp Tyr Trp Gly Gln Gly Thr				
	690		695	700
Leu Val Thr Val Ser Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly				
705		710		720
Gly Ser Gly Gly Ser Gly Gly Ser Ser Tyr Val Leu Thr Gln Pro Ser				
	725		730	735
Ser Val Ser Val Ala Pro Gly Gln Thr Ala Thr Ile Ser Cys Gly Gly				
	740		745	750
His Asn Ile Gly Ser Lys Asn Val His Trp Tyr Gln Gln Arg Pro Gly				
	755		760	765
Gln Ser Pro Val Leu Val Ile Tyr Gln Asp Asn Lys Arg Pro Ser Gly				
	770		775	780
Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser Gly Asn Thr Ala Thr Leu				
785		790		800
Thr Ile Ser Gly Thr Gln Ala Met Asp Glu Ala Asp Tyr Tyr Cys Gln				
	805		810	815
Val Trp Asp Asn Tyr Ser Val Leu Phe Gly Gly Gly Thr Lys Leu Thr				
	820		825	830
Val Leu Gly Gly Ser Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly				
	835		840	845
Ala Glu Val Lys Lys Pro Gly Glu Ser Leu Lys Val Ser Cys Lys Ala				

850		855		860	
Ser Gly Tyr Thr Phe Thr Ser Tyr Tyr Met His Trp Val Arg Gln Ala					
865		870		875	880
Pro Gly Gln Gly Leu Glu Trp Met Gly Ala Ile Glu Pro Met Tyr Gly					
	885		890		895
Ser Thr Ser Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg					
	900		905		910
Asp Thr Ser Thr Ser Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser					
	915		920		925
Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Ser Ala Tyr Tyr Tyr					
	930		935		940
Asp Phe Ala Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser					
945		950		955	960

<210> 172
 <211> 8
 <212> PRT
 <213> Homo sapiens

<400> 172
 Ser Phe Phe Pro Pro Gly Tyr Gln
 1 5

<210> 173
 <211> 725
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> scFv-Ig polypeptide chain

<400> 173	
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser	
1 5 10 15	
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr	
20 25 30	
Thr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met	
35 40 45	
Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe	
50 55 60	
Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr	
65 70 75 80	
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys	
85 90 95	
Ala Arg Gly Gly Ser Ser Gly Trp Trp Trp Gly Gln Gly Thr Leu Val	
100 105 110	

Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala		
		115					120					125					
Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu		
		130				135					140						
Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly		
145					150					155					160		
Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser		
				165					170						175		
Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu		
			180				185						190				
Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr		
		195					200					205					
Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr		
		210				215					220						
Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Phe	Glu	Gly	Gly	Pro	Ser	Val	Phe		
225					230					235					240		
Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro		
				245					250						255		
Glu	Val	Thr	Cys	Val	Val	Val	Ala	Val	Ser	His	Glu	Asp	Pro	Glu	Val		
			260					265						270			
Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr		
		275					280					285					
Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val		
		290				295					300						
Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys		
305					310					315					320		
Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser		
				325					330						335		
Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro		
			340				345						350				
Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val		
		355				360						365					
Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly		
		370				375					380						
Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp		
385					390					395					400		
Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp		
				405					410						415		
Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His		
			420					425					430				
Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Gly	Gly	Gly		
		435					440					445					
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly		
		450				455					460						
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr		
465					470					475					480		
Gln	Ser	Pro	Ala	Ser	Leu	Ser	Ala	Ser	Val	Gly	Glu	Thr	Val	Thr	Ile		
				485					490						495		
Thr	Cys	Arg	Val	Ser	Glu	Asn	Ile	Tyr	Ser	Tyr	Leu	Ala	Trp	Tyr	Gln		
			500					505					510				

Gln	Lys	Gln	Gly	Lys	Ser	Pro	Gln	Leu	Leu	Val	Tyr	Asn	Ala	Lys	Thr
		515					520					525			
Leu	Ala	Glu	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr
		530					535					540			
Gln	Phe	Ser	Leu	Lys	Ile	Asn	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Gly	Ser
545					550					555					560
Tyr	Tyr	Cys	Gln	His	His	Tyr	Gly	Thr	Pro	Trp	Thr	Phe	Gly	Gly	Gly
				565						570					575
Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly
			580					585							590
Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln
		595					600					605			
Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser	Gln	Ser	Leu	Ser	Leu	Thr
		610				615					620				
Cys	Thr	Val	Thr	Gly	Tyr	Ser	Ile	Thr	Ser	Asp	Tyr	Ala	Trp	Asn	Trp
625					630					635					640
Ile	Arg	Gln	Phe	Pro	Gly	Asn	Lys	Leu	Glu	Trp	Met	Gly	Tyr	Ile	Thr
				645					650						655
Tyr	Ser	Gly	Ser	Thr	Ser	Tyr	Asn	Pro	Ser	Leu	Glu	Ser	Arg	Ile	Ser
			660					665					670		
Ile	Thr	Arg	Asp	Thr	Ser	Thr	Asn	Gln	Phe	Phe	Leu	Gln	Leu	Asn	Ser
		675					680					685			
Val	Thr	Thr	Glu	Asp	Thr	Ala	Thr	Tyr	Tyr	Cys	Ala	Arg	Gly	Gly	Tyr
		690				695				700					
Tyr	Gly	Ser	Ser	Trp	Gly	Val	Phe	Ala	Tyr	Trp	Gly	Gln	Gly	Thr	Leu
705					710					715					720
Val	Thr	Val	Ser	Ala											
				725											

<210> 174

<211> 216

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv-Ig polypeptide chain

<400> 174

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

				85					90					95			
Asn	Gly	Pro	Val	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln		
			100					105					110				
Pro	Lys	Ala	Ala	Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser	Glu	Glu		
		115					120					125					
Leu	Gln	Ala	Asn	Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp	Phe	Tyr		
	130					135					140						
Pro	Gly	Ala	Val	Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro	Val	Lys		
145					150					155					160		
Ala	Gly	Val	Glu	Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn	Lys	Tyr		
				165					170					175			
Ala	Ala	Ser	Ser	Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys	Ser	His		
			180					185					190				
Arg	Ser	Tyr	Ser	Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Glu	Lys		
		195					200					205					
Thr	Val	Ala	Pro	Thr	Glu	Cys	Ser										
	210					215											

<210> 175

<211> 727

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv-Ig polypeptide chain

<400> 175

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ser		
1				5					10					15			
Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Gly	Thr	Phe	Ser	Ser	Tyr		
			20					25					30				
Thr	Ile	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met		
		35					40					45					
Gly	Gly	Ile	Ile	Pro	Ile	Phe	Gly	Thr	Ala	Asn	Tyr	Ala	Gln	Lys	Phe		
	50					55					60						
Gln	Gly	Arg	Val	Thr	Ile	Thr	Ala	Asp	Glu	Ser	Thr	Ser	Thr	Ala	Tyr		
65					70					75					80		
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys		
				85					90					95			
Ala	Arg	Gly	Gly	Ser	Ser	Gly	Trp	Trp	Trp	Gly	Gln	Gly	Thr	Leu	Val		
			100					105					110				
Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala		
		115					120					125					
Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu		
		130				135					140						
Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly		
145					150					155					160		
Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser		
				165				170						175			

Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu
			180					185					190		
Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr
		195					200					205			
Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr
	210					215					220				
Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Phe	Glu	Gly	Gly	Pro	Ser	Val	Phe
225					230					235					240
Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro
				245					250					255	
Glu	Val	Thr	Cys	Val	Val	Val	Ala	Val	Ser	His	Glu	Asp	Pro	Glu	Val
			260					265					270		
Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr
		275					280					285			
Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val
	290					295					300				
Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys
305					310					315					320
Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser
				325					330					335	
Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro
			340				345						350		
Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val
		355					360					365			
Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly
	370					375					380				
Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp
385					390					395					400
Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp
			405						410					415	
Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His
			420					425					430		
Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Gly	Gly	Gly
		435					440					445			
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
	450					455					460				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gln	Ser	Ala	Leu	Thr
465					470					475					480
Gln	Pro	Ala	Ser	Val	Ser	Gly	Ser	Pro	Gly	Gln	Ser	Ile	Thr	Ile	Ser
				485					490					495	
Cys	Ser	Gly	Ser	Ser	Ser	Asn	Ile	Gly	Asn	Asn	Ala	Val	Asn	Trp	Tyr
			500					505					510		
Gln	Gln	Leu	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile	Tyr	Tyr	Asp	Asp
		515					520					525			
Leu	Leu	Pro	Ser	Gly	Val	Ser	Asp	Arg	Phe	Ser	Gly	Ser	Lys	Ser	Gly
	530					535					540				
Thr	Ser	Ala	Phe	Leu	Ala	Ile	Ser	Gly	Leu	Gln	Ser	Glu	Asp	Glu	Ala
545					550					555					560
Asp	Tyr	Tyr	Cys	Ala	Ala	Trp	Asp	Asp	Ser	Leu	Asn	Gly	Pro	Val	Phe
				565					570					575	

Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gly	Ser	Gly	Gly	Ser	Gly
			580					585					590		
Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gln	Val
		595					600					605			
Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Lys	Pro	Gly	Gly	Ser	Leu
	610					615					620				
Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Tyr	Gly	Met
625					630					635					640
His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	Ala	Phe
			645						650					655	
Ile	Arg	Tyr	Asp	Gly	Ser	Asn	Lys	Tyr	Tyr	Ala	Asp	Ser	Val	Lys	Gly
			660					665					670		
Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr	Leu	Gln
		675					680					685			
Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Lys
	690					695					700				
Asp	Arg	Gly	Leu	Gly	Asp	Gly	Thr	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly
705					710					715					720
Thr	Thr	Val	Thr	Val	Ser	Ser									
				725											

<210> 176

<211> 216

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv-Ig polypeptide chain

<400> 176

Gln	Ser	Val	Leu	Thr	Gln	Pro	Pro	Ser	Ala	Ser	Gly	Thr	Pro	Gly	Gln
1				5					10					15	
Arg	Val	Ile	Ile	Ser	Cys	Ser	Gly	Ser	His	Ser	Asn	Ile	Gly	Ser	Asn
			20					25					30		
Asn	Val	Asn	Trp	Tyr	Gln	Gln	Leu	Pro	Gly	Thr	Ala	Pro	Lys	Leu	Leu
	35						40					45			
Ile	Tyr	Asn	Asn	Asn	Gln	Arg	Pro	Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser
	50					55					60				
Gly	Ser	Lys	Ser	Gly	Thr	Ser	Ala	Ser	Leu	Ala	Ile	Ser	Gly	Leu	Gln
65					70					75					80
Ser	Glu	Asp	Glu	Ser	Asp	Tyr	Phe	Cys	Gly	Thr	Trp	Asp	Asp	Ser	Leu
				85					90					95	
Asn	Gly	Pro	Val	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln
			100					105					110		
Pro	Lys	Ala	Ala	Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser	Glu	Glu
		115					120					125			
Leu	Gln	Ala	Asn	Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp	Phe	Tyr
	130					135					140				
Pro	Gly	Ala	Val	Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro	Val	Lys

145					150					155					160
Ala	Gly	Val	Glu	Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn	Lys	Tyr
				165					170					175	
Ala	Ala	Ser	Ser	Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys	Ser	His
			180					185					190		
Arg	Ser	Tyr	Ser	Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Glu	Lys
		195					200					205			
Thr	Val	Ala	Pro	Thr	Glu	Cys	Ser								
	210					215									

<210> 177
 <211> 722
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> scFv-Ig polypeptide chain

<400> 177

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ser
1			5						10					15	
Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Gly	Thr	Phe	Ser	Ser	Tyr
		20					25					30			
Thr	Ile	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
	35					40						45			
Gly	Gly	Ile	Ile	Pro	Ile	Phe	Gly	Thr	Ala	Asn	Tyr	Ala	Gln	Lys	Phe
	50				55					60					
Gln	Gly	Arg	Val	Thr	Ile	Thr	Ala	Asp	Glu	Ser	Thr	Ser	Thr	Ala	Tyr
65				70					75					80	
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Arg	Gly	Gly	Ser	Ser	Gly	Trp	Trp	Trp	Gly	Gln	Gly	Thr	Leu	Val
		100					105						110		
Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala
	115					120						125			
Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu
	130				135					140					
Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly
145				150				155						160	
Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser
			165					170						175	
Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu
		180					185					190			
Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr
	195				200							205			
Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr
	210				215						220				
Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Phe	Glu	Gly	Gly	Pro	Ser	Val	Phe
225				230					235						240

Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro
				245					250					255	
Glu	Val	Thr	Cys	Val	Val	Val	Ala	Val	Ser	His	Glu	Asp	Pro	Glu	Val
			260				265						270		
Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr
		275					280					285			
Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val
	290					295					300				
Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys
305					310					315					320
Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser
			325						330					335	
Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro
			340				345						350		
Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val
		355					360					365			
Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly
	370					375					380				
Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp
385					390					395					400
Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp
			405						410					415	
Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His
			420				425					430			
Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Gly	Gly	Gly
		435					440					445			
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
	450					455					460				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Ser	Tyr	Val	Leu	Thr
465					470					475					480
Gln	Pro	Ser	Ser	Val	Ser	Val	Ala	Pro	Gly	Gln	Thr	Ala	Thr	Ile	Ser
			485						490					495	
Cys	Gly	Gly	His	Asn	Ile	Gly	Ser	Lys	Asn	Val	His	Trp	Tyr	Gln	Gln
			500					505					510		
Arg	Pro	Gly	Gln	Ser	Pro	Val	Leu	Val	Ile	Tyr	Gln	Asp	Asn	Lys	Arg
		515					520					525			
Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	Ser	Gly	Ser	Asn	Ser	Gly	Asn	Thr
	530					535					540				
Ala	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Gln	Ala	Met	Asp	Glu	Ala	Asp	Tyr
545					550					555					560
Tyr	Cys	Gln	Val	Trp	Asp	Asn	Tyr	Ser	Val	Leu	Phe	Gly	Gly	Gly	Thr
			565						570					575	
Lys	Leu	Thr	Val	Leu	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Gly
			580					585					590		
Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly								

Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met	Gly	Ala	Ile	Glu	Pro	Met
			645						650					655	
Tyr	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe	Gln	Gly	Arg	Val	Thr	Met
			660					665					670		
Thr	Arg	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr	Met	Glu	Leu	Ser	Ser	Leu
		675					680					685			
Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Gly	Ser	Ala	Tyr
	690					695					700				
Tyr	Tyr	Asp	Phe	Ala	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val
705					710					715					720
Ser	Ser														

<210> 178

<211> 216

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv-Ig polypeptide chain

<400> 178

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Arg	Val	Ile	Ile	Ser	Cys	Ser	Gly	Ser	His	Ser	Asn	Ile	Gly	Ser	Asn
		20					25					30			
Asn	Val	Asn	Trp	Tyr	Gln	Gln	Leu	Pro	Gly	Thr	Ala	Pro	Lys	Leu	Leu
		35					40					45			
Ile	Tyr	Asn	Asn	Asn	Gln	Arg	Pro	Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser
	50				55					60					
Gly	Ser	Lys	Ser	Gly	Thr	Ser	Ala	Ser	Leu	Ala	Ile	Ser	Gly	Leu	Gln
65				70					75					80	
Ser	Glu	Asp	Glu	Ser	Asp	Tyr	Phe	Cys	Gly	Thr	Trp	Asp	Asp	Ser	Leu
			85					90						95	
Asn	Gly	Pro	Val	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln
		100						105					110		
Pro	Lys	Ala	Ala	Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser	Glu	Glu
		115					120					125			
Leu	Gln	Ala	Asn	Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp	Phe	Tyr
	130					135					140				
Pro	Gly	Ala	Val	Thr	Val	Ala	Trp	Lys	Ala	Asp	Ser	Ser	Pro	Val	Lys
145					150					155					160
Ala	Gly	Val	Glu	Thr	Thr	Thr	Pro	Ser	Lys	Gln	Ser	Asn	Asn	Lys	Tyr
				165					170					175	
Ala	Ala	Ser	Ser	Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys	Ser	His
			180					185					190		
Arg	Ser	Tyr	Ser	Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Glu	Lys
		195					200						205		
Thr	Val	Ala	Pro	Thr	Glu	Cys	Ser								

