

SEQUENCE LISTING

<110> Nanjing Legend Biotech Co., Ltd.

<120> CHIMERIC RECEPTOR POLYPEPTIDES AND USES
THEREOF

<130> 76142-20015.41

<150> PCT/CN2019/071609

<151> 2019-01-14

<160> 68

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 1

Gly Gly Gly Gly Ser

1 5

<210> 2

<211> 10

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<213> Artificial Sequence

<220>

<223> linker

<400> 2

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

1 5 10

<210> 3

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 3

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

<210> 4

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 4

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> 5

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 5

Gly Gly Ser Gly Gly Ser
1 5

<210> 6

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 6

Ser Gly Gly Gly Gly Ser
1 5

<210> 7

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 7

Gly Arg Ala Gly Gly Gly Gly Ala Gly Gly Gly Gly
1 5 10

<210> 8

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 8

Gly Arg Ala Gly Gly Gly
1 5

<210> 9

<211> 1

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<220>

<221> VARIANT

<222> (1)...(1)

<223> Can be present in repeats of one or more

<400> 9

Gly
1

<210> 10

<211> 2

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<220>

<221> VARIANT
<222> (1)...(2)
<223> Can be present in repeats of one or more

<400> 10

Gly Ser

1

<210> 11
<211> 5
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<220>
<223> linker

<220>
<221> VARIANT
<222> (1)...(5)
<223> Can be present in repeats of one or more

<400> 11

Gly Ser Gly Gly Ser

1

5

<210> 12
<211> 4
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<213> Artificial Sequence

<220>
<223> linker

<220>
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<223> Can be present in repeats of one or more

<400> 12

Gly Gly Gly Ser

1

<210> 13
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<213> Artificial Sequence

<220>

<223> linker

<220>

<221> VARIANT

<222> (1)...(5)

<223> Can be present in repeats of one or more

<400> 13

Gly Gly Gly Gly Ser

1

5

<210> 14

<211> 2

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 14

Gly Gly

1

<210> 15

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 15

Gly Gly Ser Gly

1

<210> 16

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 16

Gly Gly Ser Gly Gly

1

5

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

<220>
<223> linker

<400> 17
Gly Ser Gly Ser Gly
1 5

<210> 18
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<220>
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<400> 18
Gly Ser Gly Gly Gly
1 5

<210> 19
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<220>
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<400> 19
Gly Gly Gly Ser Gly
1 5

<210> 20
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> linker

<400> 20

Gly Ser Ser Ser Gly
1 5

<210> 21
<211> 229
<212> PRT
<213> Artificial Sequence

<220>
<223> linker

<400> 21
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe
1 5 10 15
Glu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
20 25 30
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
35 40 45
Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
50 55 60
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Gln Ser
65 70 75 80
Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
85 90 95
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
100 105 110
Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
115 120 125
Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
130 135 140
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
145 150 155 160
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
165 170 175
Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
180 185 190
Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
195 200 205
Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
210 215 220
Leu Ser Leu Gly Lys
225

<210> 22
<211> 117
<212> PRT
<213> Artificial Sequence

<223> anti-CD3 sdAb

[illegible]

<211> 122

<213> Artificial Sequence

<223> anti-CD3 sdAb

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

<210> 24

<211> 250
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-CD3 scFv (UCHT1)

<400> 24
Met Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu
1 5 10 15
Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Arg Asn
20 25 30
Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu
35 40 45
Ile Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Lys Phe Ser
50 55 60
Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu
65 70 75 80
Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro
85 90 95
Trp Thr Phe Ala Gly Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly
100 105 110
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125
Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
130 135 140
Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
145 150 155 160
Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Met
165 170 175
Gly Leu Ile Asn Pro Tyr Lys Gly Val Ser Thr Tyr Asn Gln Lys Phe
180 185 190
Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Thr Ala Tyr
195 200 205
Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
210 215 220
Ala Arg Ser Gly Tyr Tyr Gly Asp Ser Asp Trp Tyr Phe Asp Val Trp
225 230 235 240
Gly Gln Gly Thr Thr Leu Thr Val Phe Ser
245 250

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

<220>
<223> MMP seq

<400> 25

Pro Leu Gly Leu Ala Gly
1 5

<210> 26

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> anti-BCMA sdAb

<400> 26

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

<210> 27

<211> 241

<212> PRT

<213> Artificial Sequence

<220>

<223> anti-TCR gamma/delta Monoclonal Antibody (B1.1)

<400> 27

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

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

<210> 28
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 28															
Met	Gln	Ser	Gly	Thr	His	Trp	Arg	Val	Leu	Gly	Leu	Cys	Leu	Leu	Ser
1				5					10					15	
Val	Gly	Val	Trp	Gly	Gln	Asp	Gly	Asn	Glu	Glu	Met	Gly	Gly	Ile	Thr
			20					25					30		
Gln	Thr	Pro	Tyr	Lys	Val	Ser	Ile	Ser	Gly	Thr	Thr	Val	Ile	Leu	Thr
		35					40					45			
Cys	Pro	Gln	Tyr	Pro	Gly	Ser	Glu	Ile	Leu	Trp	Gln	His	Asn	Asp	Lys
	50					55					60				
Asn	Ile	Gly	Gly	Asp	Glu	Asp	Asp	Lys	Asn	Ile	Gly	Ser	Asp	Glu	Asp
65				70					75					80	
His	Leu	Ser	Leu	Lys	Glu	Phe	Ser	Glu	Leu	Glu	Gln	Ser	Gly	Tyr	Tyr
				85					90					95	
Val	Cys	Tyr	Pro	Arg	Gly	Ser	Lys	Pro	Glu	Asp	Ala	Asn	Phe	Tyr	Leu
			100					105					110		
Tyr	Leu	Arg	Ala	Arg	Val	Cys	Glu	Asn	Cys	Met	Glu	Met	Asp	Val	Met
		115					120					125			
Ser	Val	Ala	Thr	Ile	Val	Ile	Val	Asp	Ile	Cys	Ile	Thr	Gly	Gly	Leu
	130					135					140				
Leu	Leu	Leu	Val	Tyr	Tyr	Trp	Ser	Lys	Asn	Arg	Lys	Ala	Lys	Ala	Lys

145		150		155		160									
Pro	Val	Thr	Arg	Gly	Ala	Gly	Ala	Gly	Gly	Arg	Gln	Arg	Gly	Gln	Asn
				165				170						175	
Lys	Glu	Arg	Pro	Pro	Pro	Val	Pro	Asn	Pro	Asp	Tyr	Glu	Pro	Ile	Arg
			180					185						190	
Lys	Gly	Gln	Arg	Asp	Leu	Tyr	Ser	Gly	Leu	Asn	Gln	Arg	Arg	Ile	
		195					200					205			

<210> 29
 <211> 182
 <212> PRT
 <213> Homo sapiens

<400> 29

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

<210> 30
 <211> 171
 <212> PRT
 <213> Homo sapiens

<400> 30

Met	Glu	His	Ser	Thr	Phe	Leu	Ser	Gly	Leu	Val	Leu	Ala	Thr	Leu	Leu
1				5					10					15	
Ser	Gln	Val	Ser	Pro	Phe	Lys	Ile	Pro	Ile	Glu	Glu	Leu	Glu	Asp	Arg

<210> 34
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> sta

<400> 34
Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala Gly Phe Asn Leu
1 5 10 15
Leu Met Thr Leu Arg Leu Trp Ser Ser
20 25

<210> 35
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> stb

<400> 35
Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val Leu Val Ser Ala Leu
1 5 10 15
Val Leu Met Ala Met Val Lys Arg Lys Asp Phe
20 25

<210> 36
<211> 173
<212> PRT
<213> Artificial Sequence

<220>
<223> tgC

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

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

<210> 37
 <211> 153
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> tdC

<400> 37															
Ser	Gln	Pro	His	Thr	Lys	Pro	Ser	Val	Phe	Val	Met	Lys	Asn	Gly	Thr
1				5					10					15	
Asn	Val	Ala	Cys	Leu	Val	Lys	Glu	Phe	Tyr	Pro	Lys	Asp	Ile	Arg	Ile
			20					25					30		
Asn	Leu	Val	Ser	Ser	Lys	Lys	Ile	Thr	Glu	Phe	Asp	Pro	Ala	Ile	Val
	35						40					45			
Ile	Ser	Pro	Ser	Gly	Lys	Tyr	Asn	Ala	Val	Lys	Leu	Gly	Lys	Tyr	Glu
	50					55					60				
Asp	Ser	Asn	Ser	Val	Thr	Cys	Ser	Val	Gln	His	Asp	Asn	Lys	Thr	Val
65					70					75					80
His	Ser	Thr	Asp	Phe	Glu	Val	Lys	Thr	Asp	Ser	Thr	Asp	His	Val	Lys
				85					90					95	
Pro	Lys	Glu	Thr	Glu	Asn	Thr	Lys	Gln	Pro	Ser	Lys	Ser	Cys	His	Lys
			100					105					110		
Pro	Lys	Ala	Ile	Val	His	Thr	Glu	Lys	Val	Asn	Met	Met	Ser	Leu	Thr
		115					120					125			
Val	Leu	Gly	Leu	Arg	Met	Leu	Phe	Ala	Lys	Thr	Val	Ala	Val	Asn	Phe
	130					135					140				
Leu	Leu	Thr	Ala	Lys	Leu	Phe	Phe	Leu							
145					150										

<210> 38
 <211> 35
 <212> PRT
 <213> Artificial Sequence

<210> 41
<211> 66
<212> PRT
<213> Artificial Sequence

<220>
<223> sg (CD3 Gamma no extracellular)

<400> 41
Gly Phe Leu Phe Ala Glu Ile Val Ser Ile Phe Val Leu Ala Val Gly
1 5 10 15
Val Tyr Phe Ile Ala Gly Gln Asp Gly Val Arg Gln Ser Arg Ala Ser
20 25 30
Asp Lys Gln Thr Leu Leu Pro Asn Asp Gln Leu Tyr Gln Pro Leu Lys
35 40 45
Asp Arg Glu Asp Asp Gln Tyr Ser His Leu Gln Gly Asn Gln Leu Arg
50 55 60
Arg Asn
65

<210> 42
<211> 66
<212> PRT
<213> Artificial Sequence

<220>
<223> sd (CD3 Delta no extracellular)

<400> 42
Gly Ile Ile Val Thr Asp Val Ile Ala Thr Leu Leu Leu Ala Leu Gly
1 5 10 15
Val Phe Cys Phe Ala Gly His Glu Thr Gly Arg Leu Ser Gly Ala Ala
20 25 30
Asp Thr Gln Ala Leu Leu Arg Asn Asp Gln Val Tyr Gln Pro Leu Arg
35 40 45
Asp Arg Asp Asp Ala Gln Tyr Ser His Leu Gly Gly Asn Trp Ala Arg
50 55 60
Asn Lys
65

<210> 43
<211> 605
<212> PRT
<213> Artificial Sequence

<220>
<223> sdAbBCMA-anti-CD3 scFv-e

<400> 43

Met	Gln	Ser	Gly	Thr	His	Trp	Arg	Val	Leu	Gly	Leu	Cys	Leu	Leu	Ser
1				5					10					15	
Val	Gly	Val	Trp	Gly	Gln	Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly
			20					25					30		
Leu	Val	Gln	Ala	Gly	Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly
		35					40				45				
Arg	Thr	Phe	Thr	Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg
	50				55						60				
Glu	Phe	Val	Ala	Ala	Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala
65					70					75					80
Glu	Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn
				85					90					95	
Thr	Val	Val	Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu
			100					105					110		
Tyr	Tyr	Cys	Ala	Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp
		115					120					125			
Tyr	Trp	Gly	Gln	Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly
	130					135						140			
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met
145					150					155					160
Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr
				165				170						175	
Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr
			180					185					190		
Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser
		195					200					205			
Arg	Leu	His	Ser	Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly
	210					215					220				
Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala
225					230					235					240
Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly
			245						250					255	
Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
		260					265						270		
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln
		275				280						285			
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser
	290					295					300				
Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val
305					310					315					320
Lys	Gln	Ser	His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro
			325						330					335	
Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr
			340					345					350		
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser
		355					360					365			
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr
	370					375					380				

Tyr	Gly	Asp	Ser	Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr
385					390					395					400
Leu	Thr	Val	Phe	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly
				405					410					415	
Gly	Gly	Gly	Ser	Asp	Gly	Asn	Glu	Glu	Met	Gly	Gly	Ile	Thr	Gln	Thr
			420					425						430	
Pro	Tyr	Lys	Val	Ser	Ile	Ser	Gly	Thr	Thr	Val	Ile	Leu	Thr	Cys	Pro
	435						440					445			
Gln	Tyr	Pro	Gly	Ser	Glu	Ile	Leu	Trp	Gln	His	Asn	Asp	Lys	Asn	Ile
	450					455					460				
Gly	Gly	Asp	Glu	Asp	Asp	Lys	Asn	Ile	Gly	Ser	Asp	Glu	Asp	His	Leu
465					470					475					480
Ser	Leu	Lys	Glu	Phe	Ser	Glu	Leu	Glu	Gln	Ser	Gly	Tyr	Tyr	Val	Cys
				485					490					495	
Tyr	Pro	Arg	Gly	Ser	Lys	Pro	Glu	Asp	Ala	Asn	Phe	Tyr	Leu	Tyr	Leu
			500					505					510		
Arg	Ala	Arg	Val	Cys	Glu	Asn	Cys	Met	Glu	Met	Asp	Val	Met	Ser	Val
		515					520					525			
Ala	Thr	Ile	Val	Ile	Val	Asp	Ile	Cys	Ile	Thr	Gly	Gly	Leu	Leu	Leu
	530					535					540				
Leu	Val	Tyr	Tyr	Trp	Ser	Lys	Asn	Arg	Lys	Ala	Lys	Ala	Lys	Pro	Val
545					550					555					560
Thr	Arg	Gly	Ala	Gly	Ala	Gly	Gly	Arg	Gln	Arg	Gly	Gln	Asn	Lys	Glu
				565					570					575	
Arg	Pro	Pro	Pro	Val	Pro	Asn	Pro	Asp	Tyr	Glu	Pro	Ile	Arg	Lys	Gly
			580					585					590		
Gln	Arg	Asp	Leu	Tyr	Ser	Gly	Leu	Asn	Gln	Arg	Arg	Ile			
		595					600					605			

<210> 44

<211> 580

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-g

<400> 44

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

				85				90					95			
Thr	Val	Val	Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	
			100					105					110			
Tyr	Tyr	Cys	Ala	Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	
		115					120					125				
Tyr	Trp	Gly	Gln	Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	
		130				135						140				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met	
145					150					155					160	
Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr	
				165				170						175		
Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr	
			180					185					190			
Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser	
		195					200					205				
Arg	Leu	His	Ser	Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly	
		210				215					220					
Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala	
225					230					235					240	
Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly	
			245						250					255		
Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	
		260					265					270				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln	
		275				280					285					
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser	
		290				295				300						
Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val	
305					310				315						320	
Lys	Gln	Ser	His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro	
			325					330						335		
Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr	
			340					345					350			
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser	
		355				360						365				
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr	
		370				375				380						
Tyr	Gly	Asp	Ser	Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	
385					390				395						400	
Leu	Thr	Val	Phe	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	
			405					410						415		
Gly	Gly	Gly	Ser	Gln	Ser	Ile	Lys	Gly	Asn	His	Leu	Val	Lys	Val	Tyr	
			420					425				430				
Asp	Tyr	Gln	Glu	Asp	Gly	Ser	Val	Leu	Leu	Thr	Cys	Asp	Ala	Glu	Ala	
		435				440					445					
Lys	Asn	Ile	Thr	Trp	Phe	Lys	Asp	Gly	Lys	Met	Ile	Gly	Phe	Leu	Thr	
		450				455				460						
Glu	Asp	Lys	Lys	Lys	Trp	Asn	Leu	Gly	Ser	Asn	Ala	Lys	Asp	Pro	Arg	
465					470					475					480	
Gly	Met	Tyr	Gln	Cys	Lys	Gly	Ser	Gln	Asn	Lys	Ser	Lys	Pro	Leu	Gln	

				485					490					495		
Val	Tyr	Tyr	Arg	Met	Cys	Gln	Asn	Cys	Ile	Glu	Leu	Asn	Ala	Ala	Thr	
			500					505					510			
Ile	Ser	Gly	Phe	Leu	Phe	Ala	Glu	Ile	Val	Ser	Ile	Phe	Val	Leu	Ala	
		515					520					525				
Val	Gly	Val	Tyr	Phe	Ile	Ala	Gly	Gln	Asp	Gly	Val	Arg	Gln	Ser	Arg	
	530					535					540					
Ala	Ser	Asp	Lys	Gln	Thr	Leu	Leu	Pro	Asn	Asp	Gln	Leu	Tyr	Gln	Pro	
545					550					555					560	
Leu	Lys	Asp	Arg	Glu	Asp	Asp	Gln	Tyr	Ser	His	Leu	Gln	Gly	Asn	Gln	
				565					570					575		
Leu	Arg	Arg	Asn													
			580													

<210> 45

<211> 570

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-d

<400> 45

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

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

<210> 46

<211> 536

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-se

<400> 46

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

			340					345				350					
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser		
		355					360					365					
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr		
		370				375					380						
Tyr	Gly	Asp	Ser	Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr		
385					390					395					400		
Leu	Thr	Val	Phe	Ser	Gly	Gly	Gly	Gly	Ser	Thr	Thr	Thr	Pro	Ala	Pro		
			405					410						415			
Arg	Pro	Pro	Thr	Pro	Ala	Pro	Thr	Ile	Ala	Ser	Gln	Pro	Leu	Ser	Leu		
			420					425					430				
Arg	Pro	Glu	Ala	Cys	Arg	Pro	Ala	Ala	Gly	Gly	Ala	Val	His	Thr	Arg		
		435					440					445					
Gly	Leu	Asp	Phe	Ala	Cys	Asp	Val	Met	Ser	Val	Ala	Thr	Ile	Val	Ile		
		450				455					460						
Val	Asp	Ile	Cys	Ile	Thr	Gly	Gly	Leu	Leu	Leu	Leu	Val	Tyr	Tyr	Trp		
465					470					475					480		
Ser	Lys	Asn	Arg	Lys	Ala	Lys	Ala	Lys	Pro	Val	Thr	Arg	Gly	Ala	Gly		
			485					490						495			
Ala	Gly	Gly	Arg	Gln	Arg	Gly	Gln	Asn	Lys	Glu	Arg	Pro	Pro	Pro	Val		
			500					505					510				
Pro	Asn	Pro	Asp	Tyr	Glu	Pro	Ile	Arg	Lys	Gly	Gln	Arg	Asp	Leu	Tyr		
		515					520					525					
Ser	Gly	Leu	Asn	Gln	Arg	Arg	Ile										
		530				535											

<210> 47

<211> 521

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-sg

<400> 47

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

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

Leu Gln Gly Asn Gln Leu Arg Arg Asn
515 520

<210> 48

<211> 521

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-sd

<400> 48

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

290		295		300
Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met Asn Trp Val				
305		310		315
Lys Gln Ser His Gly Lys Asn Leu Glu Trp Met Gly Leu Ile Asn Pro				
	325		330	
Tyr Lys Gly Val Ser Thr Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr				
	340		345	350
Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Glu Leu Leu Ser				
	355		360	365
Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Ser Gly Tyr				
	370		375	380
Tyr Gly Asp Ser Asp Trp Tyr Phe Asp Val Trp Gly Gln Gly Thr Thr				
385		390		395
Leu Thr Val Phe Ser Gly Gly Gly Gly Ser Thr Thr Thr Pro Ala Pro				
	405		410	415
Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu				
	420		425	430
Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg				
	435		440	445
Gly Leu Asp Phe Ala Cys Asp Gly Ile Ile Val Thr Asp Val Ile Ala				
	450		455	460
Thr Leu Leu Leu Ala Leu Gly Val Phe Cys Phe Ala Gly His Glu Thr				
465		470		475
Gly Arg Leu Ser Gly Ala Ala Asp Thr Gln Ala Leu Leu Arg Asn Asp				
	485		490	495
Gln Val Tyr Gln Pro Leu Arg Asp Arg Asp Asp Ala Gln Tyr Ser His				
	500		505	510
Leu Gly Gly Asn Trp Ala Arg Asn Lys				
	515		520	

<210> 49

<211> 1181

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-taC/tbC

<400> 49

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

Ser	Val	Lys	Gly	Arg 85	Phe	Thr	Ile	Ser	Arg 90	Asp	Asn	Ala	Lys	Asn	Thr
Val	Val	Leu	Gln 100	Met	Asn	Ser	Leu	Lys 105	Pro	Glu	Asp	Thr	Ala	Lys	Tyr
Tyr	Cys	Ala	Ala 115	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr
Trp	Gly	Gln	Gly 130	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Gly
Ser 145	Gly	Gly	Gly	Gly	Ser 150	Gly	Gly	Gly	Gly	Ser 155	Met	Asp	Ile	Gln	Met 160
Thr	Gln	Thr	Thr	Ser 165	Ser	Leu	Ser	Ala	Ser 170	Leu	Gly	Asp	Arg	Val	Thr
Ile	Ser	Cys	Arg 180	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr
Gln	Gln	Lys 195	Pro	Asp	Gly	Thr	Val 200	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser
Arg	Leu	His 210	Ser	Gly	Val	Pro 215	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly
Thr 225	Asp	Tyr	Ser	Leu	Thr 230	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala
Thr	Tyr	Phe	Cys	Gln 245	Gln	Gly	Asn	Thr	Leu 250	Pro	Trp	Thr	Phe	Ala	Gly
Gly	Thr	Lys	Leu 260	Glu	Ile	Lys	Gly	Gly 265	Gly	Gly	Ser	Gly	Gly	Gly	Gly
Ser	Gly	Gly 275	Gly	Gly	Ser	Gly	Gly	Gly 280	Gly	Ser	Glu	Val	Gln	Leu	Gln
Gln	Ser 290	Gly	Pro	Glu	Leu	Val 295	Lys	Pro	Gly	Ala	Ser 300	Met	Lys	Ile	Ser
Cys 305	Lys	Ala	Ser	Gly	Tyr 310	Ser	Phe	Thr	Gly	Tyr 315	Thr	Met	Asn	Trp	Val
Lys	Gln	Ser	His 325	Gly	Lys	Asn	Leu	Glu	Trp 330	Met	Gly	Leu	Ile	Asn	Pro
Tyr	Lys	Gly	Val 340	Ser	Thr	Tyr	Asn	Gln 345	Lys	Phe	Lys	Asp	Lys	Ala	Thr
Leu	Thr	Val 355	Asp	Lys	Ser	Ser	Ser 360	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser
Leu	Thr 370	Ser	Glu	Asp	Ser	Ala 375	Val	Tyr	Tyr	Cys	Ala 380	Arg	Ser	Gly	Tyr
Tyr 385	Gly	Asp	Ser	Asp	Trp 390	Tyr	Phe	Asp	Val	Trp 395	Gly	Gln	Gly	Thr	Thr
Leu	Thr	Val	Phe 405	Ser	Gly	Gly	Gly	Gly	Ser 410	Gly	Gly	Gly	Gly	Ser	Gly
Gly	Gly	Gly	Ser 420	Pro	Asn	Ile	Gln	Asn 425	Pro	Asp	Pro	Ala	Val	Tyr	Gln
Leu	Arg	Asp 435	Ser	Lys	Ser	Ser	Asp 440	Lys	Ser	Val	Cys	Leu	Phe	Thr	Asp
Phe	Asp 450	Ser	Gln	Thr	Asn	Val 455	Ser	Gln	Ser	Lys	Asp 460	Ser	Asp	Val	Tyr
Ile 465	Thr	Asp	Lys	Thr 470	Val	Leu	Asp	Met	Arg 475	Ser	Met	Asp	Phe	Lys	Ser 480

Asn	Ser	Ala	Val	Ala	Trp	Ser	Asn	Lys	Ser	Asp	Phe	Ala	Cys	Ala	Asn
				485					490					495	
Ala	Phe	Asn	Asn	Ser	Ile	Ile	Pro	Glu	Asp	Thr	Phe	Phe	Pro	Ser	Pro
			500					505					510		
Glu	Ser	Ser	Cys	Asp	Val	Lys	Leu	Val	Glu	Lys	Ser	Phe	Glu	Thr	Asp
		515					520					525			
Thr	Asn	Leu	Asn	Phe	Gln	Asn	Leu	Ser	Val	Ile	Gly	Phe	Arg	Ile	Leu
	530					535					540				
Leu	Leu	Lys	Val	Ala	Gly	Phe	Asn	Leu	Leu	Met	Thr	Leu	Arg	Leu	Trp
545					550					555					560
Ser	Ser	Gly	Ser	Gly	Ala	Thr	Asn	Phe	Ser	Leu	Leu	Lys	Gln	Ala	Gly
				565					570					575	
Asp	Val	Glu	Glu	Asn	Pro	Gly	Pro	Met	Gly	Thr	Ser	Leu	Leu	Cys	Trp
			580					585					590		
Met	Ala	Leu	Cys	Leu	Leu	Gly	Ala	Asp	His	Ala	Asp	Thr	Glu	Val	Gln
	595						600					605			
Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Ala	Gly	Gly	Ser	Leu	Arg
	610					615					620				
Leu	Ser	Cys	Ala	Ala	Ser	Gly	Arg	Thr	Phe	Thr	Met	Gly	Trp	Phe	Arg
625					630					635					640
Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu	Phe	Val	Ala	Ala	Ile	Ser	Leu	Ser
				645					650					655	
Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu	Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile
			660					665					670		
Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Val	Val	Leu	Gln	Met	Asn	Ser	Leu
		675					680					685			
Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys	Ala	Ala	Asp	Arg	Lys	Ser
	690					695					700				
Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Gln	Val	Thr
705					710					715					720
Val	Ser	Ser	Gly	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly
				725					730					735	
Gly	Gly	Ser	Met	Asp	Ile	Gln	Met	Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser
			740					745					750		
Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr	Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp
		755					760					765			
Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr	Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val
	770					775					780				
Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser	Arg	Leu	His	Ser	Gly	Val	Pro	Ser
785					790					795					800
Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser
				805					810					815	
Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala	Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn
			820					825					830		
Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly
		835					840					845			
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly
	850					855					860				
Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln	Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys
865					870					875					880

1				5					10					15		
Gln	Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Ala	Gly	
			20					25					30			
Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Arg	Thr	Phe	Thr	Met	
		35					40					45				
Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu	Phe	Val	Ala	Ala	
		50				55					60					
Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu	Ser	Val	Lys	Gly	
65					70					75					80	
Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Val	Val	Leu	Gln	
			85					90						95		
Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys	Ala	Ala	
			100					105					110			
Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr	Trp	Gly	Gln	Gly	
		115					120					125				
Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	
		130				135					140					
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met	
145					150					155					160	
Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr	
				165				170						175		
Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr	
		180					185					190				
Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser	
		195					200				205					
Arg	Leu	His	Ser	Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly	
		210				215					220					
Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala	
225					230					235					240	
Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly	
			245					250						255		
Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	
			260				265						270			
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln	
		275				280						285				
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser	
		290				295					300					
Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val	
305					310				315						320	
Lys	Gln	Ser	His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro	
			325					330						335		
Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr	
			340					345					350			
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser	
		355				360						365				
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr	
		370				375					380					
Tyr	Gly	Asp	Ser	Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	
385					390					395					400	
Leu	Thr	Val	Phe	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	

				405				410					415			
Gly	Gly	Gly	Ser	Asp	Lys	Gln	Leu	Asp	Ala	Asp	Val	Ser	Pro	Lys	Pro	
			420					425					430			
Thr	Ile	Phe	Leu	Pro	Ser	Ile	Ala	Glu	Thr	Lys	Leu	Gln	Lys	Ala	Gly	
		435					440					445				
Thr	Tyr	Leu	Cys	Leu	Leu	Glu	Lys	Phe	Phe	Pro	Asp	Val	Ile	Lys	Ile	
	450					455					460					
His	Trp	Gln	Glu	Lys	Lys	Ser	Asn	Thr	Ile	Leu	Gly	Ser	Gln	Glu	Gly	
465				470						475					480	
Asn	Thr	Met	Lys	Thr	Asn	Asp	Thr	Tyr	Met	Lys	Phe	Ser	Trp	Leu	Thr	
			485					490					495			
Val	Pro	Glu	Lys	Ser	Leu	Asp	Lys	Glu	His	Arg	Cys	Ile	Val	Arg	His	
			500					505					510			
Glu	Asn	Asn	Lys	Asn	Gly	Val	Asp	Gln	Glu	Ile	Ile	Phe	Pro	Pro	Ile	
		515					520					525				
Lys	Thr	Asp	Val	Ile	Thr	Met	Asp	Pro	Lys	Asp	Asn	Cys	Ser	Lys	Asp	
	530					535					540					
Ala	Asn	Asp	Thr	Leu	Leu	Leu	Gln	Leu	Thr	Asn	Thr	Ser	Ala	Tyr	Tyr	
545				550						555					560	
Met	Tyr	Leu	Leu	Leu	Leu	Leu	Lys	Ser	Val	Val	Tyr	Phe	Ala	Ile	Ile	
			565						570					575		
Thr	Cys	Cys	Leu	Leu	Arg	Arg	Thr	Ala	Phe	Cys	Cys	Asn	Gly	Glu	Lys	
			580					585					590			
Ser	Gly	Ser	Gly	Ala	Thr	Asn	Phe	Ser	Leu	Leu	Lys	Gln	Ala	Gly	Asp	
		595				600						605				
Val	Glu	Glu	Asn	Pro	Gly	Pro	Met	Ile	Leu	Thr	Val	Gly	Phe	Ser	Phe	
	610					615					620					
Leu	Phe	Phe	Tyr	Arg	Gly	Thr	Leu	Cys	Glu	Val	Gln	Leu	Val	Glu	Ser	
625					630					635					640	
Gly	Gly	Gly	Leu	Val	Gln	Ala	Gly	Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	
			645						650					655		
Ala	Ser	Gly	Arg	Thr	Phe	Thr	Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	
			660					665					670			
Lys	Glu	Arg	Glu	Phe	Val	Ala	Ala	Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	
		675					680					685				
Tyr	Tyr	Ala	Glu	Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	
	690					695					700					
Ala	Lys	Asn	Thr	Val	Val	Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	
705				710						715					720	
Thr	Ala	Leu	Tyr	Tyr	Cys	Ala	Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	
			725					730					735			
Arg	Pro	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	
			740					745					750			
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	
		755				760						765				
Gly	Gly	Ser	Met	Asp	Ile	Gln	Met	Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	
	770					775					780					
Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr	Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp	
785				790						795					800	
Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr	Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	

				805				810				815			
Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser	Arg	Leu	His	Ser	Gly	Val	Pro	Ser
				820				825				830			
Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser
				835				840				845			
Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala	Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn
				850				855				860			
Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly
				865				870				875			
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly
				885				890				895			
Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln	Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys
				900				905				910			
Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe
				915				920				925			
Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val	Lys	Gln	Ser	His	Gly	Lys	Asn	Leu
				930				935				940			
Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro	Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn
				945				950				955			
Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr	Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser
				965				970				975			
Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val
				980				985				990			
Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr	Tyr	Gly	Asp	Ser	Asp	Trp	Tyr	Phe
				995				1000				1005			
Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Leu	Thr	Val	Phe	Ser	Gly	Gly	Gly
				1010				1015				1020			
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Ser	Gln	Pro	His
				1025				1030				1035			
Thr	Lys	Pro	Ser	Val	Phe	Val	Met	Lys	Asn	Gly	Thr	Asn	Val	Ala	Cys
				1045				1050				1055			
Leu	Val	Lys	Glu	Phe	Tyr	Pro	Lys	Asp	Ile	Arg	Ile	Asn	Leu	Val	Ser
				1060				1065				1070			
Ser	Lys	Lys	Ile	Thr	Glu	Phe	Asp	Pro	Ala	Ile	Val	Ile	Ser	Pro	Ser
				1075				1080				1085			
Gly	Lys	Tyr	Asn	Ala	Val	Lys	Leu	Gly	Lys	Tyr	Glu	Asp	Ser	Asn	Ser
				1090				1095				1100			
Val	Thr	Cys	Ser	Val	Gln	His	Asp	Asn	Lys	Thr	Val	His	Ser	Thr	Asp
				1105				1110				1115			
Phe	Glu	Val	Lys	Thr	Asp	Ser	Thr	Asp	His	Val	Lys	Pro	Lys	Glu	Thr
				1125				1130				1135			
Glu	Asn	Thr	Lys	Gln	Pro	Ser	Lys	Ser	Cys	His	Lys	Pro	Lys	Ala	Ile
				1140				1145				1150			
Val	His	Thr	Glu	Lys	Val	Asn	Met	Met	Ser	Leu	Thr	Val	Leu	Gly	Leu
				1155				1160				1165			
Arg	Met	Leu	Phe	Ala	Lys	Thr	Val	Ala	Val	Asn	Phe	Leu	Leu	Thr	Ala
				1170				1175				1180			
Lys	Leu	Phe	Phe	Leu											
1185															

<210> 51
<211> 562
<212> PRT
<213> Artificial Sequence

<220>
<223> sdAbBCMA-anti-CD3 scFv-taC

<400> 51
Met Ala Met Leu Leu Gly Ala Ser Val Leu Ile Leu Trp Leu Gln Pro
1 5 10 15
Asp Trp Val Asn Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
20 25 30
Val Gln Ala Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg
35 40 45
Thr Phe Thr Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu
50 55 60
Phe Val Ala Ala Ile Ser Leu Ser Pro Thr Leu Ala Tyr Tyr Ala Glu
65 70 75 80
Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr
85 90 95
Val Val Leu Gln Met Asn Ser Leu Lys Pro Glu Asp Thr Ala Leu Tyr
100 105 110
Tyr Cys Ala Ala Asp Arg Lys Ser Val Met Ser Ile Arg Pro Asp Tyr
115 120 125
Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser Gly Gly Gly Gly Gly
130 135 140
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Met Asp Ile Gln Met
145 150 155 160
Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly Asp Arg Val Thr
165 170 175
Ile Ser Cys Arg Ala Ser Gln Asp Ile Arg Asn Tyr Leu Asn Trp Tyr
180 185 190
Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile Tyr Tyr Thr Ser
195 200 205
Arg Leu His Ser Gly Val Pro Ser Lys Phe Ser Gly Ser Gly Ser Gly
210 215 220
Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln Glu Asp Ile Ala
225 230 235 240
Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp Thr Phe Ala Gly
245 250 255
Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly
260 265 270
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Gln
275 280 285
Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Met Lys Ile Ser
290 295 300
Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met Asn Trp Val
305 310 315 320

Lys Gln Ser His Gly Lys Asn Leu Glu Trp Met Gly Leu Ile Asn Pro
 325 330 335
 Tyr Lys Gly Val Ser Thr Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr
 340 345 350
 Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Glu Leu Leu Ser
 355 360 365
 Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Ser Gly Tyr
 370 375 380
 Tyr Gly Asp Ser Asp Trp Tyr Phe Asp Val Trp Gly Gln Gly Thr Thr
 385 390 395 400
 Leu Thr Val Phe Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 405 410 415
 Gly Gly Gly Ser Pro Asn Ile Gln Asn Pro Asp Pro Ala Val Tyr Gln
 420 425 430
 Leu Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu Phe Thr Asp
 435 440 445
 Phe Asp Ser Gln Thr Asn Val Ser Gln Ser Lys Asp Ser Asp Val Tyr
 450 455 460
 Ile Thr Asp Lys Thr Val Leu Asp Met Arg Ser Met Asp Phe Lys Ser
 465 470 475 480
 Asn Ser Ala Val Ala Trp Ser Asn Lys Ser Asp Phe Ala Cys Ala Asn
 485 490 495
 Ala Phe Asn Asn Ser Ile Ile Pro Glu Asp Thr Phe Phe Pro Ser Pro
 500 505 510
 Glu Ser Ser Cys Asp Val Lys Leu Val Glu Lys Ser Phe Glu Thr Asp
 515 520 525
 Thr Asn Leu Asn Phe Gln Asn Leu Ser Val Ile Gly Phe Arg Ile Leu
 530 535 540
 Leu Leu Lys Val Ala Gly Phe Asn Leu Leu Met Thr Leu Arg Leu Trp
 545 550 555 560
 Ser Ser

<210> 52

<211> 597

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-tbC

<400> 52

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

50						55					60				
Phe	Val	Ala	Ala	Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu
65					70					75					80
Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr
				85					90					95	
Val	Val	Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr
			100					105					110		
Tyr	Cys	Ala	Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr
		115					120					125			
Trp	Gly	Gln	Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Gly
	130					135					140				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met
145					150					155					160
Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr
				165					170					175	
Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr
			180					185					190		
Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser
		195					200					205			
Arg	Leu	His	Ser	Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly
	210					215					220				
Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala
225					230					235					240
Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly
			245					250					255		
Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
		260					265					270			
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln
		275					280					285			
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser
	290					295					300				
Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val
305					310					315					320
Lys	Gln	Ser	His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro
			325						330					335	
Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr
		340						345				350			
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser
		355					360					365			
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr
	370					375					380				
Tyr	Gly	Asp	Ser	Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr
385					390					395					400
Leu	Thr	Val	Phe	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly
			405					410						415	
Gly	Gly	Gly	Ser	Glu	Asp	Leu	Asn	Lys	Val	Phe	Pro	Pro	Glu	Val	Ala
			420					425					430		
Val	Phe	Glu	Pro	Ser	Glu	Ala	Glu	Ile	Ser	His	Thr	Gln	Lys	Ala	Thr
		435					440					445			
Leu	Val	Cys	Leu	Ala	Thr	Gly	Phe	Phe	Pro	Asp	His	Val	Glu	Leu	Ser

450		455		460	
Trp	Trp	Val	Asn	Gly	Lys
465				470	
Gln	Pro	Leu	Lys	Glu	Gln
				485	
Ser	Ser	Arg	Leu	Arg	Val
				500	
His	Phe	Arg	Cys	Gln	Val
				515	
Trp	Thr	Gln	Asp	Arg	Ala
				530	
Ala	Trp	Gly	Arg	Ala	Asp
545				550	
Gly	Val	Leu	Ser	Ala	Thr
				565	
Thr	Leu	Tyr	Ala	Val	Leu
				580	
Lys	Arg	Lys	Asp	Phe	
				595	

<210> 53
 <211> 562
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> sdAbBCMA-anti-CD3 scFv-tgC

<400> 53	
Met	Ala
1	
Asp	Trp
	20
Val	Gln
	35
Thr	Phe
	50
Phe	Val
65	
Ser	Val
	85
Val	Val
	100
Tyr	Cys
	115
Trp	Gly
	130
Ser	Gly
145	

Leu	Leu
	5
Ser	Glu
	25
Val	Gln
	40
Thr	Phe
	55
Phe	Val
70	
Ser	Val
	85
Val	Val
	100
Tyr	Cys
	115
Trp	Gly
	130
Ser	Gly
145	

Ala	Ser
	10
Val	Gln
	25
Leu	Arg
	40
Thr	Phe
	55
Phe	Val
70	
Ser	Val
	85
Val	Val
	100
Tyr	Cys
	115
Trp	Gly
	130
Ser	Gly
145	

Val	Ile
	10
Leu	Glu
	25
Ser	Cys
	40
Thr	Phe
	55
Phe	Val
70	
Ser	Val
	85
Val	Val
	100
Tyr	Cys
	115
Trp	Gly
	130
Ser	Gly
145	

Leu	Trp
	15
Gly	Gly
	30
Ala	Ala
	45
Gly	Lys
	60
Ala	Tyr
	75
Asn	Ala
	90
Thr	Ala
	105
Arg	Pro
	120
Gly	Gly
	135
Met	Asp
	150
Ile	Gln
	160

Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr	
				165					170					175		
Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr	
			180					185					190			
Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser	
		195					200					205				
Arg	Leu	His	Ser	Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly	
	210				215						220					
Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala	
225					230					235					240	
Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly	
				245					250					255		
Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	
			260					265					270			
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln	
	275						280					285				
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser	
	290					295					300					
Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val	
305					310					315					320	
Lys	Gln	Ser	His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro	
				325					330					335		
Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr	
			340					345					350			
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser	
		355					360					365				
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr	
	370					375					380					
Tyr	Gly	Asp	Ser	Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	
385					390					395					400	
Leu	Thr	Val	Phe	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	
				405					410					415		
Gly	Gly	Gly	Ser	Pro	Asn	Ile	Gln	Asn	Pro	Asp	Pro	Ala	Val	Tyr	Gln	
			420					425					430			
Leu	Arg	Asp	Ser	Lys	Ser	Ser	Asp	Lys	Ser	Val	Cys	Leu	Phe	Thr	Asp	
	435						440					445				
Phe	Asp	Ser	Gln	Thr	Asn	Val	Ser	Gln	Ser	Lys	Asp	Ser	Asp	Val	Tyr	
	450					455					460					
Ile	Thr	Asp	Lys	Thr	Val	Leu	Asp	Met	Arg	Ser	Met	Asp	Phe	Lys	Ser	
465					470					475					480	
Asn	Ser	Ala	Val	Ala	Trp	Ser	Asn	Lys	Ser	Asp	Phe	Ala	Cys	Ala	Asn	
				485					490					495		
Ala	Phe	Asn	Asn	Ser	Ile	Ile	Pro	Glu	Asp	Thr	Phe	Phe	Pro	Ser	Pro	
			500					505					510			
Glu	Ser	Ser	Cys	Asp	Val	Lys	Leu	Val	Glu	Lys	Ser	Phe	Glu	Thr	Asp	
		515					520					525				
Thr	Asn	Leu	Asn	Phe	Gln	Asn	Leu	Ser	Val	Ile	Gly	Phe	Arg	Ile	Leu	
	530					535					540					
Leu	Leu	Lys	Val	Ala	Gly	Phe	Asn	Leu	Leu	Met	Thr	Leu	Arg	Leu	Trp	
545					550					555					560	

Ser Ser

<210> 54

<211> 597

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-tdC

<400> 54

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

290		295		300
Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met Asn Trp Val				
305		310		315
Lys Gln Ser His Gly Lys Asn Leu Glu Trp Met Gly Leu Ile Asn Pro				
	325		330	
Tyr Lys Gly Val Ser Thr Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr				
	340		345	
Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Glu Leu Leu Ser				
	355		360	
Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Ser Gly Tyr				
	370		375	
Tyr Gly Asp Ser Asp Trp Tyr Phe Asp Val Trp Gly Gln Gly Thr Thr				
385		390		395
Leu Thr Val Phe Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly				
	405		410	
Gly Gly Gly Ser Glu Asp Leu Asn Lys Val Phe Pro Pro Glu Val Ala				
	420		425	
Val Phe Glu Pro Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr				
	435		440	
Leu Val Cys Leu Ala Thr Gly Phe Phe Pro Asp His Val Glu Leu Ser				
	450		455	
Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro				
465		470		475
Gln Pro Leu Lys Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu				
	485		490	
Ser Ser Arg Leu Arg Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn				
	500		505	
His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu				
	515		520	
Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu				
	530		535	
Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Val Ser Tyr Gln Gln				
545		550		555
Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala				
	565		570	
Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val				
	580		585	
Lys Arg Lys Asp Phe				
	595			

<210> 55

<211> 445

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-sta

<400> 55

Met	Ala	Met	Leu	Leu	Gly	Ala	Ser	Val	Leu	Ile	Leu	Trp	Leu	Gln	Pro
1				5					10					15	
Asp	Trp	Val	Asn	Ser	Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu
			20					25					30		
Val	Gln	Ala	Gly	Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Arg
		35					40					45			
Thr	Phe	Thr	Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu
	50					55					60				
Phe	Val	Ala	Ala	Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu
65					70					75					80
Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr
				85					90					95	
Val	Val	Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr
			100					105					110		
Tyr	Cys	Ala	Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr
		115					120					125			
Trp	Gly	Gln	Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Gly
	130					135					140				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met
145					150					155					160
Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr
				165					170					175	
Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr
			180					185					190		
Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser
		195					200					205			
Arg	Leu	His	Ser	Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly
	210					215					220				
Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala
225					230					235					240
Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly
			245						250					255	
Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
			260					265					270		
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln
	275						280					285			
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser
	290					295					300				
Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val
305					310					315					320
Lys	Gln	Ser	His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro
			325						330					335	
Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr
			340					345					350		
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser
		355					360					365			
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr
	370					375					380				
Tyr	Gly	Asp	Ser	Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr
385					390					395					400

Leu	Thr	Val	Phe	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly
				405					410					415	
Gly	Gly	Gly	Ser	Val	Ile	Gly	Phe	Arg	Ile	Leu	Leu	Leu	Lys	Val	Ala
			420					425					430		
Gly	Phe	Asn	Leu	Leu	Met	Thr	Leu	Arg	Leu	Trp	Ser	Ser			
		435					440					445			

<210> 56

<211> 447

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-stb

<400> 56

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

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

<210> 57

<211> 455

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-stg

<400> 57

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

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

<210> 58

<211> 444

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-std

<400> 58

Met	Ala	Met	Leu	Leu	Gly	Ala	Ser	Val	Leu	Ile	Leu	Trp	Leu	Gln	Pro
1				5					10					15	
Asp	Trp	Val	Asn	Ser	Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu
			20					25					30		
Val	Gln	Ala	Gly	Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Arg
		35					40					45			
Thr	Phe	Thr	Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu
	50					55					60				
Phe	Val	Ala	Ala	Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu
65					70					75					80
Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr
				85					90					95	
Val	Val	Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr
			100					105					110		
Tyr	Cys	Ala	Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr
		115					120					125			
Trp	Gly	Gln	Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Gly
	130					135					140				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met
145					150					155					160
Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr
				165					170					175	
Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr
			180					185					190		
Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser
		195					200					205			
Arg	Leu	His	Ser	Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly
	210					215					220				
Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala
225					230					235					240
Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly
				245					250					255	
Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
		260					265						270		
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln
		275				280						285			
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser
	290					295					300				
Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val
305					310					315					320
Lys	Gln	Ser	His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro
				325					330					335	
Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr
			340					345					350		
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser
		355					360					365			
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr

370		375		380	
Tyr Gly Asp Ser Asp Trp Tyr Phe Asp Val Trp Gly Gln Gly Thr Thr					
385		390		395	400
Leu Thr Val Phe Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly					
	405		410		415
Gly Gly Gly Ser Leu Gly Leu Arg Met Leu Phe Ala Lys Thr Val Ala					
	420		425		430
Val Asn Phe Leu Leu Thr Ala Lys Leu Phe Phe Leu					
	435		440		

<210> 59
 <211> 914
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> sdAbBCMA-anti-CD3 scFv-sta/stb

<400> 59

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

Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly			
				245					250					255				
Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly			
			260					265					270					
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln			
			275				280					285						
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser			
						295					300							
Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val			
305					310					315					320			
Lys	Gln	Ser	His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro			
				325					330					335				
Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr			
			340					345					350					
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser			
			355				360					365						
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr			
			370			375					380							
Tyr	Gly	Asp	Ser	Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr			
385					390					395					400			
Leu	Thr	Val	Phe	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly			
			405					410						415				
Gly	Gly	Gly	Ser	Val	Ile	Gly	Phe	Arg	Ile	Leu	Leu	Leu	Lys	Val	Ala			
			420					425					430					
Gly	Phe	Asn	Leu	Leu	Met	Thr	Leu	Arg	Leu	Trp	Ser	Ser	Gly	Ser	Gly			
		435					440				445							
Ala	Thr	Asn	Phe	Ser	Leu	Leu	Lys	Gln	Ala	Gly	Asp	Val	Glu	Glu	Asn			
						455					460							
Pro	Gly	Pro	Met	Ala	Met	Leu	Leu	Gly	Ala	Ser	Val	Leu	Ile	Leu	Trp			
465					470					475					480			
Leu	Gln	Pro	Asp	Trp	Val	Asn	Ser	Glu	Val	Gln	Leu	Val	Glu	Ser	Gly			
				485				490						495				
Gly	Gly	Leu	Val	Gln	Ala	Gly	Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala			
			500					505					510					
Ser	Gly	Arg	Thr	Phe	Thr	Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys			
			515				520					525						
Glu	Arg	Glu	Phe	Val	Ala	Ala	Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr			
		530				535					540							
Tyr	Ala	Glu	Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala			
545					550					555					560			
Lys	Asn	Thr	Val	Val	Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr			
				565				570						575				
Ala	Leu	Tyr	Tyr	Cys	Ala	Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg			
			580					585					590					
Pro	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly			
			595				600					605						
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp			
		610				615					620							
Ile	Gln	Met	Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp			
625					630				635						640			

Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Arg Asn Tyr Leu
 645 650 655
 Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile Tyr
 660 665 670
 Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Lys Phe Ser Gly Ser
 675 680 685
 Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln Glu
 690 695 700
 Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp Thr
 705 710 715 720
 Phe Ala Gly Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly
 725 730 735
 Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val
 740 745 750
 Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Met
 755 760 765
 Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met
 770 775 780
 Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Met Gly Leu
 785 790 795 800
 Ile Asn Pro Tyr Lys Gly Val Ser Thr Tyr Asn Gln Lys Phe Lys Asp
 805 810 815
 Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Glu
 820 825 830
 Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg
 835 840 845
 Ser Gly Tyr Tyr Gly Asp Ser Asp Trp Tyr Phe Asp Val Trp Gly Gln
 850 855 860
 Gly Thr Thr Leu Thr Val Phe Ser Gly Gly Gly Gly Ser Gly Gly Gly
 865 870 875 880
 Gly Ser Gly Gly Gly Gly Ser Ile Leu Leu Gly Lys Ala Thr Leu Tyr
 885 890 895
 Ala Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys
 900 905 910
 Asp Phe

<210> 60

<211> 921

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-CD3 scFv-stg/std

<400> 60

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

			20					25				30			
Val	Gln	Ala	Gly	Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Arg
		35					40					45			
Thr	Phe	Thr	Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu
	50					55					60				
Phe	Val	Ala	Ala	Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu
65					70					75					80
Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr
				85					90					95	
Val	Val	Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr
			100					105					110		
Tyr	Cys	Ala	Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr
		115					120					125			
Trp	Gly	Gln	Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Gly
	130					135					140				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met
145					150					155					160
Thr	Gln	Thr	Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr
				165					170					175	
Ile	Ser	Cys	Arg	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr
			180				185						190		
Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser
		195					200					205			
Arg	Leu	His	Ser	Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly
	210					215					220				
Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala
225					230					235					240
Thr	Tyr	Phe	Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly
				245					250					255	
Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
			260					265					270		
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln
		275					280					285			
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser
		290				295					300				
Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val
305					310					315					320
Lys	Gln	Ser	His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro
				325					330					335	
Tyr	Lys	Gly	Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr
			340					345					350		
Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser
		355					360					365			
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr
		370				375					3				

			420					425				430			
Val	Tyr	Phe	Ala	Ile	Ile	Thr	Cys	Cys	Leu	Leu	Arg	Arg	Thr	Ala	Phe
		435					440					445			
Cys	Cys	Asn	Gly	Glu	Lys	Ser	Gly	Ser	Gly	Ala	Thr	Asn	Phe	Ser	Leu
	450					455						460			
Leu	Lys	Gln	Ala	Gly	Asp	Val	Glu	Glu	Asn	Pro	Gly	Pro	Met	Ala	Met
465					470					475					480
Leu	Leu	Gly	Ala	Ser	Val	Leu	Ile	Leu	Trp	Leu	Gln	Pro	Asp	Trp	Val
				485					490					495	
Asn	Ser	Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Ala
			500					505					510		
Gly	Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Arg	Thr	Phe	Thr
		515					520					525			
Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu	Phe	Val	Ala
	530					535					540				
Ala	Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu	Ser	Val	Lys
545					550					555					560
Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Val	Val	Leu
				565				570						575	
Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys	Ala
			580					585					590		
Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr	Trp	Gly	Gln
	595						600					605			
Gly	Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Gly	Ser	Gly	Gly
	610					615					620				
Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met	Thr	Gln	Thr
625					630					635					640
Thr	Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr	Ile	Ser	Cys
				645					650					655	
Arg	Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr	Gln	Gln	Lys
			660					665					670		
Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser	Arg	Leu	His
	675						680						685		
Ser	Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr
	690					695					700				
Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala	Thr	Tyr	Phe
705					710					715					720
Cys	Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly	Gly	Thr	Lys
			725						730					735	
Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly
			740					745					750		
Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln	Gln	Ser	Gly
	755						760						765		
Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser	Cys	Lys	Ala
	770					775						780			
Ser	Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val	Lys	Gln	Ser
785					790					795					800
His	Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro	Tyr	Lys	Gly
			805						810					815	
Val	Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr	Leu	Thr	Val

			820					825					830			
Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser	Leu	Thr	Ser	
		835						840					845			
Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr	Tyr	Gly	Asp	
	850					855					860					
Ser	Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Leu	Thr	Val	
865					870					875					880	
Phe	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	
			885						890					895		
Ser	Leu	Gly	Leu	Arg	Met	Leu	Phe	Ala	Lys	Thr	Val	Ala	Val	Asn	Phe	
		900						905					910			
Leu	Leu	Thr	Ala	Lys	Leu	Phe	Phe	Leu								
		915					920									

<210> 61

<211> 728

<212> PRT

<213> Artificial Sequence

<220>

<223> tandem sdAbBCMA-anti-CD3 scFv-e

<400> 61

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

Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Val	Val	Leu	Gln
210						215					220				
Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys	Ala	Ala
225					230						235				240
Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr	Trp	Gly	Gln	Gly
				245					250					255	
Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
			260					265					270		
Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met	Thr	Gln	Thr	Thr	Ser
	275						280					285			
Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr	Ile	Ser	Cys	Arg	Ala
	290					295					300				
Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr	Gln	Gln	Lys	Pro	Asp
305					310					315					320
Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser	Arg	Leu	His	Ser	Gly
			325						330					335	
Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Ser	Leu
			340					345					350		
Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala	Thr	Tyr	Phe	Cys	Gln
			355				360						365		
Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly	Gly	Thr	Lys	Leu	Glu
	370					375					380				
Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
385					390					395					400
Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln	Gln	Ser	Gly	Pro	Glu
			405					410						415	
Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly
			420					425					430		
Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val	Lys	Gln	Ser	His	Gly
		435					440					445			
Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro	Tyr	Lys	Gly	Val	Ser
	450					455					460				
Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr	Leu	Thr	Val	Asp	Lys
465					470					475					480
Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser	Leu	Thr	Ser	Glu	Asp
			485					490						495	
Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr	Tyr	Gly	Asp	Ser	Asp
			500					505					510		
Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Leu	Thr	Val	Phe	Ser
		515				520					525				
Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp
	530					535					540				
Gly	Asn	Glu	Glu	Met	Gly	Gly	Ile	Thr	Gln	Thr	Pro	Tyr	Lys	Val	Ser
545					550					555					560
Ile	Ser	Gly	Thr	Thr	Val	Ile	Leu	Thr	Cys	Pro	Gln	Tyr	Pro	Gly	Ser
			565					570						575	
Glu	Ile	Leu	Trp	Gln	His	Asn	Asp	Lys	Asn	Ile	Gly	Gly	Asp	Glu	Asp
		580					585						590		
Asp	Lys	Asn	Ile	Gly	Ser	Asp	Glu	Asp	His	Leu	Ser	Leu	Lys	Glu	Phe
	595						600					605			

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

<210> 62
 <211> 584
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> sdAbBCMA-anti-TCR Ab-tgC

<400> 62
 Met Arg Trp Ala Leu Leu Val Leu Leu Ala Phe Leu Ser Pro Ala Ser
 1 5 10 15
 Gln Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly
 20 25 30
 Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Phe Thr Met
 35 40 45
 Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala Ala
 50 55 60
 Ile Ser Leu Ser Pro Thr Leu Ala Tyr Tyr Ala Glu Ser Val Lys Gly
 65 70 75 80
 Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Val Val Leu Gln
 85 90 95
 Met Asn Ser Leu Lys Pro Glu Asp Thr Ala Leu Tyr Tyr Cys Ala Ala
 100 105 110
 Asp Arg Lys Ser Val Met Ser Ile Arg Pro Asp Tyr Trp Gly Gln Gly
 115 120 125
 Thr Gln Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 130 135 140
 Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln
 145 150 155 160
 Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Val Lys Ile Ser
 165 170 175
 Cys Lys Ile Ser Asp Tyr Thr Phe Ser Asn Ser Trp Met Asn Trp Val

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

<210> 63
 <211> 565
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> sdAbBCMA-anti-TCR Ab-tdC

<400> 63
 Met Ile Leu Thr Val Gly Phe Ser Phe Leu Phe Phe Tyr Arg Gly Thr
 1 5 10 15
 Leu Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala
 20 25 30
 Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Phe Thr
 35 40 45
 Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala
 50 55 60
 Ala Ile Ser Leu Ser Pro Thr Leu Ala Tyr Tyr Ala Glu Ser Val Lys
 65 70 75 80
 Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Val Val Leu
 85 90 95
 Gln Met Asn Ser Leu Lys Pro Glu Asp Thr Ala Leu Tyr Tyr Cys Ala
 100 105 110
 Ala Asp Arg Lys Ser Val Met Ser Ile Arg Pro Asp Tyr Trp Gly Gln
 115 120 125
 Gly Thr Gln Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
 130 135 140
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu
 145 150 155 160
 Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Val Lys Ile
 165 170 175
 Ser Cys Lys Ile Ser Asp Tyr Thr Phe Ser Asn Ser Trp Met Asn Trp
 180 185 190
 Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Arg Ile Tyr
 195 200 205
 Pro Gly Asp Gly Asp Thr Lys Tyr Asn Gly Glu Phe Lys Ala Lys Ala
 210 215 220
 Thr Leu Thr Ala Asp Lys Ser Ala Arg Thr Ala Tyr Met Gln Leu Asn
 225 230 235 240
 Asn Leu Thr Ser Val Asp Ser Ala Val Tyr Phe Cys Ala Arg Trp Glu
 245 250 255
 Arg Tyr Asp Gly Gly Phe Thr Tyr Trp Gly Gln Gly Thr Leu Val Thr
 260 265 270
 Val Ser Pro Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
 275 280 285
 Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser
 290 295 300

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

<210> 64

<211> 1171

<212> PRT

<213> Artificial Sequence

<220>

<223> sdAbBCMA-anti-TCR Ab-tgC/tdC

<400> 64

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

		35				40				45					
Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu	Phe	Val	Ala	Ala
	50					55					60				
Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu	Ser	Val	Lys	Gly
65					70					75					80
Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Val	Val	Leu	Gln
				85					90					95	
Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys	Ala	Ala
		100					105						110		
Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr	Trp	Gly	Gln	Gly
	115						120					125			
Thr	Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
	130					135					140				
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln
145					150					155					160
Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Val	Lys	Ile	Ser
				165					170					175	
Cys	Lys	Ile	Ser	Asp	Tyr	Thr	Phe	Ser	Asn	Ser	Trp	Met	Asn	Trp	Val
			180					185					190		
Lys	Gln	Arg	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Ile	Gly	Arg	Ile	Tyr	Pro
	195					200					205				
Gly	Asp	Gly	Asp	Thr	Lys	Tyr	Asn	Gly	Glu	Phe	Lys	Ala	Lys	Ala	Thr
	210					215					220				
Leu	Thr	Ala	Asp	Lys	Ser	Ala	Arg	Thr	Ala	Tyr	Met	Gln	Leu	Asn	Asn
225					230					235					240
Leu	Thr	Ser	Val	Asp	Ser	Ala	Val	Tyr	Phe	Cys	Ala	Arg	Trp	Glu	Arg
				245					250					255	
Tyr	Asp	Gly	Gly	Phe	Thr	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val
		260						265					270		
Ser	Pro	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
	275					280						285			
Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ala	Ser	Leu	Ser	Ala	Ser	Val
	290					295					300				
Gly	Glu	Thr	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Glu	Asn	Ile	Tyr	Ser
305					310					315					320
Tyr	Leu	Ser	Trp	Tyr	Gln	Gln	Lys	Gln	Gly	Lys	Ser	Pro	Gln	Leu	Leu
			325						330					335	
Val	Tyr	Tyr	Ala	Asn	Thr	Leu	Ala	Glu	Gly	Val	Pro	Ser	Arg	Phe	Ser
			340					345					350		
Gly	Ser	Gly	Tyr	Gly	Thr	Gln	Phe	Ser	Leu	Lys	Ile	Asn	Ser	Leu	Gln
	355					360						365			
Pro	Val	Asp	Phe	Gly	Asn	Tyr	Tyr	Cys	Gln	His	His	Tyr	Gly	Leu	Pro
	370					375					380				
Pro	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Gly	Gly	Gly	Gly
385					390					395					400
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Lys	Gln	Leu	Asp
				405					410					415	
Ala	Asp	Val	Ser	Pro	Lys	Pro	Thr	Ile	Phe	Leu	Pro	Ser	Ile	Ala	Glu
			420					425					430		
Thr	Lys	Leu	Gln	Lys	Ala	Gly	Thr	Tyr	Leu	Cys	Leu	Leu	Glu	Lys	Phe

		435							440							445				
Phe	Pro	Asp	Val	Ile	Lys	Ile	His	Trp	Gln	Glu	Lys	Lys	Ser	Asn	Thr					
	450					455					460									
Ile	Leu	Gly	Ser	Gln	Glu	Gly	Asn	Thr	Met	Lys	Thr	Asn	Asp	Thr	Tyr					
465					470					475					480					
Met	Lys	Phe	Ser	Trp	Leu	Thr	Val	Pro	Glu	Lys	Ser	Leu	Asp	Lys	Glu					
				485					490					495						
His	Arg	Cys	Ile	Val	Arg	His	Glu	Asn	Asn	Lys	Asn	Gly	Val	Asp	Gln					
			500					505					510							
Glu	Ile	Ile	Phe	Pro	Pro	Ile	Lys	Thr	Asp	Val	Ile	Thr	Met	Asp	Pro					
		515					520					525								
Lys	Asp	Asn	Cys	Ser	Lys	Asp	Ala	Asn	Asp	Thr	Leu	Leu	Leu	Gln	Leu					
	530					535					540									
Thr	Asn	Thr	Ser	Ala	Tyr	Tyr	Met	Tyr	Leu	Leu	Leu	Leu	Leu	Lys	Ser					
545					550					555					560					
Val	Val	Tyr	Phe	Ala	Ile	Ile	Thr	Cys	Cys	Leu	Leu	Arg	Arg	Thr	Ala					
				565					570					575						
Phe	Cys	Cys	Asn	Gly	Glu	Lys	Ser	Gly	Ser	Gly	Ala	Thr	Asn	Phe	Ser					
			580					585					590							
Leu	Leu	Lys	Gln	Ala	Gly	Asp	Val	Glu	Glu	Asn	Pro	Gly	Pro	Met	Ile					
		595					600					605								
Leu	Thr	Val	Gly	Phe	Ser	Phe	Leu	Phe	Phe	Tyr	Arg	Gly	Thr	Leu	Cys					
	610					615				620										
Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Ala	Gly	Gly					
625					630					635					640					
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Arg	Thr	Phe	Thr	Met	Gly					
				645					650					655						
Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu	Phe	Val	Ala	Ala	Ile					
			660					665					670							
Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu	Ser	Val	Lys	Gly	Arg					
		675					680					685								
Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Val	Val	Leu	Gln	Met					
	690					695				700										
Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys	Ala	Ala	Asp					
705					710					715					720					
Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr	Trp	Gly	Gln	Gly	Thr					
				725					730					735						
Gln	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser					
			740					745					750							
Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln	Gln					
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Ser	Gly	Pro																		

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			20					25					30		
Gly	Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Arg	Thr	Phe	Thr
		35					40					45			
Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu	Phe	Val	Ala
	50					55					60				
Ala	Ile	Ser	Leu	Ser	Pro	Thr	Leu	Ala	Tyr	Tyr	Ala	Glu	Ser	Val	Lys
65					70					75				80	
Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Val	Val	Leu
				85					90					95	
Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys	Ala
			100					105					110		
Ala	Asp	Arg	Lys	Ser	Val	Met	Ser	Ile	Arg	Pro	Asp	Tyr	Trp	Gly	Gln
	115						120					125			
Gly	Thr	Gln	Val	Thr	Val	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	
	130					135				140					
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Met	Asp	Ile	Gln	Met	Thr	Gln	Thr	Thr
145					150					155					160
Ser	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Asp	Arg	Val	Thr	Ile	Ser	Cys	Arg
				165					170					175	
Ala	Ser	Gln	Asp	Ile	Arg	Asn	Tyr	Leu	Asn	Trp	Tyr	Gln	Gln	Lys	Pro
			180					185					190		
Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile	Tyr	Tyr	Thr	Ser	Arg	Leu	His	Ser
	195						200					205			
Gly	Val	Pro	Ser	Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Ser
	210					215					220				
Leu	Thr	Ile	Ser	Asn	Leu	Glu	Gln	Glu	Asp	Ile	Ala	Thr	Tyr	Phe	Cys
225					230					235					240
Gln	Gln	Gly	Asn	Thr	Leu	Pro	Trp	Thr	Phe	Ala	Gly	Gly	Thr	Lys	Leu
			245						250					255	
Glu	Ile	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly
			260					265					270		
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Glu	Val	Gln	Leu	Gln	Gln	Ser	Gly	Pro
	275						280					285			
Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Met	Lys	Ile	Ser	Cys	Lys	Ala	Ser
	290					295						300			
Gly	Tyr	Ser	Phe	Thr	Gly	Tyr	Thr	Met	Asn	Trp	Val	Lys	Gln	Ser	His
305					310					315					320
Gly	Lys	Asn	Leu	Glu	Trp	Met	Gly	Leu	Ile	Asn	Pro	Tyr	Lys	Gly	Val
			325						330					335	
Ser	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Asp	Lys	Ala	Thr	Leu	Thr	Val	Asp
			340					345					350		
Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Glu	Leu	Leu	Ser	Leu	Thr	Ser	Glu
		355					360					365			

Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Gly	Tyr	Tyr	Gly	Asp	Ser
370						375					380				
Asp	Trp	Tyr	Phe	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Leu	Thr	Val	Phe
385					390					395					400
Ser	Gly	Gly	Gly	Gly	Ser	Ser	Gly	Gln	Val	Leu	Leu	Glu	Ser	Asn	Ile
				405					410					415	
Lys	Val	Leu	Pro	Thr	Trp	Ser	Thr	Pro	Val	Gln	Pro	Met	Ala	Leu	Ile
			420					425					430		
Val	Leu	Gly	Gly	Val	Ala	Gly	Leu	Leu	Leu	Phe	Ile	Gly	Leu	Gly	Ile
		435				440						445			
Phe	Phe	Cys	Val	Arg	Cys	Arg	His	Arg	Arg	Arg	Gln	Ala	Glu	Arg	Met
	450					455					460				
Ser	Gln	Ile	Lys	Arg	Leu	Leu	Ser	Glu	Lys	Lys	Thr	Cys	Gln	Cys	Pro
465					470					475					480
His	Arg	Phe	Gln	Lys	Thr	Cys	Ser	Pro	Ile						
			485					490							

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