

SEQUENCE LISTING

<110> Berlin-Chemie AG

<120> PHARMACEUTICAL COMBINATIONS

<130> 489.412.133779/05

<160> 76

<170> PatentIn version 3.5

<210> 1

<211> 253

<212> PRT

<213> Mus musculus

<400> 1

Met Lys Gln Ser Thr Ile Ala Leu Ala Leu Leu Pro Leu Leu Phe Thr
1 5 10 15

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

Val Arg Pro Gly Ser Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Ala Phe Ser Asn Ser Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln
50 55 60

Gly Leu Glu Trp Ile Gly Gln Ile Tyr Pro Gly Asp Tyr Asp Thr Asn
65 70 75 80

Tyr Asn Gly Lys Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Tyr Ser
85 90 95

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

Ala Val Tyr Phe Cys Ala Arg Gly Gly Ser Ile Tyr Tyr Gly Asn Leu
115 120 125

Gly Phe Phe Asp Val Trp Gly Ala Gly Thr Thr Val Thr Val Ser Ser
130 135 140

Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro Gly Ser Ala
145 150 155 160

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

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

			180						185							190
Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Asp	Leu	Tyr	Thr	Leu	
		195					200					205				
Ser	Ser	Ser	Val	Thr	Val	Pro	Ser	Ser	Thr	Trp	Pro	Ser	Glu	Thr	Val	
	210					215					220					
Thr	Cys	Asn	Val	Ala	His	Pro	Ala	Ser	Ser	Thr	Lys	Val	Asp	Lys	Lys	
225					230					235					240	
Ile	Val	Pro	Arg	Asp	Cys	His	His	His	His	His	His	His				
				245					250							
<210>	2															
<211>	246															
<212>	PRT															
<213>	Mus musculus															
<400>	2															
Met	Lys	Gln	Ser	Thr	Ile	Ala	Leu	Ala	Leu	Leu	Pro	Leu	Leu	Phe	Thr	
1				5					10					15		
Pro	Val	Ala	Lys	Ala	Gln	Ala	Tyr	Leu	Gln	Gln	Ser	Gly	Pro	Glu	Leu	
			20					25					30			
Val	Lys	Ala	Gly	Ala	Ser	Val	Lys	Met	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	
	35						40					45				
Ser	Phe	Ile	Glu	Tyr	Thr	Ile	Asn	Trp	Val	Lys	Gln	Ser	His	Gly	Lys	
	50					55					60					
Ser	Leu	Glu	Trp	Ile	Gly	Asn	Ile	Asp	Pro	Tyr	Tyr	Gly	Thr	Thr	Tyr	
65				70						75					80	
Tyr	Asn	Gln	Met	Phe	Thr	Gly	Lys	Ala	Thr	Leu	Thr	Val	Asp	Gln	Ser	
				85				90						95		
Ser	Asn	Thr	Ala	Tyr	Met	Gln	Leu	Lys	Ser	Leu	Thr	Ser	Glu	Asp	Ser	
			100					105					110			
Ala	Val	Tyr	Phe	Cys	Ala	Arg	Gly	Ser	Ala	Trp	Phe	Pro	Tyr	Trp	Gly	
		115					120					125				
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ala	Ala	Lys	Thr	Thr	Pro	Pro	Ser	
	130					135					140					
Val	Tyr	Pro	Leu	Ala	Pro	Gly	Ser	Ala	Ala	Gln	Thr	Asn	Ser	Met	Val	
145					150					155					160	

Thr Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val
165 170 175

Thr Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala
180 185 190

Val Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro
195 200 205

Ser Ser Thr Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro
210 215 220

Ala Ser Ser Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys His
225 230 235 240

His His His His His His
245

<210> 3
<211> 237
<212> PRT
<213> Mus musculus

<400> 3

Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala
1 5 10 15

Ala Gln Pro Ala Met Ala Glu Met Val Leu Thr Gln Ser Pro Ala Ile
20 25 30

Met Ser Thr Ser Leu Gly Glu Arg Val Thr Met Thr Cys Thr Ala Ser
35 40 45

Ser Arg Val Ser Ser Ser Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly
50 55 60

Ser Ser Pro Lys Leu Trp Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly
65 70 75 80

Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu
85 90 95

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

Gln Tyr His Arg Ser Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu
115 120 125

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

Ser Glu Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn
145 150 155 160

Asn Phe Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser
165 170 175

Glu Arg Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys
180 185 190

Asp Ser Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu
195 200 205

Tyr Glu Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser
210 215 220

Thr Ser Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Ser
225 230 235

<210> 4
<211> 235
<212> PRT
<213> Mus musculus

<400> 4

Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala
1 5 10 15

Ala Gln Pro Ala Met Ala Asp Ile Val Met Ser Gln Ser Pro Ala Ile
20 25 30

Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser
35 40 45

Ser Ser Val Thr Tyr Met Tyr Trp Tyr Gln Gln Lys Pro Gly Ser Ser
50 55 60

Pro Arg Leu Leu Ile Tyr Asp Thr Ser Asn Leu Ala Ser Gly Val Pro
65 70 75 80

Val Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile
85 90 95

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

Ser Asn Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
115 120 125

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

Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe
145 150 155 160

Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg
165 170 175

Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser
180 185 190

Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu
195 200 205

Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser
210 215 220

Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Ser
225 230 235

<210> 5
<211> 811
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (808)..(808)
<223> n is a, c, g, or t

<400> 5
acgcttttga catggagaaa ataaagtga acaaagcact attgcactgg cactcttacc 60
gctcttattt acccctgtgg caaaagccca ggtgaagctt cagcagtccg gggctgagct 120
ggtagaggcct gggtcctcag tgaagatttc ctgcaaggct tctggctacg cattcagtaa 180
ctcctggata aactgggtga agcagaggcc tggacagggt cttgagtga ttggacagat 240
ttatcctgga gattatgata ctaactacaa tggaaaattc aagggtaaaag ccacactgac 300
tgcagactac tcctccagca cagcctacat gcagctcaac agcctaacat ctgaggactc 360
tgcggtctat ttctgtgcaa gggggggatc gatctactat ggtaacctcg ggttcttcga 420
tgtctggggc gcagggacca cggtcaccgt ctcctcagcc aaaacgacac ccccatctgt 480
ctatccactg gccctggat ctgctgcca aactaactcc atggtgacct tgggatgcct 540
ggccaagggc tatttccctg agccagtgc agtgacctgg aactctggat ccctgtccag 600

cggtgtgcac	accttcccag	ctgtcctgca	gtctgacctc	tacactctga	gcagctcagt	660
gactgtcccc	tccagcacct	ggcccagcga	gaccgtcacc	tgcaacgttg	cccacccggc	720
cagcagcacc	aaggtggaca	agaaaaattgt	gcccagggat	tgtcatcatc	accatcacca	780
tcactaattg	acagcttata	atcgatangc	t			811

<210> 6
 <211> 803
 <212> DNA
 <213> Mus musculus

<400> 6						
aaaaccctgg	cgttaccac	gctttgtaca	tggagaaaat	aaagtgaaac	aaagcactat	60
tgcactggca	ctcttaccgc	tcttatttac	ccctgtggca	aaagcccagg	cttatctaca	120
gcagtctgga	cctgagctgg	tgaaggctgg	cgcttcagtg	aagatgtcct	gcaaggcttc	180
tggttactca	ttcattgagt	acaccataaa	ctgggtgaaa	cagagccatg	gaaagagcct	240
tgagtggatt	ggaaatattg	atccttatta	tggaaccact	tattacaatc	agatgttcac	300
gggcaaggcc	acattgactg	tagaccaatc	ttccaacact	gcctacatgc	agctcaagag	360
cctgacatct	gaggactctg	cagtctatct	ctgtgcaaga	ggctccgcct	ggtttcctta	420
ctggggccag	gggactctag	tcactgtctc	tgcagccaaa	acgacacccc	catctgtcta	480
tccactggcc	cctggatctg	ctgccccaaac	taactccatg	gtgaccctgg	gatgcctggt	540
caagggtat	ttccctgagc	cagtgcagtg	gacctggaac	tctggatccc	tgtccagcgg	600
tgtgcacacc	ttcccagctg	tcctgcagtc	tgacctctac	actctgagca	gctcagtgac	660
tgtccccctc	agcacctggc	ccagcgagac	cgtcacctgc	aacgttgccc	acccggccag	720
cagcaccaag	gtggacaaga	aaattgtgcc	cagggattgt	catcatcacc	atcaccatca	780
ctaattgaca	gcttatcatc	gat				803

<210> 7
 <211> 759
 <212> DNA
 <213> Mus musculus

<400> 7						
gttttttttg	atggagtga	acgatgaaat	acctattgcc	tacggcagcc	gctggattgt	60
tattactcgc	tgcccaacca	gccatggccg	aatgggttct	cacccagtct	ccagcaatca	120
tgtctacatc	tctaggggaa	cgggtcacca	tgacctgcac	tgccagctca	cgtgtaagtt	180
ccagttactt	gcactggtac	cagcagaagc	caggatcctc	ccccaaactc	tggatttata	240
gtacatccaa	cctggcttct	ggagtcccag	ctcgcttcag	tggcagtggg	tctgggacct	300
cttactctct	cacaatcagc	agcatggagg	ctgaagatgc	tgccacttat	tactgccacc	360
agtatcatcg	ttccccgtac	acgttcggag	gggggaccaa	gctggaaata	aaacgggctg	420

atgctgcacc aactgtatcc atcttccac catccagtga gcagttaaca tctggaggtg	480
cctcagtcgt gtgcttcttg aacaacttct accccaaaga catcaatgtc aagtggaaga	540
ttgatggcag tgaacgacaa aatggcgctcc tgaacagttg gactgatcag gacagcaaag	600
acagcaccta cagcatgagc agcacctca cgttgaccaa ggacgagtat gaacgacata	660
acagctatac ctgtgaggcc actcacaaga catcaacttc acccattgtc aagagcttca	720
acaggaatga gtcttaagtg attagctaatt tctagaacg	759

<210> 8
 <211> 804
 <212> DNA
 <213> Mus musculus

<400> 8	
actctctact gtttctccat acccgttttt ttggatggag tgaaacgatg aaatacctat	60
tgcctacggc agccgctgga ttgttattac tcgctgcca accagccatg gccgacatcg	120
ttatgtctca gtctccagca atcatgtctg catctccagg ggagaaggct accatgacct	180
gcagtgccag ctcaagtgtg attacatgt actggtacca gcagaagcca ggatcctccc	240
ccagactcct gatttatgac acatccaacc tggcttcttg agtccctgtt cgcttcagtg	300
gcagtgggtc tgggacctct tactctctca caatcagccg aatggaggct gaagatactg	360
ccacttatta ctgccagcag tggagtaatt acccactcac gttcggtgct gggaccaagc	420
tggagctgaa acgggctgat gctgcaccaa ctgtatccat cttcccacca tccagtgagc	480
agttaacatc tggaggtgcc tcagtcgtgt gcttcttgaa caacttctac cccaaagaca	540
tcaatgtcaa gtggaagatt gatggcagtg aacgacaaaa tggcgtcctg aacagttgga	600
ctgatcagga cagcaaagac agcacctaca gcatgagcag caccctcacg ttgaccaagg	660
acgagtatga acgacataac agctatacct gtgaggccac tcacaagaca tcaacttcac	720
ccattgtcaa gagcttcaac aggaatgagt ctttaagtgat tagctaattc tagaacgcgt	780
cacttggcac tggccgtcgt tttta	804

<210> 9
 <211> 11
 <212> PRT
 <213> Mus musculus

<400> 9	
Gly Tyr Ala Phe Ser Asn Ser Trp Ile Asn Trp	
1 5 10	

<210> 10
 <211> 11
 <212> PRT
 <213> Mus musculus

<400> 10

Gly Tyr Ser Phe Ile Glu Tyr Thr Ile Asn Trp
1 5 10

<210> 11

<211> 17

<212> PRT

<213> Mus musculus

<400> 11

Gly Gln Ile Tyr Pro Gly Asp Tyr Asp Thr Asn Tyr Asn Gly Lys Phe
1 5 10 15

Lys

<210> 12

<211> 17

<212> PRT

<213> Mus musculus

<400> 12

Gly Asn Ile Asp Pro Tyr Tyr Gly Thr Thr Tyr Tyr Asn Gln Met Phe
1 5 10 15

Thr

<210> 13

<211> 16

<212> PRT

<213> Mus musculus

<400> 13

Ala Arg Gly Gly Ser Ile Tyr Tyr Gly Asn Leu Gly Phe Phe Asp Val
1 5 10 15

<210> 14

<211> 9

<212> PRT

<213> Mus musculus

<400> 14

Ala Arg Gly Ser Ala Trp Phe Pro Tyr
1 5

<210> 15

<211> 12

<212> PRT

<213> Mus musculus

<400> 15

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

<210> 16
<211> 10
<212> PRT
<213> Mus musculus

<400> 16

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

<210> 17
<211> 7
<212> PRT
<213> Mus musculus

<400> 17

Ser Thr Ser Asn Leu Ala Ser
1 5

<210> 18
<211> 7
<212> PRT
<213> Mus musculus

<400> 18

Asp Thr Ser Asn Leu Ala Ser
1 5

<210> 19
<211> 9
<212> PRT
<213> Mus musculus

<400> 19

His Gln Tyr His Arg Ser Pro Tyr Thr
1 5

<210> 20
<211> 9
<212> PRT
<213> Mus musculus

<400> 20

Gln Gln Trp Ser Asn Tyr Pro Leu Thr
1 5

<210> 21
<211> 33
<212> DNA
<213> Mus musculus

<400> 21	
ggctacgcat tcagtaactc ctggataaac tgg	33
<210> 22	
<211> 33	
<212> DNA	
<213> Mus musculus	
<400> 22	
ggttactcat tcattgagta caccataaac tgg	33
<210> 23	
<211> 51	
<212> DNA	
<213> Mus musculus	
<400> 23	
ggacagattt atcctggaga ttatgatact aactacaatg gaaaattcaa g	51
<210> 24	
<211> 51	
<212> DNA	
<213> Mus musculus	
<400> 24	
ggaaatattg atccttatta tggaaccact tattacaatc agatgttcac g	51
<210> 25	
<211> 48	
<212> DNA	
<213> Mus musculus	
<400> 25	
gcaagggggg gatcgatcta ctatggtaac ctcgggttct tcgatgtc	48
<210> 26	
<211> 27	
<212> DNA	
<213> Mus musculus	
<400> 26	
gcaagaggct ccgcctgggtt tccttac	27
<210> 27	
<211> 36	
<212> DNA	
<213> Mus musculus	
<400> 27	
actgccagct cacgtgtaag ttccagttac ttgcac	36
<210> 28	
<211> 30	
<212> DNA	
<213> Mus musculus	

<400> 28	
agtgccagct caagtgtaac ttacatgtac	30
<210> 29	
<211> 21	
<212> DNA	
<213> Mus musculus	
<400> 29	
agtacatcca acctggcttc t	21
<210> 30	
<211> 21	
<212> DNA	
<213> Mus musculus	
<400> 30	
gacacatcca acctggcttc t	21
<210> 31	
<211> 27	
<212> DNA	
<213> Mus musculus	
<400> 31	
caccagtatc atcggtcccc gtacacg	27
<210> 32	
<211> 27	
<212> DNA	
<213> Mus musculus	
<400> 32	
cagcagtggg gtaattaccc actcacg	27
<210> 33	
<211> 33	
<212> DNA	
<213> Mus musculus	
<400> 33	
ggctacgcat tcagtagcta ctggatgaac tgg	33
<210> 34	
<211> 51	
<212> DNA	
<213> Mus musculus	
<400> 34	
ggacagattt atcctggaga tggatgatact aactacaacg gaaagttcaa g	51
<210> 35	
<211> 33	
<212> DNA	
<213> Mus musculus	
<400> 35	

ggttactcat tcactgacta caacatgaac tgg 33

<210> 36
<211> 51
<212> DNA
<213> Mus musculus

<400> 36
ggagtaatta atcctaacta tgggtactact agctacaatc agaagttcaa g 51

<210> 37
<211> 36
<212> DNA
<213> Mus musculus

<400> 37
actgccagct caagtgtaag ttccagttac ttgcac 36

<210> 38
<211> 21
<212> DNA
<213> Mus musculus

<400> 38
agcacatcca acctggcttc t 21

<210> 39
<211> 25
<212> DNA
<213> Mus musculus

<400> 39
caccagtatc atcggtcccc accca 25

<210> 40
<211> 30
<212> DNA
<213> Mus musculus

<400> 40
agtgccagct caagtgtaag ttacatgtac 30

<210> 41
<211> 21
<212> DNA
<213> Mus musculus

<400> 41
gacacatcca acctggcttc t 21

<210> 42
<211> 25
<212> DNA
<213> Mus musculus

<400> 42
cagcagtgga gtagttaccc accca 25

<210> 43
<211> 318
<212> PRT
<213> Homo sapiens

<400> 43

Met Ala Ala Gln Gly Cys Ala Ala Ser Arg Leu Leu Gln Leu Leu Leu
1 5 10 15

Gln Leu Leu Leu Leu Leu Leu Leu Leu Ala Ala Gly Gly Ala Arg Ala
20 25 30

Arg Trp Arg Gly Glu Gly Thr Ser Ala His Leu Arg Asp Ile Phe Leu
35 40 45

Gly Arg Cys Ala Glu Tyr Arg Ala Leu Leu Ser Pro Glu Gln Arg Asn
50 55 60

Lys Asn Cys Thr Ala Ile Trp Glu Ala Phe Lys Val Ala Leu Asp Lys
65 70 75 80

Asp Pro Cys Ser Val Leu Pro Ser Asp Tyr Asp Leu Phe Ile Asn Leu
85 90 95

Ser Arg His Ser Ile Pro Arg Asp Lys Ser Leu Phe Trp Glu Asn Ser
100 105 110

His Leu Leu Val Asn Ser Phe Ala Asp Asn Thr Arg Arg Phe Met Pro
115 120 125

Leu Ser Asp Val Leu Tyr Gly Arg Val Ala Asp Phe Leu Ser Trp Cys
130 135 140

Arg Gln Lys Asn Asp Ser Gly Leu Asp Tyr Gln Ser Cys Pro Thr Ser
145 150 155 160

Glu Asp Cys Glu Asn Asn Pro Val Asp Ser Phe Trp Lys Arg Ala Ser
165 170 175

Ile Gln Tyr Ser Lys Asp Ser Ser Gly Val Ile His Val Met Leu Asn
180 185 190

Gly Ser Glu Pro Thr Gly Ala Tyr Pro Ile Lys Gly Phe Phe Ala Asp
195 200 205

Tyr Glu Ile Pro Asn Leu Gln Lys Glu Lys Ile Thr Arg Ile Glu Ile
210 215 220

Trp Val Met His Glu Ile Gly Gly Pro Asn Val Glu Ser Cys Gly Glu
225 230 235 240

Gly Ser Met Lys Val Leu Glu Lys Arg Leu Lys Asp Met Gly Phe Gln
245 250 255

Tyr Ser Cys Ile Asn Asp Tyr Arg Pro Val Lys Leu Leu Gln Cys Val
260 265 270

Asp His Ser Thr His Pro Asp Cys Ala Leu Lys Ser Ala Ala Ala Ala
275 280 285

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

Ile Ile Pro Leu Phe Leu Val Leu Ala Ser Arg Thr Gln Leu
305 310 315

<210> 44
<211> 264
<212> PRT
<213> Homo sapiens

<400> 44

Gly Ala Arg Ala Arg Trp Arg Gly Glu Gly Thr Ser Ala His Leu Arg
1 5 10 15

Asp Ile Phe Leu Gly Arg Cys Ala Glu Tyr Arg Ala Leu Leu Ser Pro
20 25 30

Glu Gln Arg Asn Lys Asn Cys Thr Ala Ile Trp Glu Ala Phe Lys Val
35 40 45

Ala Leu Asp Lys Asp Pro Cys Ser Val Leu Pro Ser Asp Tyr Asp Leu
50 55 60

Phe Ile Asn Leu Ser Arg His Ser Ile Pro Arg Asp Lys Ser Leu Phe
65 70 75 80

Trp Glu Asn Ser His Leu Leu Val Asn Ser Phe Ala Asp Asn Thr Arg
85 90 95

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

Leu Ser Trp Cys Arg Gln Lys Asn Asp Ser Gly Leu Asp Tyr Gln Ser
115 120 125

Cys Pro Thr Ser Glu Asp Cys Glu Asn Asn Pro Val Asp Ser Phe Trp
130 135 140

Lys Arg Ala Ser Ile Gln Tyr Ser Lys Asp Ser Ser Gly Val Ile His
145 150 155 160

Val Met Leu Asn Gly Ser Glu Pro Thr Gly Ala Tyr Pro Ile Lys Gly
165 170 175

Phe Phe Ala Asp Tyr Glu Ile Pro Asn Leu Gln Lys Glu Lys Ile Thr
180 185 190

Arg Ile Glu Ile Trp Val Met His Glu Ile Gly Gly Pro Asn Val Glu
195 200 205

Ser Cys Gly Glu Gly Ser Met Lys Val Leu Glu Lys Arg Leu Lys Asp
210 215 220

Met Gly Phe Gln Tyr Ser Cys Ile Asn Asp Tyr Arg Pro Val Lys Leu
225 230 235 240

Leu Gln Cys Val Asp His Ser Thr His Pro Asp Cys Ala Leu Lys Ser
245 250 255

Ala Ala Ala Ala Thr Gln Arg Lys
260

<210> 45
<211> 116
<212> PRT
<213> Mus musculus

<400> 45

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

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

Thr Ile Asn Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile
35 40 45

Gly Asn Ile Asp Pro Tyr Tyr Gly Thr Thr Tyr Tyr Asn Gln Met Phe
50 55 60

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

Met Gln Leu Lys Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys

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

Thr Val Ser Ala
 115

<210> 46
 <211> 116
 <212> PRT
 <213> Homo sapiens

<400> 46

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

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

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

Gly Asn Ile Asp Pro Tyr Tyr Gly Thr Thr Tyr Tyr Asn Gln Met Phe
 50 55 60

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

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

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

Thr Val Ser Ser
 115

<210> 47
 <211> 117
 <212> PRT
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (31)..(35)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (50)..(66)

<223> Xaa can be any naturally occurring amino acid

<220>

<221> misc_feature

<222> (99)..(106)

<223> Xaa can be any naturally occurring amino acid

<400> 47

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

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

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

Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
50 55 60

Xaa Xaa Arg Val Thr Leu Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Trp Gly Gln Gly Thr Leu
100 105 110

Val Pro Val Ser Ser
115

<210> 48

<211> 106

<212> PRT

<213> Mus musculus

<400> 48

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

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

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

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

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

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

Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105

<210> 49
<211> 106
<212> PRT
<213> Homo sapiens

<400> 49

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

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Thr Tyr Met
20 25 30

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

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

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

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

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

<210> 50
<211> 107
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<222> (24)..(34)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (50)..(56)
<223> Xaa can be any naturally occurring amino acid

<220>

<221> misc_feature
<222> (89)..(97)
<223> Xaa can be any naturally occurring amino acid

<400> 50

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

Asp Arg Val Thr Ile Thr Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

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

Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
85 90 95

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

<210> 51
<211> 16
<212> PRT
<213> Homo sapiens

<400> 51

Asn Ile Asp Pro Tyr Tyr Gly Thr Thr Tyr Tyr Asn Gln Met Phe Gln
1 5 10 15

<210> 52
<211> 245
<212> PRT
<213> Mus musculus

<400> 52

Met Lys Gln Ser Thr Ile Ala Leu Ala Leu Leu Pro Leu Leu Phe Thr
1 5 10 15

Pro Val Ala Lys Ala Gln Val Gln Leu Gln Gln Ser Arg Ala Glu Leu
20 25 30

Val Met Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr
35 40 45

Thr Phe Ser Asp Tyr Trp Val His Trp Val Arg Gln Arg Pro Gly Gln
50 55 60

Gly Leu Glu Trp Ile Gly Ala Ile Asp Gly Ser Asp Thr Phe Asn Asp
65 70 75 80

Tyr Ser Gln Lys Phe Lys Gly Arg Ala Thr Leu Thr Val Asp Glu Ser
85 90 95

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

Ala Val Tyr Tyr Cys Ala Arg Gly Gly Leu Leu Gln Tyr Trp Gly Gln
115 120 125

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

Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr
145 150 155 160

Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr
165 170 175

Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val
180 185 190

Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser
195 200 205

Ser Thr Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala
210 215 220

Ser Ser Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys His His
225 230 235 240

His His His His His
245

<210> 53
<211> 236
<212> PRT
<213> Mus musculus

<400> 53

Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Ala
1 5 10 15

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

20

25

30

Leu Ser Ala Ser Val Gly Glu Thr Val Thr Ile Thr Cys Arg Ala Ser
 35 40 45

Glu Asn Ile Tyr Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys
 50 55 60

Ser Pro Gln Leu Leu Val Tyr Asn Thr Lys Thr Leu Gly Glu Gly Val
 65 70 75 80

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

Ile Asn Ser Leu Gln Pro Glu Asp Phe Gly Ser Tyr Tyr Cys Gln His
 100 105 110

His Tyr Gly Thr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile
 115 120 125

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

Glu Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn
 145 150 155 160

Phe Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu
 165 170 175

Arg Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp
 180 185 190

Ser Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr
 195 200 205

Glu Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr
 210 215 220

Ser Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Ser
 225 230 235

<210> 54

<211> 738

<212> DNA

<213> Mus musculus

<400> 54

gtgaaacaaa gcactattgc actggcactc ttaccgctct tatttacccc tgtggcaaaa 60

gccaggtcc agctgcagca gtctagggct gaacttgtga tgcctggggc ttcagtgaag 120

atgtcctgca agacttctgg ctacacattc tctgactact gggtagactg ggtgaggcag	180
aggcctggac aaggccttga gtggatcgga gcgattgatg gttctgatac ttttaatgac	240
tacagtcaga agtttaaggg cagggccaca ttgactgtag acgaatcctc cagcacagtc	300
tacatgcaac tcagcagcct gacatctgag gactctgcgg tctattactg tgcaaggggg	360
ggccttcttc agtactgggg ccaaggcacc actctcacag tctcctcagc caaaacgaca	420
cccccatctg tctatccact ggcccctgga tctgctgccc aaactaactc catggtgacc	480
ctgggatgcc tgggtcaaggg ctatttcctt gagccagtga cagtgcctg gaactctgga	540
tccctgtcca gcggtgtgca caccttccca gctgtcctgc agtctgacct ctacactctg	600
agcagctcag tgactgtccc ctccagcacc tggcccagcg agaccgtcac ctgcaacggt	660
gcccacccgg ccagcagcac caaggtggac aagaaaattg tgcccagga ttgtcatcat	720
caccatcacc atcactaa	738

<210> 55
 <211> 711
 <212> DNA
 <213> Mus musculus

<400> 55	
atgaaatacc tattgcctac ggcagccgct ggattgttat tactcgctgc ccaaccagcc	60
atggccgaca ttcagctgac ccagtctcca gcctccctat ctgcatctgt gggagaaaact	120
gtcaccatca catgtcgagc aagtgaaaac atttacagtt atttagcatg gtatcagcag	180
aaacagggaa aatctcctca gctcctggtc tataatacaa aaaccttagg agaaggtgtg	240
ccatcaaggt tcagtggcag tggatcgggc acacaatttt ctctgaagat caacagcctg	300
cagcctgaag attttgggag ttattactgt caacatcatt atggtactcc attcacgttc	360
ggctcgggga caaagttgga aataaaacgg gctgatgctg caccaactgt atccatcttc	420
ccaccatcca gtgagcagtt aacatctgga ggtgcctcag tcgtgtgctt cttgaacaac	480
ttctacccca aagacatcaa tgtcaagtgg aagattgatg gcagtgaacg acaaaatggc	540
gtcctgaaca gttggactga tcaggacagc aaagacagca cctacagcat gagcagcacc	600
ctcacgttga ccaaggacga gtatgaacga cataacagct atacctgtga ggccactcac	660
aagacatcaa cttcacccat tgtcaagagc ttcaacagga atgagtctta a	711

<210> 56
 <211> 11
 <212> PRT
 <213> Mus musculus

<400> 56

Gly	Tyr	Thr	Phe	Ser	Asp	Tyr	Trp	Val	His	Trp
1				5					10	

<210> 57
<211> 17
<212> PRT
<213> Mus musculus

<400> 57

Gly Ala Ile Asp Gly Ser Asp Thr Phe Asn Asp Tyr Ser Gln Lys Phe
1 5 10 15

Lys

<210> 58
<211> 8
<212> PRT
<213> Mus musculus

<400> 58

Ala Arg Gly Gly Leu Leu Gln Tyr
1 5

<210> 59
<211> 11
<212> PRT
<213> Mus musculus

<400> 59

Arg Ala Ser Glu Asn Ile Tyr Ser Tyr Leu Ala
1 5 10

<210> 60
<211> 7
<212> PRT
<213> Mus musculus

<400> 60

Asn Thr Lys Thr Leu Gly Glu
1 5

<210> 61
<211> 9
<212> PRT
<213> Mus musculus

<400> 61

Gln His His Tyr Gly Thr Pro Phe Thr
1 5

<210> 62
<211> 33
<212> DNA

<213>	Mus musculus	
<400>	62	
	ggctacacat tctctgacta ctgggtacac tgg	33
<210>	63	
<211>	51	
<212>	DNA	
<213>	Mus musculus	
<400>	63	
	ggagcgattg atggttctga tacttttaat gactacagtc agaagtttaa g	51
<210>	64	
<211>	24	
<212>	DNA	
<213>	Mus musculus	
<400>	64	
	gcaagggggg gccttcttca gtac	24
<210>	65	
<211>	33	
<212>	DNA	
<213>	Mus musculus	
<400>	65	
	cgagcaagtg aaaacattta cagttattta gca	33
<210>	66	
<211>	21	
<212>	DNA	
<213>	Mus musculus	
<400>	66	
	aatacaaaaa ccttaggaga a	21
<210>	67	
<211>	27	
<212>	DNA	
<213>	Mus musculus	
<400>	67	
	caacatcatt atggtactcc attcacg	27
<210>	68	
<211>	33	
<212>	DNA	
<213>	Mus musculus	
<400>	68	
	ggctacacct tcaccagcta ctggatgcac tgg	33
<210>	69	
<211>	51	
<212>	DNA	
<213>	Mus musculus	

<400> 69
 ggagagattg atccttctga tagttatact aactacaatc aaaagttcaa g 51

<210> 70
 <211> 33
 <212> DNA
 <213> Mus musculus

<400> 70
 cgagcaagtg agaatatatta cagttattta gca 33

<210> 71
 <211> 21
 <212> DNA
 <213> Mus musculus

<400> 71
 aatgcaaaaa ccttagcaga a 21

<210> 72
 <211> 23
 <212> DNA
 <213> Mus musculus

<400> 72
 caacatcatt atggtactcc tcc 23

<210> 73
 <211> 1338
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Humanized heavy chain

<400> 73
 caagtccaac tggttcaatc tgggtgctgag gttaagaagc ctggtgcctc tgtgaagggtg 60
 tcatgtaaag catctgggta cagcttcacg gagtacacca ttaattgggt ccgccaaagct 120
 cctggccagg gactggagtg gatcggcaat atcgatccct actacgggac cacatactac 180
 aatcaaatgt tcaactggcag agccaccctg accgctcgaca caagcatatc tacagcctat 240
 atggagctca gccgcctgcg gtctgacgac accgctgtgt attactgcgc tcgggggaagt 300
 gcttggttcc catattgggg tcagggaacc ctcgttacag tctcctcagc ttcaaccaaa 360
 ggccccagtg tcttccctct ggcccccttc agtaagtcta ccagcggcgg cactgccgcc 420
 ctgggctgtc tcgtcaaaga ctacttccct gaaccctgta cagtgtcttg gaacagcggc 480
 gcactgacaa gcggggtgca cacatttccc gccgtcctgc aatcctccgg actgtacagc 540
 ctctcaagtg tgggtgactgt cccatcctcc tccctcggga ccagacata tatatgcaat 600
 gtgaaccata agcccagcaa caccaaggtc gataagaagg tggaacctaa aagttgcgat 660
 aagactcata catgtcctcc atgccctgcc cctgaactgc tgggaggacc ttctgtcttc 720

```

ctgttccctc ccaagcccaa agataccctg atgatatccc gcacaccaga agtgacatgt      780
gttggtgtcg atgtctctca cgaggaccct gaagtgaagt ttaattggta tgtggacggg      840
gtggaagtgc acaacgccaa gaccaaacct cgcgaagagc agtacaactc cacataccgc      900
gtgggtgagtg tgctcaccgt tctccatcag gactggctga atggcaagga gtataagtgt      960
aaggtgagca acaaagctct gccagcaccc atagagaaaa ctattagcaa agctaagggc     1020
cagcctcgcg agccacaggt gtataccctc cctcctagtc gcgaggaaat gactaagaac     1080
caggtttccc tgacatgcct cgtcaaggga ttctatccta gcgatattgc cgtcgaatgg     1140
gagtccaatg gccagcccga gaacaactac aagaccacac ctctgtcct cgactctgac     1200
ggatccttct ttctctatag caagctgacc gttgacaaaa gcaggtggca acagggtaac     1260
gtgttttcat gctctgtgat gcacgaagcc ctgcacaatc actacacaca gaagtccttg     1320
agcctgtccc ctggcaaa                                     1338

```

```

<210> 74
<211> 446
<212> PRT
<213> Artificial Sequence

```

```

<220>
<223> Humanized heavy chain

```

```

<400> 74

```

```

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

```

```

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

```

```

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

```

```

Gly Asn Ile Asp Pro Tyr Tyr Gly Thr Thr Tyr Tyr Asn Gln Met Phe
50           55           60

```

```

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

```

```

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

```

```

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

```

```

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

```

Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	130	135	140
Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	145	150	155
Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	165	170	175
Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	180	185	190
Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	195	200	205
Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	210	215	220
Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	225	230	235
Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	245	250	255
Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	260	265	270
Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	275	280	285
Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	290	295	300
Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	305	310	315
Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	325	330	335
Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	340	345	350
Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	355	360	365
Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	370	375	380

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

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

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

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

<210> 75
 <211> 639
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Humanized light chain

<400> 75
 gacattcaga tgaccaatc accaagcagt ctgtcagcca gtgttgggga tcgcgtgacc 60
 ataacatgct ctgcatactc tagtgtgact tacatgtact ggtaccaaca gaagcccggg 120
 aaagccccaag agctcctgat ctatgacact agcaacctgg ctagtggagt cccagccgg 180
 ttttcgggtt caggctcagg gactgactat actctcacta tttcatctct gcagcctgag 240
 gacttttgcca cttattattg tcagcaatgg agcaattacc cactgacctt tgggcagggc 300
 accaaggtgg aaatcaagag aactgttgct gctccctccg tgttcatctt cccaccaagc 360
 gatgagcagc tgaaatccgg gacagcctct gtggtgtgtc tcctgaacaa cttctatcct 420
 cgggaggcaa aggtccagtg gaaagtcgat aatgccctcc agagtggcaa ctcacaagaa 480
 agcgtgactg aacaggactc caaagatagt acatatagcc tcagcagtac actgaccctg 540
 agcaaagccg attatgagaa acataaggtg tacgcttgcg aggtcaccca ccagggcctg 600
 tccagtccag tgactaagag ctttaataga ggtgagtgt 639

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

<220>
 <223> Humanized light chain

<400> 76

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

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