

SEQUENCE LISTING

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<120> ANTIBODIES AND ANTIBODY-DRUG CONJUGATES SPECIFIC FOR CD123 AND
USES THEREOF

<130> PC72333

<160> 108

<170> PatentIn version 3.5

<210> 1
<211> 380
<212> PRT
<213> Homo sapiens

<400> 1

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
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Gly Ser Thr Gly Thr Lys Glu Asp Pro Asn Pro Pro Ile Thr Asn Leu
20 25 30

Arg Met Lys Ala Lys Ala Gln Gln Leu Thr Trp Asp Leu Asn Arg Asn
35 40 45

Val Thr Asp Ile Glu Cys Val Lys Asp Ala Asp Tyr Ser Met Pro Ala
50 55 60

Val Asn Asn Ser Tyr Cys Gln Phe Gly Ala Ile Ser Leu Cys Glu Val
65 70 75 80

Thr Asn Tyr Thr Val Arg Val Ala Asn Pro Pro Phe Ser Thr Trp Ile
85 90 95

Leu Phe Pro Glu Asn Ser Gly Lys Pro Trp Ala Gly Ala Glu Asn Leu
100 105 110

Thr Cys Trp Ile His Asp Val Asp Phe Leu Ser Cys Ser Trp Ala Val

115

120

125

Gly Pro Gly Ala Pro Ala Asp Val Gln Tyr Asp Leu Tyr Leu Asn Val
 130 135 140

Ala Asn Arg Arg Gln Gln Tyr Glu Cys Leu His Tyr Lys Thr Asp Ala
 145 150 155 160

Gln Gly Thr Arg Ile Gly Cys Arg Phe Asp Asp Ile Ser Arg Leu Ser
 165 170 175

Ser Gly Ser Gln Ser Ser His Ile Leu Val Arg Gly Arg Ser Ala Ala
 180 185 190

Phe Gly Ile Pro Cys Thr Asp Lys Phe Val Val Phe Ser Gln Ile Glu
 195 200 205

Ile Leu Thr Pro Pro Asn Met Thr Ala Lys Cys Asn Lys Thr His Ser
 210 215 220

Phe Met His Trp Lys Met Arg Ser His Phe Asn Arg Lys Phe Arg Tyr
 225 230 235 240

Glu Leu Gln Ile Gln Lys Arg Met Gln Pro Val Ile Thr Glu Gln Val
 245 250 255

Arg Asp Arg Thr Ser Phe Gln Leu Leu Asn Pro Gly Thr Tyr Thr Val
 260 265 270

Gln Ile Arg Ala Arg Glu Arg Val Tyr Glu Phe Leu Ser Ala Trp Ser
 275 280 285

Thr Pro Gln Arg Phe Glu Cys Asp Gln Glu Glu Gly Ala Asn Thr Arg
 290 295 300

Ala Trp Arg Thr Ser Leu Leu Ile Ala Leu Gly Thr Leu Leu Ala Leu
 305 310 315 320

Val Cys Val Phe Val Ile Cys Arg Arg Tyr Leu Val Met Gln Arg Leu
 325 330 335

Phe Pro Arg Ile Pro His Met Lys Asp Pro Ile Gly Asp Ser Phe Gln
340 345 350

Asn Asp Lys Leu Val Val Trp Glu Ala Gly Lys Ala Gly Leu Glu Glu
355 360 365

Cys Leu Val Thr Glu Val Gln Val Val Gln Lys Thr
370 375 380

<210> 2

<211> 336

<212> PRT

<213> Homo sapiens

<400> 2

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Thr Lys Glu Asp Pro Asn Pro Pro Ile Thr Asn Leu
20 25 30

Arg Met Lys Ala Lys Ala Gln Gln Leu Thr Trp Asp Leu Asn Arg Asn
35 40 45

Val Thr Asp Ile Glu Cys Val Lys Asp Ala Asp Tyr Ser Met Pro Ala
50 55 60

Val Asn Asn Ser Tyr Cys Gln Phe Gly Ala Ile Ser Leu Cys Glu Val
65 70 75 80

Thr Asn Tyr Thr Val Arg Val Ala Asn Pro Pro Phe Ser Thr Trp Ile
85 90 95

Leu Phe Pro Glu Asn Ser Gly Lys Pro Trp Ala Gly Ala Glu Asn Leu
100 105 110

Thr Cys Trp Ile His Asp Val Asp Phe Leu Ser Cys Ser Trp Ala Val
115 120 125

Gly Pro Gly Ala Pro Ala Asp Val Gln Tyr Asp Leu Tyr Leu Asn Val
130 135 140

Ala Asn Arg Arg Gln Gln Tyr Glu Cys Leu His Tyr Lys Thr Asp Ala
145 150 155 160

Gln Gly Thr Arg Ile Gly Cys Arg Phe Asp Asp Ile Ser Arg Leu Ser
165 170 175

Ser Gly Ser Gln Ser Ser His Ile Leu Val Arg Gly Arg Ser Ala Ala
180 185 190

Phe Gly Ile Pro Cys Thr Asp Lys Phe Val Val Phe Ser Gln Ile Glu
195 200 205

Ile Leu Thr Pro Pro Asn Met Thr Ala Lys Cys Asn Lys Thr His Ser
210 215 220

Phe Met His Trp Lys Met Arg Ser His Phe Asn Arg Lys Phe Arg Tyr
225 230 235 240

Glu Leu Gln Ile Gln Lys Arg Met Gln Pro Val Ile Thr Glu Gln Val
245 250 255

Arg Asp Arg Thr Ser Phe Gln Leu Leu Asn Pro Gly Thr Tyr Thr Val
260 265 270

Gln Ile Arg Ala Arg Glu Arg Val Tyr Glu Phe Leu Ser Ala Trp Ser
275 280 285

Thr Pro Gln Arg Phe Glu Cys Asp Gln Glu Glu Gly Ala Asn Thr Arg
290 295 300

Ala Trp Arg Gly Gly Pro Pro Asp Tyr Lys Asp Asp Asp Asp Lys Gly
305 310 315 320

Gly Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu
325 330 335

<210> 3
<211> 301
<212> PRT
<213> Homo sapiens

<400> 3

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1 5 10 15

Gly Ser Thr Gly Thr Lys Glu Gly Lys Pro Trp Ala Gly Ala Glu Asn
20 25 30

Leu Thr Cys Trp Ile His Asp Val Asp Phe Leu Ser Cys Ser Trp Ala
35 40 45

Val Gly Pro Gly Ala Pro Ala Asp Val Gln Tyr Asp Leu Tyr Leu Asn
50 55 60

Val Ala Asn Arg Arg Gln Gln Tyr Glu Cys Leu His Tyr Lys Thr Asp
65 70 75 80

Ala Gln Gly Thr Arg Ile Gly Cys Arg Phe Asp Asp Ile Ser Arg Leu
85 90 95

Ser Ser Gly Ser Gln Ser Ser His Ile Leu Val Arg Gly Arg Ser Ala
100 105 110

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

Glu Ile Leu Thr Pro Pro Asn Met Thr Ala Lys Cys Asn Lys Thr His
130 135 140

Ser Phe Met His Trp Lys Met Arg Ser His Phe Asn Arg Lys Phe Arg
145 150 155 160

Tyr Glu Leu Gln Ile Gln Lys Arg Met Gln Pro Val Ile Thr Glu Gln
165 170 175

Val Arg Asp Arg Thr Ser Phe Gln Leu Leu Asn Pro Gly Thr Tyr Thr
180 185 190

Val Gln Ile Arg Ala Arg Glu Arg Val Tyr Glu Phe Leu Ser Ala Trp
195 200 205

Ser Thr Pro Gln Arg Phe Glu Cys Asp Gln Glu Glu Gly Ala Asn Thr
210 215 220

Arg Ala Trp Arg Thr Ser Leu Leu Ile Ala Leu Gly Thr Leu Leu Ala
225 230 235 240

Leu Val Cys Val Phe Val Ile Cys Arg Arg Tyr Leu Val Met Gln Arg
245 250 255

Leu Phe Pro Arg Ile Pro His Met Lys Asp Pro Ile Gly Asp Ser Phe
260 265 270

Gln Asn Asp Lys Leu Val Val Trp Glu Ala Gly Lys Ala Gly Leu Glu
275 280 285

Glu Cys Leu Val Thr Glu Val Gln Val Val Gln Lys Thr
290 295 300

<210> 4
<211> 337
<212> PRT
<213> Macaca fascicularis

<400> 4

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

Leu Arg Met Lys Glu Lys Ala Gln Gln Leu Met Trp Asp Leu Asn Arg
35 40 45

Asn Val Thr Asp Val Glu Cys Ile Lys Gly Thr Asp Tyr Ser Met Pro
50 55 60

Ala Met Asn Asn Ser Tyr Cys Gln Phe Gly Ala Ile Ser Leu Cys Glu
65 70 75 80

Val Thr Asn Tyr Thr Val Arg Val Ala Ser Pro Pro Phe Ser Thr Trp
85 90 95

Ile Leu Phe Pro Glu Asn Ser Gly Thr Pro Arg Ala Gly Ala Glu Asn
100 105 110

Leu Thr Cys Trp Val His Asp Val Asp Phe Leu Ser Cys Ser Trp Val
115 120 125

Val Gly Pro Ala Ala Pro Ala Asp Val Gln Tyr Asp Leu Tyr Leu Asn
130 135 140

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

Ala Arg Gly Thr Gln Ile Gly Cys Arg Phe Asp Asp Ile Ala Arg Leu
165 170 175

Ser Arg Gly Ser Gln Ser Ser His Ile Leu Val Arg Gly Arg Ser Ala
180 185 190

Ala Val Ser Ile Pro Cys Thr Asp Lys Phe Val Phe Phe Ser Gln Ile
195 200 205

Glu Arg Leu Thr Pro Pro Asn Met Thr Gly Glu Cys Asn Glu Thr His
210 215 220

Ser Phe Met His Trp Lys Met Lys Ser His Phe Asn Arg Lys Phe Arg
225 230 235 240

Tyr Glu Leu Arg Ile Gln Lys Arg Met Gln Pro Val Arg Thr Glu Gln
245 250 255

Val Arg Asp Thr Thr Ser Phe Gln Leu Pro Asn Pro Gly Thr Tyr Thr
260 265 270

Val Gln Ile Arg Ala Arg Glu Thr Val Tyr Glu Phe Leu Ser Ala Trp
275 280 285

Ser Thr Pro Gln Arg Phe Glu Cys Asp Gln Glu Glu Gly Ala Ser Ser
290 295 300

Arg Ala Trp Arg Gly Gly Pro Pro Asp Tyr Lys Asp Asp Asp Asp Lys
 305 310 315 320

Gly Gly Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His
 325 330 335

Glu

<210> 5
 <211> 351
 <212> DNA
 <213> Mus musculus

<400> 5
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 ccaggaaagg gtctggagtg gcttggagta atatggtctg gcggaggcac aaattataat 180
 tctcgtctca tgtccagact gagcatcacc aaggacaact ccaggagtca agtgttctta 240
 aaaatgaaca gtctgcaaac tgatgacacc gccatatatt attgtgtaag agattggggt 300
 aacttttact ttgactattg gggccaaggc accactctca cagtctcctc a 351

<210> 6
 <211> 117
 <212> PRT
 <213> Mus musculus

<400> 6

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

Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ser Gly
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Asp Ile Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
 35 40 45

Gly Val Ile Trp Ser Gly Gly Gly Thr Asn Tyr Asn Ser Arg Leu Met
 50 55 60

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

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

Arg Asp Trp Gly Asn Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 7
<211> 10
<212> PRT
<213> Mus musculus

<400> 7

Gly Phe Ser Leu Thr Ser Gly Asp Ile Ser
1 5 10

<210> 8
<211> 16
<212> PRT
<213> Mus musculus

<400> 8

Val Ile Trp Ser Gly Gly Gly Thr Asn Tyr Asn Ser Arg Leu Met Ser
1 5 10 15

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

<400> 9

Asp Trp Gly Asn Phe Tyr Phe Asp Tyr
1 5

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

<400> 10

Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
1 5 10

<210> 11

<211> 98

<212> PRT

<213> Homo sapiens

<400> 11

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

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

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

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

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

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

Lys Val

<210> 12

<211> 15

<212> PRT

<213> Homo sapiens

<400> 12

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

<210> 13

<211> 110

<212> PRT
<213> Homo sapiens

<400> 13

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
20 25 30

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
35 40 45

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Leu
50 55 60

Leu Gln Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
65 70 75 80

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
85 90 95

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
100 105 110

<210> 14
<211> 106
<212> PRT
<213> Homo sapiens

<400> 14

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

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
20 25 30

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
35 40 45

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
50 55 60

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
65 70 75 80

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
85 90 95

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
100 105

<210> 15
<211> 446
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 15

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

Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ser Gly
20 25 30

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

Gly Val Ile Trp Ser Gly Gly Gly Thr Asn Tyr Asn Ser Arg Leu Met
50 55 60

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

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

Arg Asp Trp Gly Asn Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

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

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

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

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

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

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

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Arg Thr His
210 215 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225 230 235 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
245 250 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
260 265 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
275 280 285

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

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305 310 315 320

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
325 330 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
355 360 365

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

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

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

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

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

<210> 16
<211> 336
<212> DNA
<213> Mus musculus

<400> 16
gacattgtga tgtcacagtc tccatcctcc ctggctgtgt cagtaggaga gaaggtcact 60
atgagctgca aatccagtc gagtctgctc agcagtggaa cccgaaagaa ctacttggtc 120
tggtaccagc agaaaccagg gcagtctcct aaactgctga tctactgggc atccactagg 180
caatctgggg tccctgatcg cttcacaggc ggtggatctg ggacagattt cactctcacc 240
atcagcagtg tgcaggctga ggacctggca gtttattact gcagtcaatc ttataatcta 300
tacacattcg gaggggggac caagctggaa ataaaa 336

<210> 17
<211> 112
<212> PRT
<213> Mus musculus

<400> 17

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

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

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

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

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

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

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

<210> 18
<211> 17
<212> PRT
<213> Mus musculus

<400> 18

Lys Ser Ser Gln Ser Leu Leu Ser Ser Gly Thr Arg Lys Asn Tyr Leu
1 5 10 15

Ala

<210> 19
<211> 7
<212> PRT
<213> Mus musculus

<400> 19

Trp Ala Ser Thr Arg Gln Ser
1 5

<210> 20
<211> 8
<212> PRT
<213> Mus musculus

<400> 20

Ser Gln Ser Tyr Asn Leu Tyr Thr
1 5

<210> 21
<211> 10
<212> PRT
<213> Homo sapiens

<400> 21

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
1 5 10

<210> 22
<211> 107
<212> PRT
<213> Homo sapiens

<400> 22

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
1 5 10 15

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
20 25 30

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
35 40 45

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
50 55 60

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

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys

100

105

<210> 23
 <211> 219
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> SYNTHETIC CONSTRUCT

<400> 23

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

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

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

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

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

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

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

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

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

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

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser

165

170

175

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

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

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

<210> 24

<211> 117

<212> PRT

<213> Homo sapiens

<400> 24

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

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

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

Ala Val Ile Trp Ser Gly Gly Gly Thr Asn Tyr Gly Ser Arg Leu Met
 50 55 60

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

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

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

Val Thr Val Ser Ser
 115

<210> 25
<211> 16
<212> PRT
<213> Homo sapiens

<400> 25

Val Ile Trp Ser Gly Gly Gly Thr Asn Tyr Gly Ser Arg Leu Met Ser
1 5 10 15

<210> 26
<211> 11
<212> PRT
<213> Homo sapiens

<400> 26

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
1 5 10

<210> 27
<211> 446
<212> PRT
<213> Homo sapiens

<400> 27

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

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

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

Ala Val Ile Trp Ser Gly Gly Gly Thr Asn Tyr Gly Ser Arg Leu Met
50 55 60

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

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

Arg Asp Trp Gly Asn Phe Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu

100

105

110

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

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

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

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

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

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

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Arg Thr His
 210 215 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
 225 230 235 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
 245 250 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
 260 265 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
 275 280 285

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

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
 305 310 315 320

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
325 330 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
355 360 365

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

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

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

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

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

<210> 28
<211> 112
<212> PRT
<213> Homo sapiens

<400> 28

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 Lys Ser Ser Gln Ser Leu Leu Ser Ser
20 25 30

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

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

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

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

Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 29
<211> 10
<212> PRT
<213> Homo sapiens

<400> 29

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
1 5 10

<210> 30
<211> 219
<212> PRT
<213> Homo sapiens

<400> 30

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 Lys Ser Ser Gln Ser Leu Leu Ser Ser
20 25 30

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

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

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

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

Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

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

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

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

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

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

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

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

<210> 31
<211> 355
<212> DNA
<213> Mus musculus

<400> 31
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acctgcactg tctctggggtt ctcattaacc aactttgata taagttggat tcgccagcca 120
ccaggaaagg gtctggagtg gcttggagta atgtggactg gtggaggcac aaattataat 180
tcagctttca tgtccagact gagcatcagc agggacatct ccaaaagcca agtttcctta 240
aaaatgagca gtctgcaaac tgatgacaca gccatatatt actgtgtaag aggggatact 300
tacttctttg ctatggacta ctgggggtcaa ggaacctccg tcaccgtctc atcag 355

<210> 32

<211> 118
<212> PRT
<213> Mus musculus

<400> 32

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

Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Asn Phe
20 25 30

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

Gly Val Met Trp Thr Gly Gly Gly Thr Asn Tyr Asn Ser Ala Phe Met
50 55 60

Ser Arg Leu Ser Ile Ser Arg Asp Ile Ser Lys Ser Gln Val Ser Leu
65 70 75 80

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

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

Ser Val Thr Val Ser Ser
115

<210> 33
<211> 10
<212> PRT
<213> Mus musculus

<400> 33

Gly Phe Ser Leu Thr Asn Phe Asp Ile Ser
1 5 10

<210> 34
<211> 16
<212> PRT
<213> Mus musculus

<400> 34

Val Met Trp Thr Gly Gly Gly Thr Asn Tyr Asn Ser Ala Phe Met Ser
1 5 10 15

<210> 35

<211> 10

<212> PRT

<213> Mus musculus

<400> 35

Gly Asp Thr Tyr Phe Phe Ala Met Asp Tyr
1 5 10

<210> 36

<211> 11

<212> PRT

<213> Mus musculus

<400> 36

Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser
1 5 10

<210> 37

<211> 447

<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONSTRUCT

<400> 37

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

Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Asn Phe
20 25 30

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

Gly Val Met Trp Thr Gly Gly Gly Thr Asn Tyr Asn Ser Ala Phe Met
50 55 60

Ser Arg Leu Ser Ile Ser Arg Asp Ile Ser Lys Ser Gln Val Ser Leu
65 70 75 80

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

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

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

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

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

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

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

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

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

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
225 230 235 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
245 250 255

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
260 265 270

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
275 280 285

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

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

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
325 330 335

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
340 345 350

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
355 360 365

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
370 375 380

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

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

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

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

<210> 38

<211> 336

<212> DNA

<213> Mus musculus

<400> 38

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60

atcacttgca aatccagtca gagtctgctc agcagtggaa cccgaaagaa cttcttgtct 120

tggtatcagc agaaaccagg gaaagcccct aagctcctga tctattgggc atccactagg 180

ggatctgggg tcccatcaag gttcagtggc agtggatctg ggacagattt cactctcacc 240
 atcagcagtc tgcaacctga agattttgca acttactact gtaaacaatc ttataatcta 300
 tacacgtttg gccaggggac caagctggag atcaaa 336

<210> 39
 <211> 112
 <212> PRT
 <213> Mus musculus

<400> 39

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

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

Gly Thr Arg Lys Asn Phe Leu Ser Trp Tyr Gln Gln Lys Thr Gly Gln
 35 40 45

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

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

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

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

<210> 40
 <211> 17
 <212> PRT
 <213> Mus musculus

<400> 40

Lys Ser Ser Gln Ser Leu Leu Ser Ser Gly Thr Arg Lys Asn Phe Leu
 1 5 10 15

Ser

<210> 41
<211> 7
<212> PRT
<213> Mus musculus

<400> 41

Trp Ala Ser Thr Arg Gly Ser
1 5

<210> 42
<211> 8
<212> PRT
<213> Mus musculus

<400> 42

Lys Gln Ser Tyr Asn Leu Tyr Thr
1 5

<210> 43
<211> 219
<212> PRT
<213> Mus musculus

<400> 43

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

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

Gly Thr Arg Lys Asn Phe Leu Ser Trp Tyr Gln Gln Lys Thr Gly Gln
35 40 45

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

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

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

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

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

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

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

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

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

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

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

<210> 44
<211> 118
<212> PRT
<213> Homo sapiens

<400> 44

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

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

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

Ala Val Met Trp Thr Gly Gly Gly Thr Asn Tyr Gln Ser Ala Phe Met

50

55

60

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

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

Arg Gly Asp Val Tyr Phe Phe Ala Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 45
<211> 16
<212> PRT
<213> Homo sapiens

<400> 45

Val Met Trp Thr Gly Gly Gly Thr Asn Tyr Gln Ser Ala Phe Met Ser
1 5 10 15

<210> 46
<211> 10
<212> PRT
<213> Homo sapiens

<400> 46

Gly Asp Val Tyr Phe Phe Ala Met Asp Tyr
1 5 10

<210> 47
<211> 447
<212> PRT
<213> Homo sapiens

<400> 47

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

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

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

Ala Val Met Trp Thr Gly Gly Gly Thr Asn Tyr Gln Ser Ala Phe Met
50 55 60

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

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

Arg Gly Asp Val Tyr Phe Phe Ala Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

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

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

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

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

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

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

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

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
225 230 235 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
245 250 255

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
260 265 270

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
275 280 285

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

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

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
325 330 335

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
340 345 350

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
355 360 365

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
370 375 380

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

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

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

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

<210> 48
<211> 112

<212> PRT
<213> Homo sapiens

<400> 48

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 Lys Ser Ser Gln Ser Leu Leu Ser Ser
20 25 30

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

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

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

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

Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 49
<211> 219
<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 Lys Ser Ser Gln Ser Leu Leu Ser Ser
20 25 30

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

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

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

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

Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

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

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

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

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

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

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

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

<210> 50

<211> 354

<212> DNA

<213> Mus musculus

<400> 50

gagggtccagc tacaacagtc tggacctgaa ctggtgaagc ctggggccttc agtgaagatg 60

tcctgtaagg cttctggata caccttcagt gactacttca tgaagtgggt gaaacagagc 120

catggaaaga gacttgagtg gattggagat attaatccta acaatggtga aactttctac 180

aaccatcatt tcaagggcaa ggccacattg acaatagaca aatcctccag tacagcctac 240
atgcagctca acagcctgac atctgacgac tctgcagtct attactgtgc aagaccccg 300
cgggggaatg ctatggactt ctgggggtcaa ggaacctcag tcaccgtctc ctca 354

<210> 51
<211> 118
<212> PRT
<213> Mus musculus

<400> 51

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

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

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

Gly Asp Ile Asn Pro Asn Asn Gly Glu Thr Phe Tyr Asn His His Phe
50 55 60

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

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

Ala Arg Pro Arg Arg Gly Asn Ala Met Asp Phe Trp Gly Gln Gly Thr
100 105 110

Ser Val Thr Val Ser Ser
115

<210> 52
<211> 10
<212> PRT
<213> Mus musculus

<400> 52

Gly Tyr Thr Phe Ser Asp Tyr Phe Met Lys

1 5 10

<210> 53
<211> 17
<212> PRT
<213> Mus musculus

<400> 53

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

Gly

<210> 54
<211> 9
<212> PRT
<213> Mus musculus

<400> 54

Pro Arg Arg Gly Asn Ala Met Asp Phe
1 5

<210> 55
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 55

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

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

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

Gly Asp Ile Asn Pro Asn Asn Gly Glu Thr Phe Tyr Asn His His Phe
50 55 60

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

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

Ala Arg Pro Arg Arg Gly Asn Ala Met Asp Phe Trp Gly Gln Gly Thr
100 105 110

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

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

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

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

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

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

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

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
225 230 235 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
245 250 255

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
260 265 270

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala

275

280

285

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

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

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
 325 330 335

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
 340 345 350

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
 355 360 365

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
 370 375 380

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

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

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

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

<210> 56

<211> 339

<212> DNA

<213> Mus musculus

<400> 56

gacattgtga tgacacagtc tccatcctcc ctggctatgt cagtaggaca gaaggtcacc 60

atgagctgca agtccagtca gagcctttta aatagaggca atcaaaagaa ctatttggcc 120

tggtaccagc agaaaccagg acagtctcct aaatttctgg tatattttgc atccactagg 180

gaatctgggg tccctgatcg cttcataggc agtggatctg ggacagattt cactcttacc	240
atcagcagtg tgcaggctga agacctggca gattatTTTT gtcagcaaca ttatagtatt	300
ccgtacacgt tcggaggggg gaccaagctg gaaatacaa	339

<210> 57
 <211> 113
 <212> PRT
 <213> Mus musculus

<400> 57

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

Gln	Lys	Val	Thr	Met	Ser	Cys	Lys	Ser	Ser	Gln	Ser	Leu	Leu	Asn	Arg
			20					25					30		

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

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

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

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

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

Gln

<210> 58
 <211> 17
 <212> PRT
 <213> Mus musculus

<400> 58

Lys Ser Ser Gln Ser Leu Leu Asn Arg Gly Asn Gln Lys Asn Tyr Leu
1 5 10 15

Ala

<210> 59
<211> 7
<212> PRT
<213> Mus musculus

<400> 59

Phe Ala Ser Thr Arg Glu Ser
1 5

<210> 60
<211> 9
<212> PRT
<213> Mus musculus

<400> 60

Gln Gln His Tyr Ser Ile Pro Tyr Thr
1 5

<210> 61
<211> 10
<212> PRT
<213> Mus musculus

<400> 61

Phe Gly Gly Gly Thr Lys Leu Glu Ile Gln
1 5 10

<210> 62
<211> 220
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 62

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

Gln Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Arg
20 25 30

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

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

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

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

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

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

Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn
130 135 140

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

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

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

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

Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215 220

<210> 63

<211> 369
<212> DNA
<213> Mus musculus

<400> 63
gaagtacagc tgcagcagtc tgggcccagag cttcggagac ctgggacctc agtcaagctg 60
tcttgtaagg cttctggcta cagtattaca gatttcctta tgtactgggt aaaacatagg 120
ccagaatacg gcctggaatg gattggatgg attgatacctg aggatggtga aacaaaatat 180
gctcagaagt tccaaagcaa ggcccagactg actgcagata cgtcctccaa aacagcctac 240
atggaactca gcagcctgac gtctgaggac acagcaacct atttttgtgc tagatggggc 300
tatatcacgg attatttcta tggcggggtt acttactggg gccgaggcac tctggtcact 360
gtctcttca 369

<210> 64
<211> 123
<212> PRT
<213> Mus musculus

<400> 64
Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Arg Arg Pro Gly Thr
1 5 10 15
Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Ser Ile Thr Asp Phe
20 25 30
Leu Met Tyr Trp Val Lys His Arg Pro Glu Tyr Gly Leu Glu Trp Ile
35 40 45
Gly Trp Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Gln Lys Phe
50 55 60
Gln Ser Lys Ala Arg Leu Thr Ala Asp Thr Ser Ser Lys Thr Ala Tyr
65 70 75 80
Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Thr Tyr Phe Cys
85 90 95
Ala Arg Trp Gly Tyr Ile Thr Asp Tyr Phe Tyr Gly Gly Phe Thr Tyr
100 105 110

Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 65
<211> 10
<212> PRT
<213> Mus musculus

<400> 65

Gly Tyr Ser Ile Thr Asp Phe Leu Met Tyr
1 5 10

<210> 66
<211> 17
<212> PRT
<213> Mus musculus

<400> 66

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

Ser

<210> 67
<211> 14
<212> PRT
<213> Mus musculus

<400> 67

Trp Gly Tyr Ile Thr Asp Tyr Phe Tyr Gly Gly Phe Thr Tyr
1 5 10

<210> 68
<211> 11
<212> PRT
<213> Mus musculus

<400> 68

Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser
1 5 10

<210> 69

<211> 454
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 69

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

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

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

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

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

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

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

Thr Tyr Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr
115 120 125

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

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

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

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

180

185

190

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

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

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

Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 245 250 255

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 260 265 270

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 275 280 285

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Leu Leu Gln
 290 295 300

Gly Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 305 310 315 320

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 325 330 335

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 340 345 350

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 355 360 365

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 370 375 380

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 385 390 395 400

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
405 410 415

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
420 425 430

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
435 440 445

Leu Ser Leu Ser Pro Gly
450

<210> 70
<211> 318
<212> DNA
<213> Mus musculus

<400> 70
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ctcagctgca aagcaagtca gaatattaat aagaacttag actggtatca gcaaaagcat 120
ggagaagctc caaaactcct gatatatcat acaaacactt tgcaaatggg catcccatca 180
aggttcagtg gcagtggatc tggtacagat tacgcactca ccatcaccag cctgcagcct 240
gaagatgttg ccacatatta ctgctatcaa tataacagtg ggcccacgtt tggagctggg 300
accaagctgg aactgaga 318

<210> 71
<211> 106
<212> PRT
<213> Mus musculus

<400> 71

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

Asp Arg Val Thr Leu Ser Cys Lys Ala Ser Gln Asn Ile Asn Lys Asn
20 25 30

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

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

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

Glu Asp Val Ala Thr Tyr Tyr Cys Tyr Gln Tyr Asn Ser Gly Pro Thr
85 90 95

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

<210> 72
<211> 11
<212> PRT
<213> Mus musculus

<400> 72

Lys Ala Ser Gln Asn Ile Asn Lys Asn Leu Asp
1 5 10

<210> 73
<211> 7
<212> PRT
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<400> 73

His Thr Asn Thr Leu Gln Met
1 5

<210> 74
<211> 8
<212> PRT
<213> Mus musculus

<400> 74

Tyr Gln Tyr Asn Ser Gly Pro Thr
1 5

<210> 75
<211> 10
<212> PRT
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<400> 75

Phe Gly Ala Gly Thr Lys Leu Glu Leu Arg
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<211> 213

<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONSTRUCT

<400> 76

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

Asp Arg Val Thr Leu Ser Cys Lys Ala Ser Gln Asn Ile Asn Lys Asn
20 25 30

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

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

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

Glu Asp Val Ala Thr Tyr Tyr Cys Tyr Gln Tyr Asn Ser Gly Pro Thr
85 90 95

Phe Gly Ala Gly Thr Lys Leu Glu Leu Arg 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
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<210> 77
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 77

Gln Leu Gln Gly Leu Leu Gln Gly Gly
1 5

<210> 78
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 78

Leu Leu Gln Gly
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<210> 79
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
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<400> 79

Leu Ser Leu Ser Gln Gly
1 5

<210> 80

<211> 8

<212> PRT

<213> Artificial Sequence

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<223> SYNTHETIC CONSTRUCT

<400> 80

Gly Gly Gly Leu Leu Gln Gly Gly
1 5

<210> 81

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONTRUCT

<400> 81

Gly Leu Leu Gln Gly
1 5

<210> 82

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONSTRUCT

<400> 82

Leu Leu Gln Gly Ser Pro Leu Ala Gln Ser His Gly Gly
1 5 10

<210> 83

<211> 7

<212> PRT

<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 83

Gly Leu Leu Gln Gly Gly Gly
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<210> 84
<211> 6
<212> PRT
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<400> 84

Gly Leu Leu Gln Gly Gly
1 5

<210> 85
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 85

Gly Leu Leu Gln
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<210> 86
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 86

Leu Leu Gln Leu Leu Gln Gly Ala
1 5

<210> 87
<211> 5
<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONSTRUCT

<400> 87

Leu Leu Gln Gly Ala
1 5

<210> 88

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONSTRUCT

<400> 88

Leu Leu Gln Tyr Gln Gly Ala
1 5

<210> 89

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONSTRUCT

<400> 89

Leu Leu Gln Gly Ser Gly
1 5

<210> 90

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONSTRUCT

<400> 90

Leu Leu Gln Tyr Gln Gly
1 5

<210> 91

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

<220>
<223> SYNTHETIC CONSTRUCT

<400> 91

Leu Leu Gln Leu Leu Gln Gly
1 5

<210> 92
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
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<400> 92

Ser Leu Leu Gln Gly
1 5

<210> 93
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 93

Leu Leu Gln Leu Gln
1 5

<210> 94
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 94

Leu Leu Gln Leu Leu Gln
1 5

<210> 95
<211> 5
<212> PRT
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<220>
<223> SYNTHETIC CONSTRUCT

<400> 95

Leu Leu Gln Gly Arg
1 5

<210> 96
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 96

Leu Leu Gln Gly Pro Pro
1 5

<210> 97
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 97

Leu Leu Gln Gly Pro Ala
1 5

<210> 98
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 98

Gly Gly Leu Leu Gln Gly Pro Pro

1

5

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

<220>
<223> SYNTHETIC CONSTRUCT

<400> 99

Gly Gly Leu Leu Gln Gly Ala
1 5

<210> 100
<211> 7
<212> PRT
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<220>
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<400> 100

Leu Leu Gln Gly Pro Gly Lys
1 5

<210> 101
<211> 6
<212> PRT
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<220>
<223> SYNTHETIC CONSTRUCT

<400> 101

Leu Leu Gln Gly Pro Gly
1 5

<210> 102
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> SYNTHETIC CONSTRUCT

<400> 102

Leu Leu Gln Gly Pro
1 5

<210> 103
<211> 4
<212> PRT
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<220>
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<400> 103

Leu Leu Gln Pro
1

<210> 104
<211> 6
<212> PRT
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<400> 104

Leu Leu Gln Pro Gly Lys
1 5

<210> 105
<211> 7
<212> PRT
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<220>
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<400> 105

Leu Leu Gln Ala Pro Gly Lys
1 5

<210> 106
<211> 7
<212> PRT
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<220>
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<400> 106

Leu Leu Gln Gly Ala Pro Gly
1 5

<210> 107

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONSTRUCT

<400> 107

Leu Leu Gln Gly Ala Pro
1 5

<210> 108

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> SYNTHETIC CONSTRUCT

<400> 108

Leu Leu Gln Leu Gln Gly
1 5