

SEQUENCE LISTING

<110> GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED

<120> ANTIGEN BINDING PROTEIN

<130> PU66960

<140>

<141>

<150> 63/059,387

<151> 2020-07-31

<160> 240

<170> PatentIn version 3.5

<210> 1

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 1

Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala

1 5 10

<210> 2

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 2

Asp Ala Ser Asn Arg Ala Thr

1 5

<210> 3

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 3
Gln Gln Ser Asp Ser Trp Pro Pro Thr
1 5

<210> 4
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 4
Gly Tyr Tyr Met Ser
1 5

<210> 5
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 5
Trp Ile Asn Pro Leu Ser Gly Glu Thr Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 6
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 6

Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 7

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 7

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

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

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

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

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

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

<210> 8

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 8

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

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

<210> 9

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 9

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 10

<211> 453

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 10

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

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

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

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

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

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 11
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 11
gagatcgtgc tgaccagag ccctgcaacc ctgtccctga gccctggcga aagggccact 60
ctgagctgca gggccagcca gagcgtgagc agctacctcg cctggtacca gcagaagccc 120
ggccaggccc ctaggctgct gatctacgac gccagcaaca gggccaccgg cattcccga 180
aggttcagcg gcagcggcag cggcaccgac ttcaccctga ccatcagcag cctggagccc 240
gaagacttcg cagtctacta ctgccagcag agcgacagct ggccccccac cttcgggggc 300
ggcaccaagg tggagatcaa g 321

<210> 12
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 12
caggtgcagc tcgtgcagag cggcgccgag gtgaaaaagc ccggcgcctc tgtcaaggctg 60
agctgcaagg ccagcggcta caccttcctg ggctactaca tgagctgggt gaggcaggct 120
cccggacagg gcctggagtg gatgggctgg atcaaccccc tgagcggcga gaccaactac 180
gcccagaagt tccagggcag ggtgaccatg accagggaca ccagcatcag caccgcctac 240
atggaactga gcaggctgag gagcgacgac accgccgtgt attactgcgc cagggaacacc 300

ggcgagctgg acggcatgaa ctggtacttc gacctgtggg gcaggggcac cctggtgaca	360
gtgagcagc	369

<210> 13
 <211> 1416
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 13	
atgggctggt cctgcatcat cctgtttctg gtggccaccg ccaccggtgt gcacagccag	60
gtgcagctcg tgcagagcgg cgccgaggtg aaaaagcccg ggcctctgt caaggtgagc	120
tgcaaggcca gcggctacac cttcctgggc tactacatga gctgggtgag gcaggctccc	180
ggacagggcc tggagtggat gggctggatc aaccccctga gcggcgagac caactacgcc	240
cagaagttcc agggcagggg gaccatgacc agggacacca gcatcagcac cgcctacatg	300
gaactgagca ggctgaggag cgacgacacc gccgtgtatt actgcgccag ggacaccggc	360
gagctggacg gcatgaactg gtacttcgac ctgtggggca ggggcaccct ggtgacagt	420
agcagcgcca gcaccaaggg cccagcgtg ttccccctgg ccccgagcag caagagcacc	480
agcggcggca cagccgccct gggctgcctg gtgaaggact acttccccga gcccgtagacc	540
gtgtcctgga acagcggagc cctgaccagc ggcgtgcaca cttccccgc cgtgctgcag	600
agcagcggcc tgtacagcct gagcagcgtg gtgaccgtgc ccagcagcag cctgggcacc	660
cagacctaca tctgtaacgt gaaccacaag cccagcaaca ccaaggtgga caagaaggtg	720
gagcccaaga gctgtgacaa gaccacacc tgccccctt gccctgcccc cgagctggcc	780
ggagcccca gcgtgttcct gttccccccc aagcctaagg acaccctgat gatcagcaga	840
acccccgagg tgacctgtgt ggtggtggat gtgagccacg aggaccctga ggtgaagttc	900
aactggtacg tggacggcgt ggaggtgcac aatgccaaga ccaagcccag ggaggagcag	960
tacaacagca cctaccgggt ggtgtccgtg ctgaccgtgc tgcaccagga ttggctgaac	1020
ggcaaggagt acaagtgtaa ggtgtccaac aaggccctgc ctgcccctat cgagaaaacc	1080
atcagcaagg ccaagggcca gccagagag cccaggtgt acaccctgcc ccctagcaga	1140

gatgagctga ccaagaacca ggtgtccctg acctgcctgg tgaagggtt ctaccccagc	1200
gacatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc	1260
cctgtgctgg acagcgatgg cagcttcttc ctgtacagca agctgaccgt ggacaagagc	1320
agatggcagc agggcaacgt gttcagctgc tccgtgatgc acgaggccct gcacaatcac	1380
tacaccaga agagcctgag cctgtcccct ggcaag	1416

<210> 14
 <211> 699
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 14	
atgggctggt cctgcatcat cctgtttctg gtggccaccg ccaccggtgt gcacagcgag	60
atcgtgctga cccagagccc tgcaaccctg tccctgagcc ctggcgaaag ggccactctg	120
agctgcaggg ccagccagag cgtgagcagc tacctcgctt ggtaccagca gaagcccggc	180
cagggcccta ggctgctgat ctacgacgcc agcaacaggg ccaccggcat tccgcaagg	240
ttcagcggca gcggcagcgg caccgacttc accctgacca tcagcagcct ggagcccga	300
gacttcgcag tctactactg ccagcagagc gacagctggc ccccccactt cgggggcggc	360
accaaggtgg agatcaagcg tacggtggcc gccccagcg tgttcatctt cccccccagc	420
gatgagcagc tgaagagcgg caccgccagc gtggtgtgtc tgctgaacaa cttctacccc	480
cgggaggcca aggtgcagtg gaaggtggac aatgccctgc agagcggcaa cagccaggag	540
agcgtgaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg	600
agcaaggccg actacgagaa gcacaaggtg tacgcctgtg aggtgacca ccagggcctg	660
tccagccccg tgaccaagag cttcaaccgg ggcgagtgc	699

<210> 15
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 15
Gln Ala Ser Gln Asp Ile Ala Asn Tyr Leu Asn
1 5 10

<210> 16
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 16
Asp Ala Ser Asn Leu Glu Thr
1 5

<210> 17
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 17
Gln Gln Ala Asp Thr Leu Pro Phe Thr
1 5

<210> 18
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 18
Gly Asp Tyr Trp Ser
1 5

<210> 19
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 19
Glu Ile Asp Trp Ser Gly Ala Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 20
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 20
Gly Gly Ser Lys Glu Leu Ser Phe Asp Ile
1 5 10

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 21
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 Gln Ala Ser Gln Asp Ile Ala Asn Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly

50

55

60

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

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

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

<210> 22

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 22

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

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

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

Gly Glu Ile Asp Trp Ser Gly Ala Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

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

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

Arg Gly Gly Ser Lys Glu Leu Ser Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser
115

<210> 23

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 23

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 Gln Ala Ser Gln Asp Ile Ala Asn Tyr
20 25 30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 24

<211> 448

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 24

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

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

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

Gly Glu Ile Asp Trp Ser Gly Ala Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

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

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

Arg Gly Gly Ser Lys Glu Leu Ser Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met 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 Lys Thr
210 215 220

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Ala Gly Ala 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 Glu Gln Tyr Asn 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 Asp Glu Leu 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 Lys
435 440 445

<210> 25

<211> 321

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 25

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60

atcacttgcc aggcgagtca ggacattgcc aactatttaa attggtatca gcagaaacca 120

gggaaagccc ctaagctcct gatctacgat gcatccaatt tggaacagg ggtcccatca 180

aggttcagtg gaagtggatc tgggacagat ttactttca ccatcagcag cctgcagcct 240

gaagatattg caacatatta ctgtcagcag gccgataccc tccctttcac ttttggcgga 300

gggaccaagg ttgagatcaa a 321

<210> 26
<211> 354
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 26
caagtacaat tacaacagtg gggagctggt ttattaaagc cttcagaaac ttttaagtttg 60
acctgtgctg tttacggtgg atcattttttt ggtgattact ggagttggat tcgtcaacca 120
ccaggcaaag gattggagtg gatcggtgag atagactggt caggcgcgac taactacaat 180
ccaagtttaa aatccagggt tactatctcc gtagacacgt ccaagaacca gttctccctg 240
aagctgagtt ctgtgaccgc cgcagacacg gcggtgtact actgcgccag aggcggttct 300
aaagaattgt cattcgacat atggggtcag ggtacaatgg tcaccgtctc ctca 354

<210> 27
<211> 1343
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 27
caagtacaat tacaacagtg gggagctggt ttattaaagc cttcagaaac ttttaagtttg 60
acctgtgctg tttacggtgg atcattttttt ggtgattact ggagttggat tcgtcaacca 120
ccaggcaaag gattggagtg gatcggtgag atagactggt caggcgcgac taactacaat 180
ccaagtttaa aatccagggt tactatctcc gtagacacgt ccaagaacca gttctccctg 240
aagctgagtt ctgtgaccgc cgcagacacg gcggtgtact actgcgccag aggcggttct 300
aaagaattgt cattcgacat atggggtcag ggtacaatgg tcaccgtctc ctcagccagc 360
accaagggcc ccagcgtgtt ccccctggcc cccagcagca agagcaccag cggcggcaca 420
gccgccctgg gctgcctggt gaaggactac ttccccgagc ccgtgaccgt gtcctggaac 480
agcggagccc tgaccagcgg cgtgcacacc ttccccgccg tgctgcagag cagcggcctg 540

tacagcctga gcagctggtg accgtgccc	gcagcagcct gggcaccag acctacatct	600
gtaacgtgaa ccacaagccc agcaacacca	aggtggacaa gaaggtggag cccaagagct	660
gtgacaagac ccacacctgc cccccctgcc	ctgccccga gctggccgga gccccagcg	720
tgttcctgtt ccccccaag cctaaggaca	ccctgatgat cagcagaacc cccgaggtga	780
cctgtgtggt ggtggatgtg agccacgagg	accctgaggt gaagttcaac tggtagctgg	840
acggcgtgga ggtgcacaat gccaaagacca	agcccaggga ggagcagtac aacagcacct	900
accgggtggt gtccgtgctg accgtgctgc	accaggattg gctgaacggc aaggagtaca	960
agtgtaaagt gtccaacaag gccctgcctg	cccctatcga gaaaaccatc agcaaggcca	1020
agggccagcc cagagagccc caggtgtaca	ccctgcccc tagcagagat gagctgacca	1080
agaaccaggt gtccctgacc tgcctggtga	agggttcta cccagcgac atcgccgtgg	1140
agtgggagag caacggccag cccgagaaca	actacaagac cccccccct gtgctggaca	1200
gcatggcag cttcttcctg tacagcaagc	tgaccgtgga caagagcaga tggcagcagg	1260
gcaacgtgtt cagctgctcc gtgatgcacg	aggccctgca caatcactac acccagaaga	1320
gcctgagcct gtcccctggc aag		1343

<210> 28

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 28

gacatccaga tgaccagtc tccatcctcc	ctgtctgcat ctgtaggaga cagagtcacc	60
atcacttgcc aggcgagtca ggacattgcc	aactatttaa attggtatca gcagaaacca	120
gggaaagccc ctaagctcct gatctacgat	gcatccaatt tggaacagg ggtcccatca	180
aggttcagtg gaagtggatc tgggacagat	tttactttca ccatcagcag cctgcagcct	240
gaagatattg caacatatta ctgtcagcag	gccgataccc tccctttcac ttttggcgga	300
gggaccaagg ttgagatcaa acgtacggtg	gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc	agcgtggtgt gtctgctgaa caatttctac	420

ccccgggagg ccaaggtgca gtggaaggtg gacaatgccc tgcagagcgg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 29
 <211> 214
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 29
 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 Gln Ala Ser Gln Asp Ile Ala Asn Tyr
 20 25 30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Ala Asp Ala Ala
 100 105 110

Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly
 115 120 125

Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile

130

135

140

Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu
 145 150 155 160

Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
 165 170 175

Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr
 180 185 190

Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser
 195 200 205

Phe Asn Arg Asn Glu Cys
 210

<210> 30

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 polynucleotide"

<400> 30

gacatccaga tgactcagtc cccctctagc ctgagcgcta gcgtgggcga cagggtgacc 60

atcacctgcc aggccagcca ggacatcgcc aactacctga actggtacca gcagaagccc 120

ggcaaggccc ccaaactgct gatctacgac gcctcaaacc tcgagaccgg cgtgcctagc 180

aggttttagcg gcagcggcag cggcaccgac ttcaccttca ccatcagcag cctgcagccc 240

gaggatatcg ccacctacta ctgccagcag gccgacaccc tgcccttcac cttcggcgga 300

ggcaccaagg tggagattaa gagggctgac gcggcgccca ccgtgagcat cttccccccc 360

agcagcgagc agctgactag cggcggagcc tctgtggtgt gcttcctgaa caacttctac 420

cccaaggaca tcaacgtgaa gtggaagatc gacggcagcg agaggcagaa cggagtcctc 480

aacagctgga ccgaccagga cagcaaggat agcacctaca gcatgagcag caccctgacc 540

ctgaccaagg acgagtacga gaggcacaac agctacacct gcgaagccac ccacaaaacc 600

tccaccagcc ccacgtgaa gagcttcaat aggaacgagt gc

642

<210> 31

<211> 448

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 31

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

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

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

Gly Glu Ile Asp Trp Ser Gly Ala Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

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

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

Arg Gly Gly Ser Lys Glu Leu Ser Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser Val Tyr Pro
115 120 125

Leu Ala Pro Val Cys Gly Asp Thr Thr Gly Ser Ser Val Thr Leu Gly
130 135 140

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

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

Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Thr Ser Ser Thr
180 185 190

Trp Pro Ser Gln Ser Ile Thr Cys Asn Val Ala His Pro Ala Ser Ser
195 200 205

Thr Lys Val Asp Lys Lys Ile Glu Pro Arg Gly Pro Thr Ile Lys Pro
210 215 220

Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Ala Gly Ala Pro Ser
225 230 235 240

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

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

Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
275 280 285

Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val
290 295 300

Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
305 310 315 320

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

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

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

Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn
370 375 380

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

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

Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly
420 425 430

Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
435 440 445

<210> 32

<211> 1344

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 32

caggtgcagc tgcagcagtg gggcgccgga ctgctgaagc ccagcgagac cctgagcctg	60
acctgcgccg tgtacggcgg gtccttcttc ggcgactact ggagctggat caggcagccc	120
cccggcaaag gcctggagtg gatcggcgag atcgactgga gcggcgccac caactacaac	180
cccagcctca agagcagggt gaccatcagc gtggacacca gcaagaacca gttcagcctg	240
aagctgagca gcgtgaccgc cgccgacacc gccgtgtact attgcgccag gggcggcagc	300
aaggagctga gcttcgacat ctggggccag ggcactatgg tcaccgtgag cagcgctaaa	360
accaccgccc cctccgtgta ccccctggcg cccgtctgtg gcgacaccac cggcagcagc	420
gtgacactgg gctgcctggt gaagggttac ttccccgagc ccgtcacctt gacctggaat	480
agcggaagcc tgtcaagcgg cgtgcacact ttccccgccg tgctgcagtc tgacctgtac	540
accctgagca gcagcgtgac cgtgaccagc agcacctggc ccagccagtc tatcacttgc	600
aacgtggccc accctgccag ctccaccaag gtggacaaga agatcgagcc taggggaccc	660
accattaaac cctgcccccc ctgcaagtgc cccgccccca atctggccgg agccccagc	720
gtgtttatct tccccccaa gatcaaggac gtgctgatga tcagcctgag ccccatcgtg	780

acctgcgtgg tggtggacgt gagcgaggac gaccagacg tgcagatcag ctggtttgtg	840
aacaacgtgg aggtgcacac cgcccagacc cagaccaca gggaggatta caacagcacc	900
ctgaggggtgg tgagcgccct gcccatccag caccaggact ggatgtccgg caaggagttc	960
aagtgcaagg tgaacaaca ggacctgccc gccccatcg agaggacat cagcaagcct	1020
aagggcagcg tgagggcacc ccaggtctac gtgctgcccc cccagagga ggaaatgacc	1080
aagaagcagg tgacctgac ctgcatggtg accgacttca tgcccagga catctacgtg	1140
gagtggacca acaacggcaa gaccgagctg aactacaaga acaccagacc cgtgctggac	1200
agcgacggca gctacttcat gtatagcaag ctgcgggtcg agaagaaga ctgggtggag	1260
aggaacagct acagctgcag cgtcgtgcac gaaggcctcc acaaccacca caccaccaag	1320
agcttcagca ggacccccgg gaag	1344

<210> 33
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 33
 Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Ala
 1 5 10

<210> 34
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 34
 Ala Ala Ser Ser Leu Gln Ser
 1 5

<210> 35
 <211> 9

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 35
Gln Gln Ala Leu Ser Leu Pro Tyr Thr
1 5

<210> 36
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 36
Glu Trp Ala Ile Ser
1 5

<210> 37
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 37
Ala Ile Ile Pro Lys Phe Gly Thr Ala Glu Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 38
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 38

Gly Ala Lys Tyr Tyr Tyr Ala Glu Asp Tyr Met Asp Val
1 5 10

<210> 39

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 39

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

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

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

Tyr Ala Ala Ser Ser Leu Gln Ser 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 Gln Gln Ala Leu Ser Leu Pro Tyr
85 90 95

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

<210> 40

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 40

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Glu Trp
20 25 30

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

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

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

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

Ala Arg Gly Ala Lys Tyr Tyr Tyr Ala Glu Asp Tyr Met Asp Val Trp
100 105 110

Gly Lys Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 41

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 41

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

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

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

Tyr Ala Ala Ser Ser Leu Gln Ser 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 Gln Gln Ala Leu Ser Leu Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 42

<211> 452

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 42

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Glu Trp
20 25 30

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

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

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

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

Ala Arg Gly Ala Lys Tyr Tyr Tyr Ala Glu Asp Tyr Met Asp Val Trp
100 105 110

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

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

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

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

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
180 185 190

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

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

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Ala
225 230 235 240

Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
245 250 255

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

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

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
290 295 300

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

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

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

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

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
370 375 380

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
385 390 395 400

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

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

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

Ser Pro Gly Lys
450

<210> 43
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 43
gacatccaga tgaccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtc ggggtattagc agctgggtag cctgggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtcagcag gcactcagtc tcccttacac ttttggcgga 300
gggaccaagg ttgagatcaa a 321

<210> 44
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 44
caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60
tcctgcaagg cttctggagg caccttcagc gagtgggcta tcagctgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggagct atcatcccta agtttggtac agcagagtac 180

gcacagaagt tccagggcag agtcacgatt accgcggacg aatccacgag cacagcctac	240
atggagctga gcagcctgag atctgaggac acggcgggtgt actactgcgc cagaggtgct	300
aagtactact acgctgagga ctacatggac gtatggggca aggggtacaac tgtcaccgtc	360
tcctca	366

<210> 45

<211> 1356

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 45

caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc	60
tcctgcaagg cttctggagg caccttcagc gagtgggcta tcagctgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggagct atcatcccta agtttggtac agcagagtac	180
gcacagaagt tccagggcag agtcacgatt accgcggacg aatccacgag cacagcctac	240
atggagctga gcagcctgag atctgaggac acggcgggtgt actactgcgc cagaggtgct	300
aagtactact acgctgagga ctacatggac gtatggggca aggggtacaac tgtcaccgtc	360
tcctcagcca gcaccaaggg cccagcgtg ttccccctgg cccccagcag caagagcacc	420
agcggcggca cagccgccct gggctgcctg gtgaaggact acttccccga gcccgtagacc	480
gtgtcctgga acagcggagc cctgaccagc ggcgtgcaca ctttccccgc cgtgctgcag	540
agcagcggcc tgtacagcct gagcagcgtg gtgaccgtgc ccagcagcag cctgggcacc	600
cagacctaca tctgtaacgt gaaccacaag cccagcaaca ccaaggtgga caagaagggtg	660
gagcccaaga gctgtgacaa gaccacacc tgccccccct gccctgcccc cgagctggcc	720
ggagccccca gcgtgttcct gttccccccc aagcctaagg acaccctgat gatcagcaga	780
acccccgagg tgacctgtgt ggtggtggat gtgagccacg aggaccctga ggtgaagtgc	840
aactggtacg tggacggcgt ggagggtgcac aatgccaaga ccaagcccag ggaggagcag	900
tacaacagca cctaccgggt ggtgtccgtg ctgaccgtgc tgcaccagga ttggctgaac	960
ggcaaggagt acaagtgtaa ggtgtccaac aaggccctgc ctgcccctat cgagaaaacc	1020

atcagcaagg ccaagggcca gcccagagag ccccaggtgt acaccctgcc ccctagcaga	1080
gatgagctga ccaagaacca ggtgtccctg acctgcctgg tgaagggtt ctaccccagc	1140
gacatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc	1200
cctgtgctgg acagcgatgg cagcttcttc ctgtacagca agctgaccgt ggacaagagc	1260
agatggcagc agggcaacgt gttcagctgc tccgtgatgc acgaggccct gcacaatcac	1320
tacaccaga agagcctgag cctgtcccct ggcaag	1356

<210> 46
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 46	
gacatccaga tgaccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc	60
atcacttgtc gggcgagtca ggggtattagc agctggttag cctggatatca gcagaaacca	120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca	180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct	240
gaagattttg caacttatta ctgtcagcag gcactcagtc tcccttacac ttttggcgga	300
gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaagggtg gacaatgccc tgcaagcgcg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 47
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 47
Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala
1 5 10

<210> 48
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 48
Asp Ala Ser Asn Arg Ala Thr
1 5

<210> 49
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 49
Gln Gln Ser Asp Ser Trp Pro Pro Thr
1 5

<210> 50
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 50
Gly Tyr Tyr Met Asn
1 5

<210> 51
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 51
Trp Ile Asn Pro Ser Ser Gly Glu Thr Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 52
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 52
Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 53
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 53
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile

35

40

45

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

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

<210> 54

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 54

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

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

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

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

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

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

<210> 55

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 55

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 56
<211> 453
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 56
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

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

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

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

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 57

<211> 321

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 57

gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120

ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc	180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct	240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctctac ttttggcgga	300
gggaccaagg ttgagatcaa a	321

<210> 58
 <211> 369
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 polynucleotide"

<400> 58	
caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc	60
tcctgcaagg cttctggata caccttcatt ggctactata tgaattgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggatgg atcaaccctt ctagtgggtga gacaaactat	180
gcacagaagt ttcagggcag ggtcaccatg accaggga cgtccatcag cacagcctac	240
atggagctga gcaggctgag atctgacgac acggcgggtg actactgcgc cagagacacg	300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtag cttggtcacc	360
gtctcctca	369

<210> 59
 <211> 1359
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 polynucleotide"

<400> 59	
caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc	60
tcctgcaagg cttctggata caccttcatt ggctactata tgaattgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggatgg atcaaccctt ctagtgggtga gacaaactat	180
gcacagaagt ttcagggcag ggtcaccatg accaggga cgtccatcag cacagcctac	240

atggagctga gcaggctgag atctgacgac acggcgggtgt actactgcgc cagagacacg	300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtag cttggtcacc	360
gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc	420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg	480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
accagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc ttaggtgaag	840
ttcaactggt acgtggacgg cgtggagggtg cacaatgcca agaccaagcc caggaggag	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagt taaggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gcccctagc	1080
agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tgggtgaaggg cttctacccc	1140
agcgacatcg ccgtggagt ggagagcaac ggccagccc agaacaacta caagaccacc	1200
ccccctgtgc tggacagcga tggcagcttc ttcctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacacc agaagagcct gagcctgtcc cctggcaag	1359

<210> 60

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 60

gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc	60
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ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct	120
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ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
 aggttcagtg gcagtggggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
 gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctcctac ttttggcgga 300
 gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc 360
 agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac 420
 ccccgaggagg ccaagggtgca gtggaagggtg gacaatgccc tgcagagcgg caacagccag 480
 gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540
 ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc 600
 ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc 642

<210> 61
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 61
 Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala
 1 5 10

<210> 62
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 62
 Asp Ala Ser Asn Arg Ala Thr
 1 5

<210> 63
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 63
Gln Gln Ser Asp Ser Trp Pro Pro Thr
1 5

<210> 64
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 64
Ser Tyr Tyr Met Asn
1 5

<210> 65
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 65
Ile Ile Asn Pro Ser Ser Gly Glu Thr Ser Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 66
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 66

Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 67

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 67

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

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

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
100 105 110

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

<210> 68

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 68

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

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

<210> 69

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 69

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile

35

40

45

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
 100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175

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

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

Phe Asn Arg Gly Glu Cys
 210

<210> 70

<211> 453

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 70

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

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

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
100 105 110

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 71
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 71
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctctac ttttggcgga 300
gggaccaagg ttgagatcaa a 321

<210> 72
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 72
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaagggt 60
tcctgcaagg catctggata caccttcagg agctactata tgaattgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggaata atcaacccta gttcgggtga gacaagctac 180
gcacagaagt tccagggcag agtcaccatg accagggaca cgtccacgag cacagtctac 240

atggagctga gcagcctgag atctgaggac acggcggtgt actactgcgc cagagacacg	300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc	360
gtctcctca	369

<210> 73
 <211> 1359
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 73	
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtt	60
tcctgcaagg catctggata caccttcagg agctactata tgaattgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggaata atcaacccta gttcgggtga gacaagctac	180
gcacagaagt tccagggcag agtcaccatg accagggaca cgtccacgag cacagtctac	240
atggagctga gcagcctgag atctgaggac acggcggtgt actactgcgc cagagacacg	300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc	360
gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc	420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg	480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
accagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc tgaggtgaag	840
ttcaactggt acgtggacgg cgtggaggtg cacaatgcca agaccaagcc cagggaggag	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagt taaggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gcccctagc	1080

agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tggatgaagg cttctacccc	1140
agcgacatcg ccgtggagtg ggagagcaac ggccagcccc agaacaacta caagaccacc	1200
ccccctgtgc tggacagcga tggcagcttc ttcctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacaccc agaagagcct gagcctgtcc cctggcaag	1359

<210> 74
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 74	
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc	60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct	120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc	180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct	240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctctac ttttggcgga	300
gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaaggtg gacaatgccc tgacagagcg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 75
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 75

Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala
1 5 10

<210> 76

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 76

Asp Ala Ser Asn Arg Ala Thr
1 5

<210> 77

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 77

Gln Gln Ser Asp Ser Trp Pro Pro Thr
1 5

<210> 78

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 78

Gly Tyr Tyr Met Ser
1 5

<210> 79

<211> 17

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 79
Trp Ile Asn Pro Asn Ser Gly Glu Thr Ile Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 80
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 80
Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 81
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 81
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

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

<210> 82

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 82

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

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

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

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

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

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

<210> 83

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 83

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln

145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175

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

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

Phe Asn Arg Gly Glu Cys
 210

<210> 84
<211> 453
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 84
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

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

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

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

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 85
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 85
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180

aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct	240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggcctcctac ttttggcgga	300
gggaccaagg ttgagatcaa a	321

<210> 86
 <211> 369
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 86	
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc	60
tcctgcaagg cttctggata caccttccgg ggctactata tgagttgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtgggtga gacaatttat	180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac	240
atggagctga gcaggctgag atctgacgac acggcggtgt actactgcgc cagagacacg	300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc	360
gtctcctca	369

<210> 87
 <211> 1359
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 87	
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc	60
tcctgcaagg cttctggata caccttccgg ggctactata tgagttgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtgggtga gacaatttat	180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac	240
atggagctga gcaggctgag atctgacgac acggcggtgt actactgcgc cagagacacg	300

ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc	360
gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc	420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg	480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
acccagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc tgaggtgaag	840
ttcaactggt acgtggacgg cgtggaggtg cacaatgcca agaccaagcc cagggaggag	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagt taaggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gccccctagc	1080
agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tgggtgaaggg cttctacccc	1140
agcgacatcg ccgtggagt ggagagcaac ggccagccc agaacaacta caagaccacc	1200
ccccctgtgc tggacagcga tggcagcttc ttctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacacc agaagagcct gagcctgtcc cctggcaag	1359

<210> 88

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 88

gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc	60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct	120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc	180

aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct	240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggcctcctac ttttggcgga	300
gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaaggtg gacaatgccc tgcagagcgg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 89

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 89

Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala

1	5	10
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<210> 90

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 90

Asp Ala Ser Asn Arg Ala Thr

1	5
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<210> 91

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 91
Gln Gln Ser Asp Ser Trp Pro Pro Thr
1 5

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 92
Gly Tyr Tyr Met Ser
1 5

<210> 93
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 93
Trp Ile Asn Pro Asn Ser Gly Glu Thr Phe Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 94
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 94

Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 95
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 95
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

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

<210> 96
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 96

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

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

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

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

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

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

<210> 97

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 97

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 98

<211> 453

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 98

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

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

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

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

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

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 99
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 99
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctctac ttttggcgga 300
gggaccaagg ttgagatcaa a 321

<210> 100
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 100
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggata caccttctcg ggctactata tgagttgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtgggtga gacattttat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggagctga gcaggctgag atctgacgac acggcggtgt actactgcgc cagagacacg 300

ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc	360
gtctcctca	369

<210> 101
 <211> 1359
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 101	
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc	60
tcctgcaagg cttctggata caccttctcg ggctactata tgagttgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtgggtga gacattttat	180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac	240
atggagctga gcaggctgag atctgacgac acggcgggtgt actactgcgc cagagacacg	300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc	360
gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc	420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg	480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
accagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc tgaggtgaag	840
ttcaactggg acgtggacgg cgtggaggtg cacaatgcca agaccaagcc caggaggagg	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagtg taagggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gccccctagc	1080
agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tgggtgaaggg cttctacccc	1140

agcgacatcg ccgtggagtg ggagagcaac ggccagcccg agaacaacta caagaccacc	1200
ccccctgtgc tggacagcga tggcagcttc ttcctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacaccc agaagagcct gagcctgtcc cctggcaag	1359

<210> 102
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 102	
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc	60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct	120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc	180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct	240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctcctac ttttggcgga	300
gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaagggtg gacaatgccc tgcagagcgg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 103
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 103
Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala
1 5 10

<210> 104
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 104
Asp Ala Ser Asn Arg Ala Thr
1 5

<210> 105
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 105
Gln Gln Ser Asp Ser Trp Pro Pro Thr
1 5

<210> 106
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 106
Gly Tyr Tyr Met Ser
1 5

<210> 107
<211> 17
<212> PRT
<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 107

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

Gly

<210> 108

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 108

Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 109

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 109

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly

50

55

60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
 85 90 95

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

<210> 110

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 110

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

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

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

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

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

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

<210> 111

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 111

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 112

<211> 453

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 112

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

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

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

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

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

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 113
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 113
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240

gaagatTTTtG cagTTtatta ctgtcagcag tccgactcct ggccTcctac tTTtggcgga	300
gggaccaagg ttgagatcaa a	321

<210> 114
 <211> 369
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 114	
caggtgcagc tggTgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggTc	60
tcctgcaagg cttctggata caccttcggg ggctactata tgtcgtgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtggTga gacatattat	180
gcacagaagt ttCagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac	240
atggagctga gcaggctgag atctgacgac acggcggtgt actactgcgc cagagacacg	300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggTac cttggTcacc	360
gtctcctca	369

<210> 115
 <211> 1359
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 115	
caggtgcagc tggTgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggTc	60
tcctgcaagg cttctggata caccttcggg ggctactata tgtcgtgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acagtggTga gacatattat	180
gcacagaagt ttCagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac	240
atggagctga gcaggctgag atctgacgac acggcggtgt actactgcgc cagagacacg	300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggTac cttggTcacc	360

gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc	420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg	480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
acccagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc tgaggtgaag	840
ttcaactggt acgtggacgg cgtggaggtg cacaatgcca agaccaagcc cagggaggag	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagt taaggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gccccctagc	1080
agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tgggtgaaggg cttctacccc	1140
agcgacatcg ccgtggagtg ggagagcaac ggccagcccc agaacaacta caagaccacc	1200
ccccctgtgc tggacagcga tggcagcttc ttctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacaccc agaagagcct gagcctgtcc cctggcaag	1359

<210> 116

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 116

gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc	60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct	120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc	180
aggttcagtg gcagtgggtc tgggacagac ttactctca ccatcagcag cctagagcct	240

gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctcctac ttttggcgga 300
 gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc 360
 agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac 420
 ccccgggagg ccaaggtgca gtggaaggtg gacaatgccc tgcagagcgg caacagccag 480
 gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540
 ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc 600
 ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc 642

<210> 117
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 117
 Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala
 1 5 10

<210> 118
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 118
 Asp Ala Ser Asn Arg Ala Thr
 1 5

<210> 119
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

peptide"

<400> 119

Gln Gln Ser Asp Ser Trp Pro Pro Thr
1 5

<210> 120

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 120

Gly Tyr Tyr Met Asn
1 5

<210> 121

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 121

Trp Ile Asn Pro Leu Ser Gly Glu Thr Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 122

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 122

Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 123
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 123
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

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

<210> 124
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 124
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

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

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

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

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

<210> 125
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 125
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly

50

55

60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 126

<211> 453

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 126

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

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

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

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

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

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 127
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 127
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggcctcctac ttttggcgga 300
gggaccaagg ttgatcaaa a 321

<210> 128
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 128
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggata caccttccat ggctactata tgaattgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaaccctc tgagtgggtga gacaaaactat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggagctga gcaggctgag atctgacgac acggcggtgt actactgcgc cagagacacg 300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc 360

gtctcctca

369

<210> 129

<211> 1359

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 129

caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc	60
tcctgcaagg cttctggata caccttccat ggctactata tgaattgggt gcgacaggcc	120
cctggacaag ggcttgagtg gatgggatgg atcaaccctc tgagtgggtga gacaaactat	180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac	240
atggagctga gcaggctgag atctgacgac acggcggtgt actactgcgc cagagacacg	300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtag cttggtcacc	360
gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc	420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg	480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
accagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacct tgaggtgaag	840
ttcaactggg acgtggacgg cgtggagggt cacaatgcca agaccaagcc caggaggag	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagt taaggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacacct gccccctagc	1080
agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tgggtgaagg cttctacccc	1140
agcgacatcg ccgtggagtg ggagagcaac ggccagcccc agaacaacta caagaccacc	1200

ccccctgtgc tggacagcga tggcagcttc ttcctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcaggggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacaccc agaagagcct gagcctgtcc cctggcaag	1359

<210> 130
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 130	
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc	60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct	120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc	180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct	240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctcctac ttttggcgga	300
gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaagggtg gacaatgccc tgcagagcgg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 131
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 131
 Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala

1

5

10

<210> 132

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 132

Asp Ala Ser Asn Arg Ala Thr

1

5

<210> 133

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 133

Gln Gln Ser Asp Ser Trp Pro Pro Thr

1

5

<210> 134

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 134

Gly Tyr Tyr Met Thr

1

5

<210> 135

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 135
Asn Ile Asn Pro Asn Ser Gly Trp Thr Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 136
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 136
Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 137
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 137
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

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

<210> 138
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 138
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

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

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

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

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

<210> 139
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 139
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser

165

170

175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 140

<211> 453

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 140

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

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

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

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

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

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 141

<211> 321

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 141

gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120

ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180

aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240

gaagattttg cagtttatta ctgtcagcag tccgactcct ggcctcctac ttttggcgga 300

gggaccaagg ttgatatcaa a 321

<210> 142

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 142

caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60

tcctgcaagg cttctggata caccttcctt ggctactata tgacttgggt gcgacaggcc 120

cctggacaag ggcttgagtg gatgggaaat atcaacccta acagtgggtg gacaaactat 180

gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240

atggagctga gcaggctgag atctgacgac acggcgggtg actactgcgc cagagacacg 300

ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc 360

gtctcctca 369

<210> 143

<211> 1359

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 143

caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60

tcctgcaagg cttctggata caccttcctt ggctactata tgacttgggt gcgacaggcc 120

cctggacaag ggcttgagtg gatgggaaat atcaacccta acagtgggtg gacaaactat 180

gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240

atggagctga gcaggctgag atctgacgac acggcgggtg actactgcgc cagagacacg 300

ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc 360

gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc 420

accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg	480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
accagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtgggtgtg gatgtgagcc acgaggacc tgaggtgaag	840
ttcaactggc acgtggacgg cgtggaggtg cacaatgcc agaccaagcc cagggaggag	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagt taagggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gcccctagc	1080
agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tgggtgaaggg cttctacccc	1140
agcgacatcg ccgtggagtg ggagagcaac ggccagcccg agaacaacta caagaccacc	1200
ccccctgtgc tggacagcga tggcagcttc ttcctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacaccc agaagagcct gagcctgtcc cctggcaag	1359

<210> 144

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 144

gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc	60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct	120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc	180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct	240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctcctac ttttggcggg	300

gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaaggtg gacaatgccc tgcagagcgg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 145
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 145
 Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala
 1 5 10

<210> 146
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 146
 Asp Ala Ser Asn Arg Ala Thr
 1 5

<210> 147
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 147
Gln Gln Ser Asp Ser Trp Pro Pro Thr
1 5

<210> 148
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 148
Gly Tyr Tyr Met Ser
1 5

<210> 149
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 149
Trp Ile Asn Pro Gln Ser Gly Glu Thr Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 150
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 150
Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 151
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 151
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

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

<210> 152
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 152
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

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

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

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

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

<210> 153

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 153

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 154

<211> 453

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 154

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

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

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

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

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

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 155
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 155
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggcctcctac ttttggcgga 300
gggaccaagg ttgagatcaa a 321

<210> 156
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 156
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggata caccttctgg ggctactata tgagttgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaaccctc agagtgggtga gacaaactat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggagctga gcaggctgag atctgacgac acggcggtgt actactgcgc cagagacacg 300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc 360
gtctcctca 369

<210> 157
<211> 1359
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 157
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggata caccttctgg ggctactata tgagttgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggatgg atcaaccctc agagtgggtga gacaaactat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggagctga gcaggctgag atctgacgac acggcggtgt actactgcgc cagagacacg 300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc 360
gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc 420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg 480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg 540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc 600
acccagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag 660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg 720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc 780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc ttaggtgaag 840
ttcaactggg acgtggacgg cgtggaggtg cacaatgcca agaccaagcc caggaggag 900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg 960
aacggcaagg agtacaagt taaggtgtcc aacaaggccc tgcctgcccc tatcgagaaa 1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gccccctagc 1080
agagatgagc tgaccaagaa ccagggtgtcc ctgacctgcc tgggtgaaggg cttctacccc 1140
agcgacatcg ccgtggagtg ggagagcaac ggccagcccg agaacaacta caagaccacc 1200
ccccctgtgc tggacagcga tggcagcttc ttctgtaca gcaagctgac cgtggacaag 1260

agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacaccc agaagagcct gagcctgtcc cctggcaag	1359

<210> 158
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 158	
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc	60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct	120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc	180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct	240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggccctcctac ttttggcgga	300
gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaagggtg gacaatgccc tgcagagcgg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 159
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 159	
Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala	
1 5 10	

<210> 160
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 160
Asp Ala Ser Asn Arg Ala Thr
1 5

<210> 161
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 161
Gln Gln Ser Asp Ser Trp Pro Pro Thr
1 5

<210> 162
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 162
Gly Tyr Tyr Met Ser
1 5

<210> 163
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

peptide"

<400> 163

Trp Ile Asn Pro Met Ser Gly Glu Thr Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 164

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 164

Asp Thr Gly Glu Leu Asp Gly Met Asn Trp Tyr Phe Asp Leu
1 5 10

<210> 165

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 165

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro

65		70		75		80									
Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Ser	Asp	Ser	Trp	Pro	Pro
				85					90					95	

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

<210> 166
 <211> 123
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 166
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

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

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

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

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

<210> 167
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 167
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 168
<211> 453
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 168
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

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

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

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

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

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 169
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 169
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggcctcctac ttttggcgga 300
gggaccaagg ttgagatcaa a 321

<210> 170
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 170
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggata caccttccgt ggctactata tgagttgggt gcgacaggcc 120
cctggacaag ggcttgagt gatgggatgg atcaacccta tgagtgggtga gacaaactat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggagctga gcaggctgag atctgacgac acggcgggtgt actactgcgc cagagacacg 300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc 360
gtctcctca 369

<210> 171
<211> 1359
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 171
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60
tcctgcaagg cttctggata caccttccgt ggctactata tgagttgggt gcgacaggcc 120
cctggacaag ggcttgagt gatgggatgg atcaacccta tgagtgggtga gacaaactat 180
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240
atggagctga gcaggctgag atctgacgac acggcgggtgt actactgcgc cagagacacg 300
ggagaacttg acggaatgaa ctggtacttc gacctatggg ggagaggtac cttggtcacc 360
gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc 420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg 480

accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
accagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc ttaggtgaag	840
ttcaactggg acgtggacgg cgtggaggtg cacaatgcca agaccaagcc cagggaggag	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagt taaggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gcccctagc	1080
agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tgggtgaaggg cttctacccc	1140
agcgacatcg ccgtggagtg ggagagcaac ggccagcccc agaacaacta caagaccacc	1200
ccccctgtgc tggacagcga tggcagcttc ttctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacaccc agaagagcct gagcctgtcc cctggcaag	1359

<210> 172

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 172

gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc	60
ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct	120
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc	180
aggttcagtg gcagtgggtc tgggacagac ttactctca ccatcagcag cctagagcct	240
gaagattttg cagtttatta ctgtcagcag tccgactcct ggcctcctac ttttggcggg	300
gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360

agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac 420
 ccccgaggagg ccaaggtgca gtggaaggtg gacaatgccc tgcagagcgg caacagccag 480
 gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540
 ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc 600
 ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc 642

<210> 173
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 173
 Gln Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn
 1 5 10

<210> 174
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 174
 Asp Ala Ser Asn Leu Glu Thr
 1 5

<210> 175
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 175
 Gln Gln Ala Asp Ile Phe Pro Leu Thr

1

5

<210> 176
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 176
Ser Tyr Ala Ile Ser
1 5

<210> 177
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 177
Gly Ile Ile Pro Val Phe Gly Ser Ala Tyr Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 178
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 178
Glu Gly Arg Ala Tyr Tyr Gly Ser Glu Ser Tyr Asp Asp Ser Asp Tyr
1 5 10 15

Met Asp Val

<210> 179
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 179
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

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

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

<210> 180
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 180
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

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

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

Gly Gly Ile Ile Pro Val Phe Gly Ser Ala Tyr Tyr Ala Gln Lys Phe
50 55 60

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

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

Ala Gly Glu Gly Arg Ala Tyr Tyr Gly Ser Glu Ser Tyr Asp Asp Ser
100 105 110

Asp Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 181
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 181
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly

50

55

60

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 182

<211> 458

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 182

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

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

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

Gly Gly Ile Ile Pro Val Phe Gly Ser Ala Tyr Tyr Ala Gln Lys Phe
50 55 60

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

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

Ala Gly Glu Gly Arg Ala Tyr Tyr Gly Ser Glu Ser Tyr Asp Asp Ser
100 105 110

Asp Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
115 120 125

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

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

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

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
210 215 220

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

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

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

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

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
290 295 300

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
340 345 350

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

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

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

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

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

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

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
450 455

<210> 183
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 183
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggaaacagg ggtcccatca 180
aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagcag cctgcagcct 240
gaagatattg caacatatta ctgtcagcag gccgatatct tccctctcac ttttggcgga 300
gggaccaagg ttgatgataa a 321

<210> 184
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 184
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60
tcctgcaagg cttctggagg caccttcagc tcgtacgcga tctcgtgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggaggg atcatccccg tctttggctc ggcgtactac 180
gcgcagaagt tccagggcag agtcacgatt accgcggacg aatccacgag cacagcctac 240
atggagctga gcagcctgag atctgaggac acggcgggtgt actactgcgc cggagaaggc 300
cgggcgatatt atgggtcggg gtcgtacgat gactctgact atatggacgt ctggggcaag 360

ggtacaactg tcaccgtctc ctca

384

<210> 185

<211> 1374

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 185

caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc	60
tcctgcaagg cttctggagg caccttcagc tcgtacgcga tctcgtgggt gcgacaggcc	120
cctggacaag ggcttgagt gatgggaggg atcatccccg tctttggctc ggcgtactac	180
gcgcagaagt tccagggcag agtcacgatt accgcggacg aatccacgag cacagcctac	240
atggagctga gcagcctgag atctgaggac acggcggtgt actactgcgc cggagaaggc	300
cgggcgtatt atgggtcggg gtcgtacgat gactctgact atatggacgt ctggggcaag	360
ggtacaactg tcaccgtctc ctacgccagc accaagggcc ccagcgtgtt cccctggcc	420
cccagcagca agagcaccag cggcggcaca gccgccctgg gctgcctggt gaaggactac	480
ttccccgagc ccgtgaccgt gtcctggaac agcggagccc tgaccagcgg cgtgcacacc	540
ttccccgccg tgctgcagag cagcggcctg tacagcctga gcagcgtggt gaccgtgccc	600
agcagcagcc tgggcaccca gacctacatc tgtaacgtga accacaagcc cagcaacacc	660
aaggtggaca agaaggtgga gcccgaagc tgtgacaaga cccacacctg cccccctgc	720
cctgcccccg agctggccgg agccccagc gtgttcctgt tccccccaa gcctaaggac	780
accctgatga tcagcagaac ccccaggtg acctgtgtgg tgggtgatgt gagccacgag	840
gacctgagg tgaagttcaa ctggtacgtg gacggcgtgg aggtgcacaa tgccaagacc	900
aagcccaggg aggagcagta caacagcacc taccgggtgg tgtccgtgct gaccgtgctg	960
caccaggatt ggctgaacgg caaggagtac aagtgtgaagg tgtccaacaa ggccctgcct	1020
gcccctatcg agaaaacat cagcaaggcc aagggccagc ccagagagcc ccaggtgtac	1080
accctgcccc ctagcagaga tgagctgacc aagaaccagg tgtccctgac ctgcctggtg	1140
aagggtttct accccagcga catcgccgtg gagtgggaga gcaacggcca gcccgagaac	1200

aactacaaga ccaccccccc tgtgctggac agcgatggca gcttcttcct gtacagcaag	1260
ctgaccgtgg acaagagcag atggcagcag ggcaacgtgt tcagctgctc cgtgatgcac	1320
gaggccctgc acaatcacta caccagaag agcctgagcc tgtcccctgg caag	1374

<210> 186
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 186	
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc	60
atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca	120
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggaacagg ggtcccatca	180
aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagcag cctgcagcct	240
gaagatattg caacatatta ctgtcagcag gccgatatct tccctctcac ttttggcgga	300
gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaagggtg gacaatgccc tgcagagcgg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 187
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 187
 Gln Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn

1

5

10

<210> 188

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 188

Asp Ala Ser Asn Leu Ala Thr

1

5

<210> 189

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 189

Gln Gln Asp Asp Tyr Leu Pro Ile Thr

1

5

<210> 190

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 190

Asp Phe Ala Ile Ser

1

5

<210> 191

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 191
Gly Ile Ile Pro Ile Tyr Gly Thr Ala Ser Tyr Ala Gln Lys Phe Leu
1 5 10 15

Gly

<210> 192
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 192
Asp Val Gly Val Gln Leu Val Tyr His Gly Ala Phe Asp Ile
1 5 10

<210> 193
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 193
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

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

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

<210> 194

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 194

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

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

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

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

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

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

Ala Arg Asp Val Gly Val Gln Leu Val Tyr His Gly Ala Phe Asp Ile
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 195
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 195
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser

165

170

175

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

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

Phe Asn Arg Gly Glu Cys
 210

<210> 196

<211> 453

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 196

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

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

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

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

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

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

Ala Arg Asp Val Gly Val Gln Leu Val Tyr His Gly Ala Phe Asp Ile
 100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 197

<211> 321

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 197

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60

atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca 120

gggaaagccc ctaagctcct gatctacgat gcatccaatt tggcaacagg ggtcccatca 180

aggttcagtg gaagtggatc tgggacagat ttactttca ccatcagcag cctgcagcct 240

gaagatattg caacatatta ctgtcagcag gacgattacc tccctatcac ttttggcgga 300

gggaccaagg ttgatgataa a 321

<210> 198

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 198

caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60

tcctgcaagg cttctggagg caccttcagc gactttgcca tctcgtgggt gcgacaggcc 120

cctggacaag ggcttgagtg gatgggaggg atcattccca tctatggcac ggcgagctac 180

gcgcagaagt tcctaggcag agtcacgatt accgcggacg aatccacgag cacagcctac 240

atggagctga gcagcctgag atctgaggac acggcggtgt actactgcgc cagagatgtg 300

ggcgtccaac tcgtctatca cggggcggtc gacatctggg gtcagggtac aatggtcacc 360

gtctcctca 369

<210> 199

<211> 1359

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 199

caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60

tcctgcaagg cttctggagg caccttcagc gactttgcca tctcgtgggt gcgacaggcc 120

cctggacaag ggcttgagtg gatgggaggg atcattccca tctatggcac ggcgagctac 180

gcgcagaagt tcctaggcag agtcacgatt accgcggacg aatccacgag cacagcctac 240

atggagctga gcagcctgag atctgaggac acggcggtgt actactgcgc cagagatgtg 300

ggcgtccaac tcgtctatca cggggcggtc gacatctggg gtcagggtac aatggtcacc 360

gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc 420

accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg	480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
accagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc tgaggtgaag	840
ttcaactggg acgtggacgg cgtggaggtg cacaatgcca agaccaagcc cagggaggag	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagtg taagggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gccccctagc	1080
agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tgggtgaaggg cttctacccc	1140
agcgacatcg ccgtggagtg ggagagcaac ggccagcccc agaacaacta caagaccacc	1200
ccccctgtgc tggacagcga tggcagcttc ttcctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacaccc agaagagcct gagcctgtcc cctggcaag	1359

<210> 200

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 200

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc	60
atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca	120
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggcaacagg ggtcccatca	180
aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagcag cctgcagcct	240
gaagatattg caacatatta ctgtcagcag gacgattacc tccctatcac ttttggcggg	300

gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360
agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaaggtg gacaatgccc tgcagagcgg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 201
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 201		
Gln	Ala	Ser
Gln	Asp	Ile
Ser	Asn	Tyr
Leu	Asn	
1	5	10

<210> 202
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 202		
Asp	Ala	Ser
Asn	Leu	Ala
Thr		
1	5	

<210> 203
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 203
Gln Gln Asp Asp Tyr Leu Pro Ile Thr
1 5

<210> 204
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 204
Ser Asp Ala Ile Ser
1 5

<210> 205
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 205
Gly Ile Ile Thr Asn Phe Gly Thr Ala Thr Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 206
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 206
Asp Val Gly Val Gln Leu Val Tyr His Gly Ala Phe Asp Ile
1 5 10

<210> 207
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 207
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

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

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

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

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

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

Ala Arg Asp Val Gly Val Gln Leu Val Tyr His Gly Ala Phe Asp Ile
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 208
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 208

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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

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

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

<210> 209

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 209

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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 210

<211> 453

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 210

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

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

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

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

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

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

Ala Arg Asp Val Gly Val Gln Leu Val Tyr His Gly Ala Phe Asp Ile
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 211
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggcaacagg ggtcccatca 180
aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagcag cctgcagcct 240
gaagatattg caacatatta ctgtcagcag gacgattacc tccctatcac ttttggcgga 300
gggaccaagg ttgagatcaa a 321

<210> 212
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 212
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60
tcctgcaagg cttctggagg caccttcagc tccgacgcga tctcgtgggt gcgacaggcc 120
cctggacaag ggcttgagtg gatgggaggg atcatcacca actttgggac cgccacctac 180
gcgcagaagt tccaggggag agtcacgatt accgcggacg aatccacgag cacagcctac 240
atggagctga gcagcctgag atctgaggac acggcggtgt actactgcgc cagagatgtc 300
ggggtgcaac tgggtctatca cggggcggtc gacatctggg gtcagggtac aatggtcacc 360
gtctcctca 369

<210> 213
<211> 1359
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 213
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60
tcctgcaagg cttctggagg caccttcagc tccgacgcga tctcgtgggt gcgacaggcc 120
cctggacaag ggcttgagt gatgggaggg atcatcacca actttgggac cgccacctac 180
gcgcagaagt tccaggggag agtcacgatt accgcggacg aatccacgag cacagcctac 240
atggagctga gcagcctgag atctgaggac acggcgggtgt actactgcgc cagagatgtc 300
ggggtgcaac tgggtctatca cggggcgttc gacatctggg gtcagggtac aatggtcacc 360
gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc 420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg 480
accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg 540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc 600
acccagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag 660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg 720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc 780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc tgaggtgaag 840
ttcaactggg acgtggacgg cgtggagggtg cacaatgcc aagaccaagcc caggaggag 900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg 960
aacggcaagg agtacaagt taaggtgtcc aacaaggccc tgcctgcccc tatcgagaaa 1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gccccctagc 1080
agagatgagc tgaccaagaa ccagggtgtcc ctgacctgcc tgggtgaaggg cttctacccc 1140
agcgacatcg ccgtggagt ggagagcaac ggccagcccg agaacaacta caagaccacc 1200
ccccctgtgc tggacagcga tggcagcttc ttctgtaca gcaagctgac cgtggacaag 1260

agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat 1320
 cactacaccc agaagagcct gagcctgtcc cctggcaag 1359

<210> 214
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 214
 gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
 atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca 120
 gggaaagccc ctaagctcct gatctacgat gcatccaatt tggcaacagg ggtcccatca 180
 aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagcag cctgcagcct 240
 gaagatattg caacatatta ctgtcagcag gacgattacc tccctatcac ttttggcgga 300
 gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc 360
 agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac 420
 ccccgaggagg ccaaggtgca gtggaagggtg gacaatgccc tgcagagcgg caacagccag 480
 gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540
 ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc 600
 ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc 642

<210> 215
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 215
 Gln Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn
 1 5 10

<210> 216
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 216
Asp Ala Ser Asn Leu Ala Thr
1 5

<210> 217
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 217
Gln Gln Asp Asp Tyr Leu Pro Ile Thr
1 5

<210> 218
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 218
Glu Ser Ala Ile Ser
1 5

<210> 219
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

peptide"

<400> 219

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

Gly

<210> 220

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 220

Asp Val Gly Val Gln Leu Val Tyr His Gly Ala Phe Asp Ile
1 5 10

<210> 221

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 221

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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro

65		70		75		80									
Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Asp	Asp	Tyr	Leu	Pro	Ile
				85					90					95	

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

<210> 222
 <211> 123
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polypeptide"

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

Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Gly	Thr	Phe	Ser	Glu	Ser
			20					25					30		

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

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

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

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

Ala	Arg	Asp	Val	Gly	Val	Gln	Leu	Val	Tyr	His	Gly	Ala	Phe	Asp	Ile
			100					105					110		

Trp	Gly	Gln	Gly	Thr	Met	Val	Thr	Val	Ser	Ser
	115						120			

<210> 223
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 223
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 Gln Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 224
<211> 453
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 224
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Glu Ser
20 25 30

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

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

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

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

Ala Arg Asp Val Gly Val Gln Leu Val Tyr His Gly Ala Phe Asp Ile
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

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

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

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

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

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

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

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

Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

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

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
290 295 300

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

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

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

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

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

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

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

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

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

Leu Ser Pro Gly Lys
450

<210> 225
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 225
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggcaacagg ggtcccatca 180
aggttcagtg gaagtggatc tgggacagat ttactttca ccatcagcag cctgcagcct 240
gaagatattg caacatatta ctgtcagcag gacgattacc tccctatcac ttttggcgga 300
gggaccaagg ttgagatcaa a 321

<210> 226
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 226
caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60
tcctgcaagg cttctggagg caccttcagc gagtccgcga tttcgtgggt gcgacaggcc 120
cctggacaag ggcttgagt gatgggaggg atcatcccga cttttgacac caccaactac 180
gcgcagaagt tccaggggag agtcacgatt accgcggacg aatccacgag cacagcctac 240
atggagctga gcagcctgag atctgaggac acggcggtgt actactgcgc cagagatgtc 300
ggggtgcaac tggtctacca cggcgcgttc gacatctggg gtcagggtac aatggtcacc 360
gtctcctca 369

<210> 227
<211> 1359
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 227
caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctgggtcctc ggtgaaggtc 60
tcctgcaagg cttctggagg caccttcagc gagtccgcga tttcgtgggt gcgacaggcc 120
cctggacaag ggcttgagt gatgggaggg atcatcccga cttttgacac caccaactac 180
gcgcagaagt tccaggggag agtcacgatt accgcggacg aatccacgag cacagcctac 240
atggagctga gcagcctgag atctgaggac acggcggtgt actactgcgc cagagatgtc 300
ggggtgcaac tggtctacca cggcgcgttc gacatctggg gtcagggtac aatggtcacc 360
gtctcctcag ccagcaccaa gggccccagc gtgttcccc tggccccag cagcaagagc 420
accagcggcg gcacagccgc cctgggctgc ctggtgaagg actacttccc cgagcccgtg 480

accgtgtcct ggaacagcgg agccctgacc agcggcgtgc acaccttccc cgccgtgctg	540
cagagcagcg gcctgtacag cctgagcagc gtggtgaccg tgcccagcag cagcctgggc	600
accagacct acatctgtaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag	660
gtggagccca agagctgtga caagaccac acctgcccc cctgccctgc ccccgagctg	720
gccggagccc ccagcgtgtt cctgttcccc cccaagccta aggacaccct gatgatcagc	780
agaacccccg aggtgacctg tgtggtggtg gatgtgagcc acgaggacc ttaggtgaag	840
ttcaactggg acgtggacgg cgtggaggtg cacaatgcca agaccaagcc caggaggag	900
cagtacaaca gcacctaccg ggtggtgtcc gtgctgaccg tgctgcacca ggattggctg	960
aacggcaagg agtacaagt taaggtgtcc aacaaggccc tgcctgcccc tatcgagaaa	1020
accatcagca aggccaaggg ccagcccaga gagccccagg tgtacaccct gcccctagc	1080
agagatgagc tgaccaagaa ccaggtgtcc ctgacctgcc tggatgaagg cttctacccc	1140
agcgacatcg ccgtggagtg ggagagcaac ggccagcccc agaacaacta caagaccacc	1200
ccccctgtgc tggacagcga tggcagcttc ttctgtaca gcaagctgac cgtggacaag	1260
agcagatggc agcagggcaa cgtgttcagc tgctccgtga tgcacgaggc cctgcacaat	1320
cactacaccc agaagagcct gagcctgtcc cctggcaag	1359

<210> 228

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 228

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc	60
atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaaacca	120
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggcaacagg ggtcccatca	180
aggttcagtg gaagtggatc tgggacagat ttactttca ccatcagcag cctgcagcct	240
gaagatattg caacatatta ctgtcagcag gacgattacc tccctatcac ttttggcggg	300
gggaccaagg ttgagatcaa acgtacggtg gccgccccca gcgtgttcat cttccccccc	360

agcgatgagc agctgaagag cggcaccgcc agcgtggtgt gtctgctgaa caacttctac	420
ccccgggagg ccaaggtgca gtggaaggtg gacaatgccc tgcagagcgg caacagccag	480
gagagcgtga ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc	540
ctgagcaagg ccgactacga gaagcacaag gtgtacgcct gtgaggtgac ccaccagggc	600
ctgtccagcc ccgtgaccaa gagcttcaac cggggcgagt gc	642

<210> 229
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 229	
gagatcgtgc tgaccagag ccctgcaacc ctgtccctga gccctggcga aagggccact	60
ctgagctgca gggccagcca gagcgtgagc agctacctcg cctggtacca gcagaagccc	120
ggccaggccc ctaggctgct gatctacgac gccagcaaca gggccaccgg cattcccgca	180
aggttcagcg gcagcggcag cggcaccgac ttcaccctga ccatcagcag cctggagccc	240
gaagacttcg cagtctacta ctgccagcag agcgacagct ggccccccac cttcgggggc	300
ggcaccaagg tggagatcaa gagggctgac gcggcgccca ccgtgagcat cttccccccc	360
agcagcgagc agctgactag cggcggagcc tctgtggtgt gcttcctgaa caacttctac	420
cccaaggaca tcaacgtgaa gtggaagatc gacggcagcg agaggcagaa cggagtcctc	480
aacagctgga ccgaccagga cagcaaggat agcacctaca gcatgagcag caccctgacc	540
ctgaccaagg acgagtacga gaggcacaac agctacacct gcgaagccac ccacaaaacc	600
tccaccagcc ccatcgtgaa gagcttcaat aggaacgagt gc	642

<210> 230
 <211> 214
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 230

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly
115 120 125

Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile
130 135 140

Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu
145 150 155 160

Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
165 170 175

Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr
180 185 190

Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser
195 200 205

Phe Asn Arg Asn Glu Cys
210

<210> 231
<211> 1359
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 231
caggtgcagc tcgtgcagag cggcgccgag gtgaaaaagc ccggcgcctc tgtcaagggtg 60
agctgcaagg ccagcggcta caccttcctg ggctactaca tgagctgggt gaggcaggct 120
cccggacagg gcctggagtg gatgggctgg atcaaccccc tgagcggcga gaccaactac 180
gcccagaagt tccagggcag ggtgaccatg accagggaca ccagcatcag caccgcctac 240
atggaactga gcaggctgag gagcgacgac accgccgtgt attactgcgc cagggaacacc 300
ggcgagctgg acggcatgaa ctggtacttc gacctgtggg gcaggggcac cctggtgaca 360
gtgagcagcg ctaaaaccac cgccccctcc gtgtaccccc tggcgcccgt ctgtggcgac 420
accaccggca gcagcgtgac actgggctgc ctggtgaagg gctacttccc cgagcccgtc 480
accctgacct ggaatagcgg aagcctgtca agcggcgtgc acactttccc cgccgtgctg 540
cagtctgacc tgtacaccct gagcagcagc gtgaccgtga ccagcagcac ctggcccagc 600
cagtctatca cttgcaacgt ggccccacct gccagctcca ccaaggtgga caagaagatc 660
gagcctaggg gaccacccat taaaccctgc cccccctgca agtgccccgc cccaatctg 720
gccggagccc ccagcgtgtt tatcttcccc cccaagatca aggacgtgct gatgatcagc 780
ctgagcccca tcgtgacctg cgtgggtggtg gacgtgagcg aggacgaccc agacgtgcag 840
atcagctgggt ttgtgaacaa cgtggaggtg cacaccgccc agaccagac ccacagggag 900
gattacaaca gcaccctgag ggtgggtgagc gccctgcccc tccagcacca ggactggatg 960
tccggcaagg agttcaagtg caaggtgaac aacaaggacc tgcccccccc catcgagagg 1020
accatcagca agcctaaggg cagcgtgagg gcaccccagg tctacgtgct gcccccccca 1080
gaggaggaaa tgaccaagaa gcaggtgacc ctgacctgca tgggtgaccga cttcatgccc 1140

gaggacatct acgtggagtg gaccaacaac ggcaagaccg agctgaacta caagaacacc	1200
gagcccgtgc tggacagcga cggcagctac ttcattgtata gcaagctgcg ggctcgagaag	1260
aagaactggg tggagaggaa cagctacagc tgcagcgtcg tgcacgaagg cctccacaac	1320
caccacacca ccaagagctt cagcaggacc cccgggaag	1359

<210> 232
 <211> 453
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 232
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

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

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

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

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

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

Pro Ser Val Tyr Pro Leu Ala Pro Val Cys Gly Asp Thr Thr Gly Ser
 130 135 140

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

Thr Leu Thr Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr
180 185 190

Val Thr Ser Ser Thr Trp Pro Ser Gln Ser Ile Thr Cys Asn Val Ala
195 200 205

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

Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu
225 230 235 240

Ala Gly Ala Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val
245 250 255

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

Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val
275 280 285

Glu Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser
290 295 300

Thr Leu Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met
305 310 315 320

Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala
325 330 335

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

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

Val Thr Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr
370 375 380

Val Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr
385 390 395 400

Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu
405 410 415

Arg Val Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser
420 425 430

Val Val His Glu Gly Leu His Asn His His Thr Thr Lys Ser Phe Ser
435 440 445

Arg Thr Pro Gly Lys
450

<210> 233

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 233

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

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

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

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

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

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

Pro Ser Val Tyr Pro Leu Ala Pro Gly Cys Gly Asp Thr Thr Ser Ser
130 135 140

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

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

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

Ser Ser Thr Trp Pro Ser Gln Thr Val Thr Cys Asn Val Ala His Pro
195 200 205

Ala Ser Ser Thr Lys Val Asp Lys Lys Val Glu Arg Arg Asn Gly Gly
210 215 220

Ile Gly His Lys Cys Pro Thr Cys Pro Thr Cys His Lys Cys Pro Val
225 230 235 240

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

Lys Asp Ile Leu Leu Ile Ser Gln Asn Ala Lys Val Thr Cys Val Val
260 265 270

Val Asp Val Ser Glu Glu Glu Pro Asp Val Gln Phe Ser Trp Phe Val

275

280

285

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

Tyr Asn Ser Thr Phe Arg Val Val Ser Ala Leu Pro Ile Gln His Gln
305 310 315 320

Asp Trp Met Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Ala
325 330 335

Leu Pro Ser Pro Ile Glu Lys Thr Ile Ser Lys Pro Lys Gly Leu Val
340 345 350

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

Glu Gln Thr Val Ser Leu Thr Cys Leu Thr Ser Gly Phe Leu Pro Asn
370 375 380

Asp Ile Gly Val Glu Trp Thr Ser Asn Gly His Ile Glu Lys Asn Tyr
385 390 395 400

Lys Asn Thr Glu Pro Val Met Asp Ser Asp Gly Ser Phe Phe Met Tyr
405 410 415

Ser Lys Leu Asn Val Glu Arg Ser Arg Trp Asp Ser Arg Ala Pro Phe
420 425 430

Val Cys Ser Val Val His Glu Gly Leu His Asn His His Val Glu Lys
435 440 445

Ser Ile Ser Arg Pro Pro Gly Lys
450 455

<210> 234

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 234

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asp Ser Trp Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser Ile Phe Pro Pro Ser Thr Glu Gln Leu Ala Thr Gly
115 120 125

Gly Ala Ser Val Val Cys Leu Met Asn Asn Phe Tyr Pro Arg Asp Ile
130 135 140

Ser Val Lys Trp Lys Ile Asp Gly Thr Glu Arg Arg Asp Gly Val Leu
145 150 155 160

Asp Ser Val Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
165 170 175

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

Thr Cys Glu Val Val His Lys Thr Ser Ser Ser Pro Val Val Lys Ser
195 200 205

Phe Asn Arg Asn Glu Cys
210

<210> 235
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 235
gagatcgtgc tgaccagag ccctgcaacc ctgtccctga gccctggcga aagggccact 60
ctgagctgca gggccagcca gagcgtgagc agctacctcg cctggtacca gcagaagccc 120
ggccaggccc ctaggctgct gatctacgac gccagcaaca gggccaccgg cattcccgca 180
aggttcagcg gcagcggcag cggcaccgac ttcaccctga ccatcagcag cctggagccc 240
gaagacttcg cagtctacta ctgccagcag agcgacagct ggccccccac cttcgggggc 300
ggcaccaagg tggagatcaa gagggccgac gcggcgccca ccgtgtccat cttccccccc 360
agcaccgaac agctggccac tggcggagct agcgtggtgt gcctgatgaa caacttctac 420
cccagggaaca tcagcgtgaa gtggaagatc gacggcaccg agaggaggga cggcgtcctg 480
gattctgtga ccgaccagga cagcaaagac agcacctaca gcatgagcag caccctgagc 540
ctgaccaagg ccgactacga gagccacaac ctctacacct gcgaggtggt gcacaagacc 600
agcagcagcc ccgtggtgaa gagcttcaac aggaacgagt gc 642

<210> 236
<211> 1368
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 236
caggtgcagc tcgtgcagag cggcgccgag gtgaaaaagc ccggcgccctc tgtcaaggtg 60
agctgcaagg ccagcggcta caccttctg ggctactaca tgagctgggt gaggcaggct 120

cccgacagg gcctggagt gatgggctgg atcaaccccc tgagcggcga gaccaactac	180
gcccagaagt tccagggcag ggtgaccatg accagggaca ccagcatcag caccgcctac	240
atggaactga gcaggctgag gagcgacgac accgccgtgt attactgcgc cagggaacacc	300
ggcgagctgg acggcatgaa ctggtacttc gacctgtggg gcaggggcac cctggtgaca	360
gtgagcagcg cccagaccac agctcccagc gtgtatcccc tggcgcccgg ctgtggcgat	420
actaccagca gcaccgtcac cctgggctgc ctggtgaaag gctacttccc cgaaccagt	480
accgtgacct ggaatagcgg agctctgtca agcgacgtgc acacctttcc cgccgtgctc	540
cagagcggcc tgtacaccct caccagcagc gtgactagca gcacctggcc ctctcagacc	600
gtgacctgca acgtggccca cccgcctct tccaccaagg tggacaagaa agtggagagg	660
aggaacggcg gaatcggcca caagtgccca acctgcccc cctgccataa atgccccgtg	720
cccgaactgg ccggagcccc cagcgtgttc atcttcccc ccaagcccaa ggacatcctg	780
ctgatcagcc agaacgcaa ggtgacctgc gtggtggtgg acgtcagcga ggaggagccc	840
gacgtgcagt tcagctggtt tgtgaacaac gtggaggtgc acaccgcca gaccagccc	900
agggaggagc agtacaacag caccttccgg gtggtgagcg ccctgcctat ccagcaccag	960
gactggatga gcggcaagga gttcaagtgc aaggtgaaca acaaggccct gccagcccc	1020
atcgagaaga ccattagcaa gcccagggc ctcgtgagga agccccaggt ctacgtgatg	1080
ggaccaccta ccgagcagct gaccgaacag accgtgtccc tgacctgcct gaccagcggc	1140
ttcctgcca acgacatcgg cgtggagtgg accagcaacg gccacatcga gaagaactac	1200
aagaacaccg agcccgtgat ggacagcgac ggcagcttct tcatgtacag caagctgaac	1260
gtggagagga gcaggtggga cagcagagcc cccttcgtgt gcagcgtcgt ccacgagggg	1320
ctgcacaacc accacgtcga gaagagcatc tctaggcccc ccggcaag	1368

<210> 237

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 237

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 Gln Ala Ser Gln Asp Ile Ala Asn Tyr
20 25 30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser Ile Phe Pro Pro Ser Thr Glu Gln Leu Ala Thr Gly
115 120 125

Gly Ala Ser Val Val Cys Leu Met Asn Asn Phe Tyr Pro Arg Asp Ile
130 135 140

Ser Val Lys Trp Lys Ile Asp Gly Thr Glu Arg Arg Asp Gly Val Leu
145 150 155 160

Asp Ser Val Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
165 170 175

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

Thr Cys Glu Val Val His Lys Thr Ser Ser Ser Pro Val Val Lys Ser
195 200 205

Phe Asn Arg Asn Glu Cys

210

<210> 238

<211> 451

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 238

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

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

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

Gly Glu Ile Asp Trp Ser Gly Ala Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

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

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

Arg Gly Gly Ser Lys Glu Leu Ser Phe Asp Ile Trp Gly Gln Gly Thr
100 105 110

Met Val Thr Val Ser Ser Ala Gln Thr Thr Ala Pro Ser Val Tyr Pro
115 120 125

Leu Ala Pro Gly Cys Gly Asp Thr Thr Ser Ser Thr Val Thr Leu Gly
130 135 140

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

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

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

Ser Gln Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys
195 200 205

Val Asp Lys Lys Val Glu Arg Arg Asn Gly Gly Ile Gly His Lys Cys
210 215 220

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

Ala Pro Ser Val Phe Ile Phe Pro Pro Lys Pro Lys Asp Ile Leu Leu
245 250 255

Ile Ser Gln Asn Ala Lys Val Thr Cys Val Val Val Asp Val Ser Glu
260 265 270

Glu Glu Pro Asp Val Gln Phe Ser Trp Phe Val Asn Asn Val Glu Val
275 280 285

His Thr Ala Gln Thr Gln Pro Arg Glu Glu Gln Tyr Asn Ser Thr Phe
290 295 300

Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly
305 310 315 320

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

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

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

Leu Thr Cys Leu Thr Ser Gly Phe Leu Pro Asn Asp Ile Gly Val Glu
370 375 380

Trp Thr Ser Asn Gly His Ile Glu Lys Asn Tyr Lys Asn Thr Glu Pro
385 390 395 400

Val Met Asp Ser Asp Gly Ser Phe Phe Met Tyr Ser Lys Leu Asn Val
405 410 415

Glu Arg Ser Arg Trp Asp Ser Arg Ala Pro Phe Val Cys Ser Val Val
420 425 430

His Glu Gly Leu His Asn His His Val Glu Lys Ser Ile Ser Arg Pro
435 440 445

Pro Gly Lys
450

<210> 239
<211> 1353
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 239
caggtgcagc tgcagcagtg gggcgccgga ctgctgaagc ccagcgagac cctgagcctg 60
acctgcgccg tgtacggcgg gtccttcttc ggcgactact ggagctggat caggcagccc 120
cccggcaaag gcctggagtg gatcggcgag atcgactgga gcggcgccac caactacaac 180
cccagcctca agagcagggt gaccatcagc gtggacacca gcaagaacca gttcagcctg 240
aagctgagca gcgtgaccgc cgccgacacc gccgtgtact attgcgccag gggcggcagc 300
aaggagctga gcttcgacat ctggggccag ggcactatgg tcaccgtgag cagcgcccag 360
accacagctc ccagcgtgta tcccctggcg cccggctgtg gcgatactac cagcagcacc 420
gtcaccttgg gctgcctggg gaaaggctac ttccccgaac cagtgaccgt gacctggaat 480
agcggagctc tgtcaagcga cgtgcacacc tttcccgccg tgctccagag cggcctgtac 540
accctcacca gcagcgtgac tagcagcacc tggccctctc agaccgtgac ctgcaacgtg 600
gcccaccccg cctcttcac caaggtggac aagaaagtgg agaggaggaa cggcgggaatc 660

ggccacaagt gcccaacctg ccccacctgc cataaatgcc ccgtgcccga actggccgga	720
gccccagcg tgttcattctt ccccccaag cccaaggaca tcctgctgat cagccagaac	780
gccaaggtga cctgcgtggt ggtggacgtc agcgaggagg agcccgacgt gcagttcagc	840
tggttttgtga acaacgtgga ggtgcacacc gccagaccc agcccaggga ggagcagtac	900
aacagcacct tccgggtggt gagcgccctg cctatccagc accaggactg gatgagcggc	960
aaggagttca agtgcaaggt gaacaacaag gccctgcccc gccccatcga gaagaccatt	1020
agcaagccca agggcctcgt gaggaagccc caggtctacg tgatgggacc acctaccgag	1080
cagctgaccg aacagaccgt gtccctgacc tgcctgacca gcggcttcct gcccaacgac	1140
atcggcgtgg agtggaccag caacggccac atcgagaaga actacaagaa caccgagccc	1200
gtgatggaca gcgacggcag cttcttcatg tacagcaagc tgaacgtgga gaggagcagg	1260
tgggacagca gagccccctt cgtgtgcagc gtcgtccacg aggggctgca caaccaccac	1320
gtcgagaaga gcatctctag gcccccggc aag	1353

<210> 240

<211> 642

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 240

gacatccaga tgactcagtc cccctctagc ctgagcgcta gcgtgggcga cagggtgacc	60
atcacctgcc aggccagcca ggacatcgcc aactacctga actggtacca gcagaagccc	120
ggcaaggccc ccaaactgct gatctacgac gcctcaaacc tcgagaccgg cgtgcctagc	180
aggtttagcg gcagcggcag cggcaccgac ttcacattca ccatcagcag cctgcagccc	240
gaggatatcg ccacctacta ctgccagcag gccgacaccc tgcccttcac cttcggcgga	300
ggcaccaagg tggagattaa gagggccgac gcggcgcccc ccgtgtccat cttccccccc	360
agcaccgaac agctggccac tggcggagct agcgtggtgt gcctgatgaa caacttctac	420
cccagggaca tcagcgtgaa gtggaagatc gacggcaccg agaggaggga cggcgtcctg	480
gattctgtga ccgaccagga cagcaaagac agcacctaca gcatgagcag caccctgagc	540

ctgaccaagg ccgactacga gagccacaac ctctacacct gcgaggtggt gcacaagacc	600
agcagcagcc ccgtggtgaa gagcttcaac aggaacgagt gc	642