

SEQUENCE LISTING

<110> THE UNIVERSITY OF CHICAGO

<120> SYSTEMS AND METHODS FOR MODULATING RNA

<130> ARCD-P0678WO-1001105787

<140> PCT/US2020/012169

<141> 2020-01-03

<150> 62/929,339

<151> 2019-11-01

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<150> 62/831,342

<151> 2019-04-09

<150> 62/788,571

<151> 2019-01-04

<160> 148

<170> PatentIn version 3.5

<210> 1

<211> 31

<212> RNA

<213> Homo sapiens

<400> 1

ggccagaucu gagccuggga gcucucuggc c

31

<210> 2

<211> 26

<212> RNA

<213> Homo sapiens

<400> 2

ccaaaggcuc uucucagagc caccca

26

<210> 3

<211> 369

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 3

Met Lys Ile Glu Glu Gly Lys Leu Val Ile Trp Ile Asn Gly Asp Lys
1 5 10 15

Gly Tyr Asn Gly Leu Ala Glu Val Gly Lys Lys Phe Glu Lys Asp Thr
20 25 30

Gly Ile Lys Val Thr Val Glu His Pro Asp Lys Leu Glu Glu Lys Phe
35 40 45

Pro Gln Val Ala Ala Thr Gly Asp Gly Pro Asp Ile Ile Phe Trp Ala
50 55 60

His Asp Arg Phe Gly Gly Tyr Ala Gln Ser Gly Leu Leu Ala Glu Ile
65 70 75 80

Thr Pro Asp Lys Ala Phe Gln Asp Lys Leu Tyr Pro Phe Thr Trp Asp
85 90 95

Ala Val Arg Tyr Asn Gly Lys Leu Ile Ala Tyr Pro Ile Ala Val Glu
100 105 110

Ala Leu Ser Leu Ile Tyr Asn Lys Asp Leu Leu Pro Asn Pro Pro Lys
115 120 125

Thr Trp Glu Glu Ile Pro Ala Leu Asp Lys Glu Leu Lys Ala Lys Gly
130 135 140

Lys Ser Ala Leu Met Phe Asn Leu Gln Glu Pro Tyr Phe Thr Trp Pro
145 150 155 160

Leu Ile Ala Ala Asp Gly Gly Tyr Ala Phe Lys Tyr Glu Asn Gly Lys
165 170 175

Tyr Asp Ile Lys Asp Val Gly Val Asp Asn Ala Gly Ala Lys Ala Gly
180 185 190

Leu Thr Phe Leu Val Asp Leu Ile Lys Asn Lys His Met Asn Ala Asp
195 200 205

Thr Asp Tyr Ser Ile Ala Glu Ala Ala Phe Asn Lys Gly Glu Thr Ala
 210 215 220

Met Thr Ile Asn Gly Pro Trp Ala Trp Ser Asn Ile Asp Thr Ser Lys
 225 230 235 240

Val Asn Tyr Gly Val Thr Val Leu Pro Thr Phe Lys Gly Gln Pro Ser
 245 250 255

Lys Pro Phe Val Gly Val Leu Ser Ala Gly Ile Asn Ala Ala Ser Pro
 260 265 270

Asn Lys Glu Leu Ala Lys Glu Phe Leu Glu Asn Tyr Leu Leu Thr Asp
 275 280 285

Glu Gly Leu Glu Ala Val Asn Lys Asp Lys Pro Leu Gly Ala Val Ala
 290 295 300

Leu Lys Ser Tyr Glu Glu Glu Leu Ala Lys Asp Pro Arg Ile Ala Ala
 305 310 315 320

Thr Met Glu Asn Ala Gln Lys Gly Glu Ile Met Pro Asn Ile Pro Gln
 325 330 335

Met Ser Ala Phe Trp Tyr Ala Val Arg Thr Ala Val Ile Asn Ala Ala
 340 345 350

Ser Gly Arg Gln Thr Val Asp Glu Ala Leu Lys Asp Ala Gln Thr Asn
 355 360 365

Ser

<210> 4

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 4

Ile Thr Ser Leu Tyr Lys Lys Ala Gly Ser Glu Thr Val Arg Phe Gln
1 5 10 15

Ser His His His His His His Ser Ser Gly Val Asp Leu Gly Thr Glu
20 25 30

Asn Leu Tyr Phe Gln Ser Asn Ala
35 40

<210> 5

<211> 90

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 5

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu
85 90

<210> 6

<211> 18

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 6

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

Gly Ser

<210> 7

<211> 102

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 7

Met Ala Val Pro Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn
1 5 10 15

Leu Asn Ser Lys Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala
20 25 30

Ile Phe Ser Gln Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln
35 40 45

Arg Thr Pro Arg Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser
50 55 60

Ala Thr Asn Ala Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys
65 70 75 80

Pro Met Arg Ile Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys
85 90 95

Met Lys Gly Thr Phe Val
100

<210> 8

<211> 11

<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 8

Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu
1 5 10

<210> 9

<211> 181

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 9

Met Glu Leu Glu Ile Arg Pro Leu Phe Leu Val Pro Asp Thr Asn Gly
1 5 10 15

Phe Ile Asp His Leu Ala Ser Leu Ala Arg Leu Leu Glu Ser Arg Lys
20 25 30

Tyr Ile Leu Val Val Pro Leu Ile Val Ile Asn Glu Leu Asp Gly Leu
35 40 45

Ala Lys Gly Gln Glu Thr Asp His Arg Ala Gly Gly Tyr Ala Arg Val
50 55 60

Val Gln Glu Lys Ala Arg Lys Ser Ile Glu Phe Leu Glu Gln Arg Phe
65 70 75 80

Glu Ser Arg Asp Ser Cys Leu Arg Ala Leu Thr Ser Arg Gly Asn Glu
85 90 95

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

Asn Asn Asp Asp Leu Ile Leu Ser Cys Cys Leu His Tyr Cys Lys Asp
115 120 125

Lys Ala Lys Asp Phe Met Pro Ala Ser Lys Glu Glu Pro Ile Arg Leu
 130 135 140

Leu Arg Glu Val Val Leu Leu Thr Asp Asp Arg Asn Leu Arg Val Lys
 145 150 155 160

Ala Leu Thr Arg Asn Val Pro Val Arg Asp Ile Pro Ala Phe Leu Thr
 165 170 175

Trp Ala Gln Val Gly
 180

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

<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 10
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 1 5

<210> 11
 <211> 181
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 11
 Met Glu Leu Glu Ile Arg Pro Leu Phe Leu Val Pro Asp Thr Asn Gly
 1 5 10 15

Phe Ile Asp His Leu Ala Ser Leu Ala Arg Leu Leu Glu Ser Arg Lys
 20 25 30

Tyr Ile Leu Val Val Pro Leu Ile Val Ile Asn Glu Leu Asp Gly Leu
 35 40 45

Ala Lys Gly Gln Glu Thr Asp His Arg Ala Gly Gly Tyr Ala Arg Val
50 55 60

Val Gln Glu Lys Ala Arg Lys Ser Ile Glu Phe Leu Glu Gln Arg Phe
65 70 75 80

Glu Ser Arg Asp Ser Cys Leu Arg Ala Leu Thr Ser Arg Gly Asn Glu
85 90 95

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

Asn Asn Ala Asp Leu Ile Leu Ser Cys Cys Leu His Tyr Cys Lys Asp
115 120 125

Lys Ala Lys Asp Phe Met Pro Ala Ser Lys Glu Glu Pro Ile Arg Leu
130 135 140

Leu Arg Glu Val Val Leu Leu Thr Asp Asp Arg Asn Leu Arg Val Lys
145 150 155 160

Ala Leu Thr Arg Asn Val Pro Val Arg Asp Ile Pro Ala Phe Leu Thr
165 170 175

Trp Ala Gln Val Gly
180

<210> 12

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 12

Asp Tyr Lys Asp His Asp Gly Asp Tyr Lys Asp His Asp Ile Asp Tyr
1 5 10 15

Lys Asp Asp Asp Asp Lys
20

<210> 13
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 13
Lys Arg Pro Ala Ala Thr Lys Lys Ala Gly Gln Ala Lys Lys Lys Lys
1 5 10 15

<210> 14
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 14
Asp Tyr Lys Asp Asp Asp Asp Lys
1 5

<210> 15
<211> 364
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 15
Met Ser Ala Thr Ser Val Asp Thr Gln Arg Thr Lys Gly Gln Asp Asn
1 5 10 15

Lys Val Gln Asn Gly Ser Leu His Gln Lys Asp Thr Val His Asp Asn
20 25 30

Asp Phe Glu Pro Tyr Leu Thr Gly Gln Ser Asn Gln Ser Asn Ser Tyr
35 40 45

Pro Ser Met Ser Asp Pro Tyr Leu Ser Ser Tyr Tyr Pro Pro Ser Ile
50 55 60

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

Pro Pro Ile Pro Tyr Leu Thr Thr Tyr Gly Gln Leu Ser Asn Gly Asp
85 90 95

His His Phe Met His Asp Ala Val Phe Gly Gln Pro Gly Gly Leu Gly
100 105 110

Asn Asn Ile Tyr Gln His Arg Phe Asn Phe Phe Pro Glu Asn Pro Ala
115 120 125

Phe Ser Ala Trp Gly Thr Ser Gly Ser Gln Gly Gln Gln Thr Gln Ser
130 135 140

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

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

Ala Pro Gly Met Asn Ser Leu Glu Gln Gly Met Val Gly Leu Lys Ile
180 185 190

Gly Asp Val Ser Ser Ser Ala Val Lys Thr Val Gly Ser Val Val Ser
195 200 205

Ser Val Ala Leu Thr Gly Val Leu Ser Gly Asn Gly Gly Thr Asn Val
210 215 220

Asn Met Pro Val Ser Lys Pro Thr Ser Trp Ala Ala Ile Ala Ser Lys
225 230 235 240

Pro Ala Lys Pro Gln Pro Lys Met Lys Thr Lys Ser Gly Pro Val Met
245 250 255

Gly Gly Gly Leu Pro Pro Pro Pro Ile Lys His Asn Met Asp Ile Gly
260 265 270

Thr Trp Asp Asn Lys Gly Pro Val Pro Lys Ala Pro Val Pro Gln Gln
275 280 285

Ala Pro Ser Pro Gln Ala Ala Pro Gln Pro Gln Gln Val Ala Gln Pro
290 295 300

Leu Pro Ala Gln Pro Pro Ala Leu Ala Gln Pro Gln Tyr Gln Ser Pro
305 310 315 320

Gln Gln Pro Pro Gln Thr Arg Trp Val Ala Pro Arg Asn Arg Asn Ala
325 330 335

Ala Phe Gly Gln Ser Gly Gly Ala Gly Ser Asp Ser Asn Ser Pro Gly
340 345 350

Asn Val Gln Pro Asn Ser Ala Pro Ser Val Glu Ser
355 360

<210> 16

<211> 90

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 16

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

Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly Ile Asp Phe Ser Ala
20 25 30

Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr Gln Ser Ser Gly Tyr
35 40 45

Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu Gly Gly Ala Met Ile
50 55 60

Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu Asn Lys Ala Pro Gly
65 70 75 80

Met Asn Thr Ile Asp Gln Gly Met Ala Ala
85 90

<210> 17

<211> 191

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 17

Met Ser Ala Ser Ser Leu Leu Glu Gln Arg Pro Lys Gly Gln Gly Asn
1 5 10 15

Lys Val Gln Asn Gly Ser Val His Gln Lys Asp Gly Leu Asn Asp Asp
20 25 30

Asp Phe Glu Pro Tyr Leu Ser Pro Gln Ala Arg Pro Asn Asn Ala Tyr
35 40 45

Thr Ala Met Ser Asp Ser Tyr Leu Pro Ser Tyr Tyr Ser Pro Ser Ile
50 55 60

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

Thr Ala Met Pro Tyr Leu Thr Ser Tyr Gly Gln Leu Ser Asn Gly Glu
85 90 95

Pro His Phe Leu Pro Asp Ala Met Phe Gly Gln Pro Gly Ala Leu Gly
100 105 110

Ser Thr Pro Phe Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly
115 120 125

Ile Asp Phe Ser Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr
130 135 140

Gln Ser Ser Gly Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu

145 150 155 160

Gly Gly Ala Met Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu
 165 170 175

Asn Lys Ala Pro Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala
 180 185 190

<210> 18
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 18
Ala Asp Phe Glu Thr Asp Glu Ser Val Leu Met Arg Arg Gln Lys Gln
1 5 10 15

Ile Asn Tyr Gly Lys Asn Thr Ile Ala Tyr Asp Arg Tyr Ile Lys Glu
 20 25 30

Val Pro Arg His Leu Arg Gln Pro Gly Ile His Pro Lys Thr Pro Asn
 35 40 45

Lys Phe Lys Lys Tyr Ser Arg Arg Ser Trp Asp Gln Gln Ile Lys Leu
 50 55 60

Trp Lys Val Ala Leu His Phe Trp Asp
65 70

<210> 19
<211> 76
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 19
Met Arg Val Thr Leu Ser Ser Lys Pro Gln Ala Leu Ala Thr Pro Asn
1 5 10 15

Lys Glu Glu His Gly Lys Arg Lys Lys Lys Gly Lys Gly Leu Gly Lys
20 25 30

Lys Arg Asp Pro Cys Leu Arg Lys Tyr Lys Asp Phe Cys Ile His Gly
35 40 45

Glu Cys Lys Tyr Val Lys Glu Leu Arg Ala Pro Ser Cys Ile Cys His
50 55 60

Pro Gly Tyr His Gly Glu Arg Cys His Gly Leu Ser
65 70 75

<210> 20

<211> 46

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 20

Met Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr Cys Arg Val Arg Gly
1 5 10 15

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

Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg Arg Lys Lys
35 40 45

<210> 21

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 21

Gly Gly Ser Gly Gly Ser Gly Gly Ser
1 5

<210> 22
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 22
Ser Gly Ser Glu Thr Pro Gly Thr Ser Glu Ser Ala Thr Pro Glu Ser
1 5 10 15

<210> 23
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 23
Gly Gly Ser Gly
1

<210> 24
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 24
Glu Glu Glu Glu Lys Lys Lys Gln Gln Glu Glu Glu Ala Glu Arg Leu
1 5 10 15

Arg Arg Ile Gln Glu Glu Met Glu Lys Glu Arg Lys Arg Arg Glu Glu
20 25 30

Asp Glu Gln Arg Arg Arg Lys Glu Glu Glu Glu Arg Arg Met Lys Leu
35 40 45

Glu Met Glu Ala Lys Arg Lys Gln Glu Glu Glu Glu Arg Lys Lys Arg
50 55 60

Glu Asp Asp Glu Lys Arg Lys Lys Lys
65 70

<210> 25
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 25
Gly Ser Gly Gly Ser
1 5

<210> 26
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 26
ggccagatct gaggctggga gctctctggc c 31

<210> 27
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 27
tgacagccca catggcattc cacttatcac tggcatcctt 40

<210> 28
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide

<400> 28
ccaaaggctc ttctcagagc caccca 26

<210> 29
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 29
gtgataagtg gaatgccatg 20

<210> 30
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 30
caggtcgact ctagactcga ggctagcgag ctcgtttaaa 40

<210> 31
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 31
cttggtgctc tccaccttcc gcaccacctc catgccctct 40

<210> 32
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 32
ccgatgcggt gggctcggtc ctgcgcttgc aggtcctggt 40

<210> 33
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 33
gcctccacca gctctctgac tgtaccccca gagacctcat 40

<210> 34
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 34
aagcatcttc aacaccctgt ctggtcttgg ctgaggtttc 40

<210> 35
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 35
cttcgcaccg cagcgcagcg cggctcagct cccggctcgt 40

<210> 36
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 36
ctagactcga ggctagcgag 20

<210> 37
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 37
cgactctaga ctcgaggcta gcgagctcgt 30

<210> 38
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 38
ggccctggcc cttcccctgg agccatgctg ggccctagcc 40

<210> 39
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 39
gccaacccc atttaaccag aaccagctgc accagctcag 40

<210> 40
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
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oligonucleotide

<400> 40

cctcccaagc cctggcctga aggacccatg gcgaatgctg 40

<210> 41

<211> 40

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 41

cgtcccaccc gccgcctcgc ccgtgatgcc accgcagacc 40

<210> 42

<211> 40

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 42

ggaggtggtg gtgtgcatgc ggagggacac agcgctggag 40

<210> 43

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 43

tcacaggcaa aatccagaag ctgaccaagg cagtggccac 40

<210> 44

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 44

catggctgaa gatgaggagg ggtaccgcaa gctcatcgac 40

<210> 45
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 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 45
 ctctggacga gaccagccag atgagcgacc tcccgggtgaa 40

 <210> 46
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 46
 cccaccctgc ccgtggagga gaagaagaag attccagatc 40

 <210> 47
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 47
 aatatggcgt gtcccaggcc cttgcacgtg gcctgcagtc 40

 <210> 48
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 48
 ctcatcacgt acctcatgga gcacaaacgc atcaatgggc 40

<210> 49
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 49
 tggatgaagggt gtcttacaag ggatccccag cagcaagacg 40

 <210> 50
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 50
 accccgccgc ctgctgctga cgggcacacc gctgcagaac 40

 <210> 51
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 51
 cagtggttta acgcaccctt tgccatgacc ggggaaaagg 40

 <210> 52
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 52
 acgactcaag aaggaagtcg aggcccagtt gcccgaaaag 40

<210> 53
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 53
 gtgctgctga ctgatggctc cgagaaggac aagaaggga 40

 <210> 54
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 54
 ggaaccacga aggcggagga ccggggcatg ctgctgaaaa 40

 <210> 55
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 55
 tccagtcggc agacactgtg atcatttttg acagcgactg 40

 <210> 56
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 56
 cgccagcggg cgtcaacccc gacttggagg agccacctct 40

 <210> 57

<211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 57
 gcggaggtgg agcggctgac ctgtgaggag gaggaggaga 40

 <210> 58
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 58
 tgatcaagta caaggacagc agcagtggac gtcagctcag 40

 <210> 59
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 59
 cttcaagaag ataaaggagc gcattcgcaa ccacaagtac 40

 <210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 60
 aggggtcccga gccaaagccgg tcgtgagtga cgatgacagt 40

 <210> 61
 <211> 40

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 61
 tatttatata gcagagaagc tgtaggactg tttgtgactg 40

 <210> 62
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 62
 ggggaacaca cgatacctgt ttttcttttc cgttgctggc 40

 <210> 63
 <211> 70
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 63
 ataggccagt gaattcgagc tcgaatatgg attacttggt agaacagcaa tctacgccgg 60

 aagcataaag 70

 <210> 64
 <211> 173
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 polynucleotide

 <400> 64
 ggccagtga ttcgagctcg gtacccgggg atcctctaga aatatggatt acttggtaga 60

 acagcaatct actcgacctg caggcatgca agcttggcgt aatcatggtc atagctgttt 120

cctgtgttta tccgctcaca attccacaca acatacagac cggaagcata aag 173

<210> 65
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 65
ggccagatct gagcctggga gctctctggc ccagccacca cccacagagc cgccaccaga 60

<210> 66
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 66
ggccagatct gagcctggga gctctctggc cctagattgc tgttctacca agtaatccat 60

<210> 67
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 67
gtctcctctg acttcaacag cg 22

<210> 68
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 68
accaccctgt tgctgtagcc aa 22

<210> 69
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 69
 aacgcaggca aagacaccaa cg 22

<210> 70
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 70
 tctgtcttgg tgctctccac ct 22

<210> 71
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 71
 aggttacaac cgccaagaag c 21

<210> 72
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 72
 atgagaatct cgcgatctt g 21

<210> 73
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 73
 aacgcaggca aagacaccaa cg 22

 <210> 74
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 74
 tctgtcttgg tgctctccac ct 22

 <210> 75
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 75
 gcagcactac ttcttgacca cc 22

 <210> 76
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 76
 tctgctcctg agcattgacg tc 22

<210> 77
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 77
 gaaacctcag ccaagaccag ac 22

 <210> 78
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 78
 ggcaatccca tacaaccctg ag 22

 <210> 79
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 79
 tgaggctgct ttcactatcc gc 22

 <210> 80
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 80
 gaggaaggctc ttggtggcaa tc 22

 <210> 81

<211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 81
 caaagacaag cacatcctcg cc 22

 <210> 82
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 82
 gccacatagt gcgtgttgag ca 22

 <210> 83
 <211> 43
 <212> RNA
 <213> Homo sapiens

 <400> 83
 ggcgucccuc ccgaagcugc gcgcucgguc gaacaggacg acc 43

 <210> 84
 <211> 6
 <212> RNA
 <213> Homo sapiens

 <400> 84
 ucccga 6

 <210> 85
 <211> 22
 <212> RNA
 <213> Homo sapiens

 <400> 85
 ggccgaauc ccgaaugagg cc 22

 <210> 86

<211> 21
 <212> RNA
 <213> Homo sapiens

<400> 86
 ggauGCCUCC cgagUGCAUC c

21

<210> 87
 <211> 446
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 87
 Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
 1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
 20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
 35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
 65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
 85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
 100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
 115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
 130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
 145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
 165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile
 180 185 190

Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr
 195 200 205

Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu Gly
 210 215 220

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly
 225 230 235 240

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

Gly Phe Ile Asp His Leu Ala Ser Leu Ala Arg Leu Leu Glu Ser Arg
 260 265 270

Lys Tyr Ile Leu Val Val Pro Leu Ile Val Ile Asn Glu Leu Asp Gly
 275 280 285

Leu Ala Lys Gly Gln Glu Thr Asp His Arg Ala Gly Gly Tyr Ala Arg
 290 295 300

Val Val Gln Glu Lys Ala Arg Lys Ser Ile Glu Phe Leu Glu Gln Arg
 305 310 315 320

Phe Glu Ser Arg Asp Ser Cys Leu Arg Ala Leu Thr Ser Arg Gly Asn
 325 330 335

Glu Leu Glu Ser Ile Ala Phe Arg Ser Glu Asp Ile Thr Gly Gln Leu
 340 345 350

Gly Asn Asn Ala Asp Leu Ile Leu Ser Cys Cys Leu His Tyr Cys Lys
355 360 365

Asp Lys Ala Lys Asp Phe Met Pro Ala Ser Lys Glu Glu Pro Ile Arg
370 375 380

Leu Leu Arg Glu Val Val Leu Leu Thr Asp Asp Arg Asn Leu Arg Val
385 390 395 400

Lys Ala Leu Thr Arg Asn Val Pro Val Arg Asp Ile Pro Ala Phe Leu
405 410 415

Thr Trp Ala Gln Val Gly Gly Ser Asp Tyr Lys Asp His Asp Gly Asp
420 425 430

Tyr Lys Asp His Asp Ile Asp Tyr Lys Asp Asp Asp Asp Lys
435 440 445

<210> 88

<211> 435

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 88

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile
180 185 190

Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr
195 200 205

Phe Val Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly
210 215 220

Ser Gly Gly Ser Met Glu Leu Glu Ile Arg Pro Leu Phe Leu Val Pro
225 230 235 240

Asp Thr Asn Gly Phe Ile Asp His Leu Ala Ser Leu Ala Arg Leu Leu
245 250 255

Glu Ser Arg Lys Tyr Ile Leu Val Val Pro Leu Ile Val Ile Asn Glu
260 265 270

Leu Asp Gly Leu Ala Lys Gly Gln Glu Thr Asp His Arg Ala Gly Gly
275 280 285

Tyr Ala Arg Val Val Gln Glu Lys Ala Arg Lys Ser Ile Glu Phe Leu
 290 295 300

Glu Gln Arg Phe Glu Ser Arg Asp Ser Cys Leu Arg Ala Leu Thr Ser
 305 310 315 320

Arg Gly Asn Glu Leu Glu Ser Ile Ala Phe Arg Ser Glu Asp Ile Thr
 325 330 335

Gly Gln Leu Gly Asn Asn Asp Asp Leu Ile Leu Ser Cys Cys Leu His
 340 345 350

Tyr Cys Lys Asp Lys Ala Lys Asp Phe Met Pro Ala Ser Lys Glu Glu
 355 360 365

Pro Ile Arg Leu Leu Arg Glu Val Val Leu Leu Thr Asp Asp Arg Asn
 370 375 380

Leu Arg Val Lys Ala Leu Thr Arg Asn Val Pro Val Arg Asp Ile Pro
 385 390 395 400

Ala Phe Leu Thr Trp Ala Gln Val Gly Lys Arg Pro Ala Ala Thr Lys
 405 410 415

Lys Ala Gly Gln Ala Lys Lys Lys Lys Gly Ser Asp Tyr Lys Asp Asp
 420 425 430

Asp Asp Lys
 435

<210> 89

<211> 615

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 89

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
 1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile
180 185 190

Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr
195 200 205

Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu Gly
210 215 220

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly
 225 230 235 240

Ser Met Ser Ala Thr Ser Val Asp Thr Gln Arg Thr Lys Gly Gln Asp
 245 250 255

Asn Lys Val Gln Asn Gly Ser Leu His Gln Lys Asp Thr Val His Asp
 260 265 270

Asn Asp Phe Glu Pro Tyr Leu Thr Gly Gln Ser Asn Gln Ser Asn Ser
 275 280 285

Tyr Pro Ser Met Ser Asp Pro Tyr Leu Ser Ser Tyr Tyr Pro Pro Ser
 290 295 300

Ile Gly Phe Pro Tyr Ser Leu Asn Glu Ala Pro Trp Ser Thr Ala Gly
 305 310 315 320

Asp Pro Pro Ile Pro Tyr Leu Thr Thr Tyr Gly Gln Leu Ser Asn Gly
 325 330 335

Asp His His Phe Met His Asp Ala Val Phe Gly Gln Pro Gly Gly Leu
 340 345 350

Gly Asn Asn Ile Tyr Gln His Arg Phe Asn Phe Phe Pro Glu Asn Pro
 355 360 365

Ala Phe Ser Ala Trp Gly Thr Ser Gly Ser Gln Gly Gln Gln Thr Gln
 370 375 380

Ser Ser Ala Tyr Gly Ser Ser Tyr Thr Tyr Pro Pro Ser Ser Leu Gly
 385 390 395 400

Gly Thr Val Val Asp Gly Gln Pro Gly Phe His Ser Asp Thr Leu Ser
 405 410 415

Lys Ala Pro Gly Met Asn Ser Leu Glu Gln Gly Met Val Gly Leu Lys
 420 425 430

Ile Gly Asp Val Ser Ser Ser Ala Val Lys Thr Val Gly Ser Val Val

435

440

445

Ser Ser Val Ala Leu Thr Gly Val Leu Ser Gly Asn Gly Gly Thr Asn
 450 455 460

Val Asn Met Pro Val Ser Lys Pro Thr Ser Trp Ala Ala Ile Ala Ser
 465 470 475 480

Lys Pro Ala Lys Pro Gln Pro Lys Met Lys Thr Lys Ser Gly Pro Val
 485 490 495

Met Gly Gly Gly Leu Pro Pro Pro Pro Ile Lys His Asn Met Asp Ile
 500 505 510

Gly Thr Trp Asp Asn Lys Gly Pro Val Pro Lys Ala Pro Val Pro Gln
 515 520 525

Gln Ala Pro Ser Pro Gln Ala Ala Pro Gln Pro Gln Gln Val Ala Gln
 530 535 540

Pro Leu Pro Ala Gln Pro Pro Ala Leu Ala Gln Pro Gln Tyr Gln Ser
 545 550 555 560

Pro Gln Gln Pro Pro Gln Thr Arg Trp Val Ala Pro Arg Asn Arg Asn
 565 570 575

Ala Ala Phe Gly Gln Ser Gly Gly Ala Gly Ser Asp Ser Asn Ser Pro
 580 585 590

Gly Asn Val Gln Pro Asn Ser Ala Pro Ser Val Glu Ser Gly Ser Asp
 595 600 605

Tyr Lys Asp Asp Asp Asp Lys
 610 615

<210> 90

<211> 341

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 90

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile
180 185 190

Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr

195

200

205

Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu Gly
 210 215 220

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly
 225 230 235 240

Ser Asp Ala Met Phe Gly Gln Pro Gly Ala Leu Gly Ser Thr Pro Phe
 245 250 255

Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly Ile Asp Phe Ser
 260 265 270

Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr Gln Ser Ser Gly
 275 280 285

Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu Gly Gly Ala Met
 290 295 300

Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu Asn Lys Ala Pro
 305 310 315 320

Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala Gly Ser Asp Tyr Lys
 325 330 335

Asp Asp Asp Asp Lys
 340

<210> 91

<211> 442

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 91

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
 1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile
180 185 190

Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr
195 200 205

Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu Gly
210 215 220

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly

225		230		235		240
Ser Met Ser Ala	Ser Ser Leu Leu Glu Gln Arg Pro Lys Gly Gln Gly					
	245			250		255
Asn Lys Val Gln Asn Gly Ser Val His Gln Lys Asp Gly Leu Asn Asp						
	260		265			270
Asp Asp Phe Glu Pro Tyr Leu Ser Pro Gln Ala Arg Pro Asn Asn Ala						
	275		280			285
Tyr Thr Ala Met Ser Asp Ser Tyr Leu Pro Ser Tyr Tyr Ser Pro Ser						
	290		295			300
Ile Gly Phe Ser Tyr Ser Leu Gly Glu Ala Ala Trp Ser Thr Gly Gly						
305		310		315		320
Asp Thr Ala Met Pro Tyr Leu Thr Ser Tyr Gly Gln Leu Ser Asn Gly						
	325		330			335
Glu Pro His Phe Leu Pro Asp Ala Met Phe Gly Gln Pro Gly Ala Leu						
	340		345			350
Gly Ser Thr Pro Phe Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser						
	355		360			365
Gly Ile Asp Phe Ser Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser						
370		375		380		
Thr Gln Ser Ser Gly Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser						
385		390		395		400
Leu Gly Gly Ala Met Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr						
	405		410			415
Leu Asn Lys Ala Pro Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala						
	420		425			430
Gly Ser Asp Tyr Lys Asp Asp Asp Asp Lys						
	435		440			

<210> 92

<211> 310

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 92

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Ala Asp Phe Glu
100 105 110

Thr Asp Glu Ser Val Leu Met Arg Arg Gln Lys Gln Ile Asn Tyr Gly
115 120 125

Lys Asn Thr Ile Ala Tyr Asp Arg Tyr Ile Lys Glu Val Pro Arg His
130 135 140

Leu Arg Gln Pro Gly Ile His Pro Lys Thr Pro Asn Lys Phe Lys Lys
145 150 155 160

Tyr Ser Arg Arg Ser Trp Asp Gln Gln Ile Lys Leu Trp Lys Val Ala

165

170

175

Leu His Phe Trp Asp Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu
 180 185 190

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
 195 200 205

Gly Ser Asp Ala Met Phe Gly Gln Pro Gly Ala Leu Gly Ser Thr Pro
 210 215 220

Phe Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly Ile Asp Phe
 225 230 235 240

Ser Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr Gln Ser Ser
 245 250 255

Gly Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu Gly Gly Ala
 260 265 270

Met Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu Asn Lys Ala
 275 280 285

Pro Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala Gly Ser Asp Tyr
 290 295 300

Lys Asp Asp Asp Asp Lys
 305 310

<210> 93

<211> 411

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 93

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
 1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Ala Asp Phe Glu
100 105 110

Thr Asp Glu Ser Val Leu Met Arg Arg Gln Lys Gln Ile Asn Tyr Gly
115 120 125

Lys Asn Thr Ile Ala Tyr Asp Arg Tyr Ile Lys Glu Val Pro Arg His
130 135 140

Leu Arg Gln Pro Gly Ile His Pro Lys Thr Pro Asn Lys Phe Lys Lys
145 150 155 160

Tyr Ser Arg Arg Ser Trp Asp Gln Gln Ile Lys Leu Trp Lys Val Ala
165 170 175

Leu His Phe Trp Asp Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu
180 185 190

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
195 200 205

Gly Ser Met Ser Ala Ser Ser Leu Leu Glu Gln Arg Pro Lys Gly Gln
210 215 220

Gly Asn Lys Val Gln Asn Gly Ser Val His Gln Lys Asp Gly Leu Asn

225		230		235		240									
Asp	Asp	Asp	Phe	Glu	Pro	Tyr	Leu	Ser	Pro	Gln	Ala	Arg	Pro	Asn	Asn
			245						250					255	
Ala	Tyr	Thr	Ala	Met	Ser	Asp	Ser	Tyr	Leu	Pro	Ser	Tyr	Tyr	Ser	Pro
			260					265					270		
Ser	Ile	Gly	Phe	Ser	Tyr	Ser	Leu	Gly	Glu	Ala	Ala	Trp	Ser	Thr	Gly
		275					280					285			
Gly	Asp	Thr	Ala	Met	Pro	Tyr	Leu	Thr	Ser	Tyr	Gly	Gln	Leu	Ser	Asn
	290					295					300				
Gly	Glu	Pro	His	Phe	Leu	Pro	Asp	Ala	Met	Phe	Gly	Gln	Pro	Gly	Ala
305					310					315					320
Leu	Gly	Ser	Thr	Pro	Phe	Leu	Gly	Gln	His	Gly	Phe	Asn	Phe	Phe	Pro
				325					330					335	
Ser	Gly	Ile	Asp	Phe	Ser	Ala	Trp	Gly	Asn	Asn	Ser	Ser	Gln	Gly	Gln
			340					345					350		
Ser	Thr	Gln	Ser	Ser	Gly	Tyr	Ser	Ser	Asn	Tyr	Ala	Tyr	Ala	Pro	Ser
		355					360					365			
Ser	Leu	Gly	Gly	Ala	Met	Ile	Asp	Gly	Gln	Ser	Ala	Phe	Ala	Asn	Glu
	370					375					380				
Thr	Leu	Asn	Lys	Ala	Pro	Gly	Met	Asn	Thr	Ile	Asp	Gln	Gly	Met	Ala
385					390					395					400
Ala	Gly	Ser	Asp	Tyr	Lys	Asp	Asp	Asp	Asp	Lys					
			405						410						

<210> 94
 <211> 327
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 94

Met Arg Val Thr Leu Ser Ser Lys Pro Gln Ala Leu Ala Thr Pro Asn
1 5 10 15

Lys Glu Glu His Gly Lys Arg Lys Lys Lys Gly Lys Gly Leu Gly Lys
20 25 30

Lys Arg Asp Pro Cys Leu Arg Lys Tyr Lys Asp Phe Cys Ile His Gly
35 40 45

Glu Cys Lys Tyr Val Lys Glu Leu Arg Ala Pro Ser Cys Ile Cys His
50 55 60

Pro Gly Tyr His Gly Glu Arg Cys His Gly Leu Ser Gly Gly Ser Gly
65 70 75 80

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala
85 90 95

Val Pro Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn
100 105 110

Ser Lys Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe
115 120 125

Ser Gln Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr
130 135 140

Pro Arg Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr
145 150 155 160

Asn Ala Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met
165 170 175

Arg Ile Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys
180 185 190

Gly Thr Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr

195

200

205

Leu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
 210 215 220

Gly Gly Ser Asp Ala Met Phe Gly Gln Pro Gly Ala Leu Gly Ser Thr
 225 230 235 240

Pro Phe Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly Ile Asp
 245 250 255

Phe Ser Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr Gln Ser
 260 265 270

Ser Gly Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu Gly Gly
 275 280 285

Ala Met Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu Asn Lys
 290 295 300

Ala Pro Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala Gly Ser Asp
 305 310 315 320

Tyr Lys Asp Asp Asp Asp Lys
 325

<210> 95

<211> 428

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 95

Met Arg Val Thr Leu Ser Ser Lys Pro Gln Ala Leu Ala Thr Pro Asn
 1 5 10 15

Lys Glu Glu His Gly Lys Arg Lys Lys Lys Gly Lys Gly Leu Gly Lys
 20 25 30

Lys Arg Asp Pro Cys Leu Arg Lys Tyr Lys Asp Phe Cys Ile His Gly
35 40 45

Glu Cys Lys Tyr Val Lys Glu Leu Arg Ala Pro Ser Cys Ile Cys His
50 55 60

Pro Gly Tyr His Gly Glu Arg Cys His Gly Leu Ser Gly Gly Ser Gly
65 70 75 80

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala
85 90 95

Val Pro Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn
100 105 110

Ser Lys Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe
115 120 125

Ser Gln Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr
130 135 140

Pro Arg Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr
145 150 155 160

Asn Ala Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met
165 170 175

Arg Ile Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys
180 185 190

Gly Thr Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr
195 200 205

Leu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
210 215 220

Gly Gly Ser Met Ser Ala Ser Ser Leu Leu Glu Gln Arg Pro Lys Gly
225 230 235 240

Gln Gly Asn Lys Val Gln Asn Gly Ser Val His Gln Lys Asp Gly Leu

245

250

255

Asn Asp Asp Asp Phe Glu Pro Tyr Leu Ser Pro Gln Ala Arg Pro Asn
 260 265 270

Asn Ala Tyr Thr Ala Met Ser Asp Ser Tyr Leu Pro Ser Tyr Tyr Ser
 275 280 285

Pro Ser Ile Gly Phe Ser Tyr Ser Leu Gly Glu Ala Ala Trp Ser Thr
 290 295 300

Gly Gly Asp Thr Ala Met Pro Tyr Leu Thr Ser Tyr Gly Gln Leu Ser
 305 310 315 320

Asn Gly Glu Pro His Phe Leu Pro Asp Ala Met Phe Gly Gln Pro Gly
 325 330 335

Ala Leu Gly Ser Thr Pro Phe Leu Gly Gln His Gly Phe Asn Phe Phe
 340 345 350

Pro Ser Gly Ile Asp Phe Ser Ala Trp Gly Asn Asn Ser Ser Gln Gly
 355 360 365

Gln Ser Thr Gln Ser Ser Gly Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro
 370 375 380

Ser Ser Leu Gly Gly Ala Met Ile Asp Gly Gln Ser Ala Phe Ala Asn
 385 390 395 400

Glu Thr Leu Asn Lys Ala Pro Gly Met Asn Thr Ile Asp Gln Gly Met
 405 410 415

Ala Ala Gly Ser Asp Tyr Lys Asp Asp Asp Asp Lys
 420 425

<210> 96

<211> 297

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 96

Met Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr Cys Arg Val Arg Gly
1 5 10 15

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

Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg Arg Lys Lys Gly Gly
35 40 45

Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
50 55 60

Met Ala Val Pro Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn
65 70 75 80

Leu Asn Ser Lys Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala
85 90 95

Ile Phe Ser Gln Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln
100 105 110

Arg Thr Pro Arg Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser
115 120 125

Ala Thr Asn Ala Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys
130 135 140

Pro Met Arg Ile Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys
145 150 155 160

Met Lys Gly Thr Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg
165 170 175

Leu Thr Leu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
180 185 190

Gly Ser Gly Gly Ser Asp Ala Met Phe Gly Gln Pro Gly Ala Leu Gly

195

200

205

Ser Thr Pro Phe Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly
 210 215 220

Ile Asp Phe Ser Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr
 225 230 235 240

Gln Ser Ser Gly Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu
 245 250 255

Gly Gly Ala Met Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu
 260 265 270

Asn Lys Ala Pro Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala Gly
 275 280 285

Ser Asp Tyr Lys Asp Asp Asp Asp Lys
 290 295

<210> 97

<211> 398

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 97

Met Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr Cys Arg Val Arg Gly
 1 5 10 15

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

Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg Arg Lys Lys Gly Gly
 35 40 45

Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
 50 55 60

Met Ala Val Pro Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn
65 70 75 80

Leu Asn Ser Lys Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala
85 90 95

Ile Phe Ser Gln Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln
100 105 110

Arg Thr Pro Arg Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser
115 120 125

Ala Thr Asn Ala Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys
130 135 140

Pro Met Arg Ile Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys
145 150 155 160

Met Lys Gly Thr Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg
165 170 175

Leu Thr Leu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
180 185 190

Gly Ser Gly Gly Ser Met Ser Ala Ser Ser Leu Leu Glu Gln Arg Pro
195 200 205

Lys Gly Gln Gly Asn Lys Val Gln Asn Gly Ser Val His Gln Lys Asp
210 215 220

Gly Leu Asn Asp Asp Asp Phe Glu Pro Tyr Leu Ser Pro Gln Ala Arg
225 230 235 240

Pro Asn Asn Ala Tyr Thr Ala Met Ser Asp Ser Tyr Leu Pro Ser Tyr
245 250 255

Tyr Ser Pro Ser Ile Gly Phe Ser Tyr Ser Leu Gly Glu Ala Ala Trp
260 265 270

Ser Thr Gly Gly Asp Thr Ala Met Pro Tyr Leu Thr Ser Tyr Gly Gln

275

280

285

Leu Ser Asn Gly Glu Pro His Phe Leu Pro Asp Ala Met Phe Gly Gln
 290 295 300

Pro Gly Ala Leu Gly Ser Thr Pro Phe Leu Gly Gln His Gly Phe Asn
 305 310 315 320

Phe Phe Pro Ser Gly Ile Asp Phe Ser Ala Trp Gly Asn Asn Ser Ser
 325 330 335

Gln Gly Gln Ser Thr Gln Ser Ser Gly Tyr Ser Ser Asn Tyr Ala Tyr
 340 345 350

Ala Pro Ser Ser Leu Gly Gly Ala Met Ile Asp Gly Gln Ser Ala Phe
 355 360 365

Ala Asn Glu Thr Leu Asn Lys Ala Pro Gly Met Asn Thr Ile Asp Gln
 370 375 380

Gly Met Ala Ala Gly Ser Asp Tyr Lys Asp Asp Asp Asp Lys
 385 390 395

<210> 98

<211> 367

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 98

Met Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr Cys Arg Val Arg Gly
 1 5 10 15

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

Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg Arg Lys Lys Gly Gly
 35 40 45

Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
50 55 60

Ala Asp Phe Glu Thr Asp Glu Ser Val Leu Met Arg Arg Gln Lys Gln
65 70 75 80

Ile Asn Tyr Gly Lys Asn Thr Ile Ala Tyr Asp Arg Tyr Ile Lys Glu
85 90 95

Val Pro Arg His Leu Arg Gln Pro Gly Ile His Pro Lys Thr Pro Asn
100 105 110

Lys Phe Lys Lys Tyr Ser Arg Arg Ser Trp Asp Gln Gln Ile Lys Leu
115 120 125

Trp Lys Val Ala Leu His Phe Trp Asp Leu Gln Leu Pro Pro Leu Glu
130 135 140

Arg Leu Thr Leu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
145 150 155 160

Gly Gly Ser Gly Gly Ser Met Ser Ala Ser Ser Leu Leu Glu Gln Arg
165 170 175

Pro Lys Gly Gln Gly Asn Lys Val Gln Asn Gly Ser Val His Gln Lys
180 185 190

Asp Gly Leu Asn Asp Asp Asp Phe Glu Pro Tyr Leu Ser Pro Gln Ala
195 200 205

Arg Pro Asn Asn Ala Tyr Thr Ala Met Ser Asp Ser Tyr Leu Pro Ser
210 215 220

Tyr Tyr Ser Pro Ser Ile Gly Phe Ser Tyr Ser Leu Gly Glu Ala Ala
225 230 235 240

Trp Ser Thr Gly Gly Asp Thr Ala Met Pro Tyr Leu Thr Ser Tyr Gly
245 250 255

Gln Leu Ser Asn Gly Glu Pro His Phe Leu Pro Asp Ala Met Phe Gly

260

265

270

Gln Pro Gly Ala Leu Gly Ser Thr Pro Phe Leu Gly Gln His Gly Phe
 275 280 285

Asn Phe Phe Pro Ser Gly Ile Asp Phe Ser Ala Trp Gly Asn Asn Ser
 290 295 300

Ser Gln Gly Gln Ser Thr Gln Ser Ser Gly Tyr Ser Ser Asn Tyr Ala
 305 310 315 320

Tyr Ala Pro Ser Ser Leu Gly Gly Ala Met Ile Asp Gly Gln Ser Ala
 325 330 335

Phe Ala Asn Glu Thr Leu Asn Lys Ala Pro Gly Met Asn Thr Ile Asp
 340 345 350

Gln Gly Met Ala Ala Gly Ser Asp Tyr Lys Asp Asp Asp Asp Lys
 355 360 365

<210> 99

<211> 324

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 99

Met Ala Val Pro Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn
 1 5 10 15

Leu Asn Ser Lys Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala
 20 25 30

Ile Phe Ser Gln Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln
 35 40 45

Arg Thr Pro Arg Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser
 50 55 60

Ala Thr Asn Ala Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys
65 70 75 80

Pro Met Arg Ile Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys
85 90 95

Met Lys Gly Thr Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg
100 105 110

Leu Thr Leu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
115 120 125

Gly Ser Gly Gly Ser Met Glu Leu Glu Ile Arg Pro Leu Phe Leu Val
130 135 140

Pro Asp Thr Asn Gly Phe Ile Asp His Leu Ala Ser Leu Ala Arg Leu
145 150 155 160

Leu Glu Ser Arg Lys Tyr Ile Leu Val Val Pro Leu Ile Val Ile Asn
165 170 175

Glu Leu Asp Gly Leu Ala Lys Gly Gln Glu Thr Asp His Arg Ala Gly
180 185 190

Gly Tyr Ala Arg Val Val Gln Glu Lys Ala Arg Lys Ser Ile Glu Phe
195 200 205

Leu Glu Gln Arg Phe Glu Ser Arg Asp Ser Cys Leu Arg Ala Leu Thr
210 215 220

Ser Arg Gly Asn Glu Leu Glu Ser Ile Ala Phe Arg Ser Glu Asp Ile
225 230 235 240

Thr Gly Gln Leu Gly Asn Asn Asp Asp Leu Ile Leu Ser Cys Cys Leu
245 250 255

His Tyr Cys Lys Asp Lys Ala Lys Asp Phe Met Pro Ala Ser Lys Glu
260 265 270

Glu Pro Ile Arg Leu Leu Arg Glu Val Val Leu Leu Thr Asp Asp Arg

275

280

285

Asn Leu Arg Val Lys Ala Leu Thr Arg Asn Val Pro Val Arg Asp Ile
 290 295 300

Pro Ala Phe Leu Thr Trp Ala Gln Val Gly Gly Ser Asp Tyr Lys Asp
 305 310 315 320

Asp Asp Asp Lys

<210> 100

<211> 432

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 100

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
 1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
 20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
 35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
 65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
 85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
 100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile
180 185 190

Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr
195 200 205

Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu Gly
210 215 220

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly
225 230 235 240

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

Gly Phe Ile Asp His Leu Ala Ser Leu Ala Arg Leu Leu Glu Ser Arg
260 265 270

Lys Tyr Ile Leu Val Val Pro Leu Ile Val Ile Asn Glu Leu Asp Gly
275 280 285

Leu Ala Lys Gly Gln Glu Thr Asp His Arg Ala Gly Gly Tyr Ala Arg
290 295 300

Val Val Gln Glu Lys Ala Arg Lys Ser Ile Glu Phe Leu Glu Gln Arg
305 310 315 320

Phe Glu Ser Arg Asp Ser Cys Leu Arg Ala Leu Thr Ser Arg Gly Asn

325

330

335

Glu Leu Glu Ser Ile Ala Phe Arg Ser Glu Asp Ile Thr Gly Gln Leu
 340 345 350

Gly Asn Asn Asp Asp Leu Ile Leu Ser Cys Cys Leu His Tyr Cys Lys
 355 360 365

Asp Lys Ala Lys Asp Phe Met Pro Ala Ser Lys Glu Glu Pro Ile Arg
 370 375 380

Leu Leu Arg Glu Val Val Leu Leu Thr Asp Asp Arg Asn Leu Arg Val
 385 390 395 400

Lys Ala Leu Thr Arg Asn Val Pro Val Arg Asp Ile Pro Ala Phe Leu
 405 410 415

Thr Trp Ala Gln Val Gly Gly Ser Asp Tyr Lys Asp Asp Asp Asp Lys
 420 425 430

<210> 101

<211> 423

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 101

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
 1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
 20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
 35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile
180 185 190

Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr
195 200 205

Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu Gly
210 215 220

Gly Ser Gly Gly Ser Gly Gly Ser Met Glu Leu Glu Ile Arg Pro Leu
225 230 235 240

Phe Leu Val Pro Asp Thr Asn Gly Phe Ile Asp His Leu Ala Ser Leu
245 250 255

Ala Arg Leu Leu Glu Ser Arg Lys Tyr Ile Leu Val Val Pro Leu Ile
260 265 270

Val Ile Asn Glu Leu Asp Gly Leu Ala Lys Gly Gln Glu Thr Asp His

275

280

285

Arg Ala Gly Gly Tyr Ala Arg Val Val Gln Glu Lys Ala Arg Lys Ser
 290 295 300

Ile Glu Phe Leu Glu Gln Arg Phe Glu Ser Arg Asp Ser Cys Leu Arg
 305 310 315 320

Ala Leu Thr Ser Arg Gly Asn Glu Leu Glu Ser Ile Ala Phe Arg Ser
 325 330 335

Glu Asp Ile Thr Gly Gln Leu Gly Asn Asn Asp Asp Leu Ile Leu Ser
 340 345 350

Cys Cys Leu His Tyr Cys Lys Asp Lys Ala Lys Asp Phe Met Pro Ala
 355 360 365

Ser Lys Glu Glu Pro Ile Arg Leu Leu Arg Glu Val Val Leu Leu Thr
 370 375 380

Asp Asp Arg Asn Leu Arg Val Lys Ala Leu Thr Arg Asn Val Pro Val
 385 390 395 400

Arg Asp Ile Pro Ala Phe Leu Thr Trp Ala Gln Val Gly Gly Ser Asp
 405 410 415

Tyr Lys Asp Asp Asp Asp Lys
 420

<210> 102

<211> 430

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 102

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
 1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile
180 185 190

Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr
195 200 205

Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu Ser
210 215 220

Gly Ser Glu Thr Pro Gly Thr Ser Glu Ser Ala Thr Pro Glu Ser Met

225		230		235		240									
Glu	Leu	Glu	Ile	Arg	Pro	Leu	Phe	Leu	Val	Pro	Asp	Thr	Asn	Gly	Phe
				245					250					255	
Ile	Asp	His	Leu	Ala	Ser	Leu	Ala	Arg	Leu	Leu	Glu	Ser	Arg	Lys	Tyr
			260					265					270		
Ile	Leu	Val	Val	Pro	Leu	Ile	Val	Ile	Asn	Glu	Leu	Asp	Gly	Leu	Ala
		275					280					285			
Lys	Gly	Gln	Glu	Thr	Asp	His	Arg	Ala	Gly	Gly	Tyr	Ala	Arg	Val	Val
	290					295					300				
Gln	Glu	Lys	Ala	Arg	Lys	Ser	Ile	Glu	Phe	Leu	Glu	Gln	Arg	Phe	Glu
305					310					315					320
Ser	Arg	Asp	Ser	Cys	Leu	Arg	Ala	Leu	Thr	Ser	Arg	Gly	Asn	Glu	Leu
				325					330					335	
Glu	Ser	Ile	Ala	Phe	Arg	Ser	Glu	Asp	Ile	Thr	Gly	Gln	Leu	Gly	Asn
			340					345					350		
Asn	Asp	Asp	Leu	Ile	Leu	Ser	Cys	Cys	Leu	His	Tyr	Cys	Lys	Asp	Lys
		355					360					365			
Ala	Lys	Asp	Phe	Met	Pro	Ala	Ser	Lys	Glu	Glu	Pro	Ile	Arg	Leu	Leu
	370					375					380				
Arg	Glu	Val	Val	Leu	Leu	Thr	Asp	Asp	Arg	Asn	Leu	Arg	Val	Lys	Ala
385					390					395					400
Leu	Thr	Arg	Asn	Val	Pro	Val	Arg	Asp	Ile	Pro	Ala	Phe	Leu	Thr	Trp
			405						410					415	
Ala	Gln	Val	Gly	Gly	Ser	Asp	Tyr	Lys	Asp	Asp	Asp	Asp	Lys		
			420					425					430		

<210> 103

<211> 496

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 103

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile

180	185	190
Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr		
195	200	205
Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu Gly		
210	215	220
Gly Ser Gly Glu Glu Glu Glu Lys Lys Lys Gln Gln Glu Glu Glu Ala		
225	230	235
Glu Arg Leu Arg Arg Ile Gln Glu Glu Met Glu Lys Glu Arg Lys Arg		
	245	250
Arg Glu Glu Asp Glu Gln Arg Arg Arg Lys Glu Glu Glu Glu Arg Arg		
	260	265
Met Lys Leu Glu Met Glu Ala Lys Arg Lys Gln Glu Glu Glu Glu Arg		
	275	280
Lys Lys Arg Glu Asp Asp Glu Lys Arg Lys Lys Lys Gly Ser Gly Gly		
	295	300
Ser Met Glu Leu Glu Ile Arg Pro Leu Phe Leu Val Pro Asp Thr Asn		
305	310	315
Gly Phe Ile Asp His Leu Ala Ser Leu Ala Arg Leu Leu Glu Ser Arg		
	325	330
Lys Tyr Ile Leu Val Val Pro Leu Ile Val Ile Asn Glu Leu Asp Gly		
	340	345
Leu Ala Lys Gly Gln Glu Thr Asp His Arg Ala Gly Gly Tyr Ala Arg		
	355	360
Val Val Gln Glu Lys Ala Arg Lys Ser Ile Glu Phe Leu Glu Gln Arg		
	370	375
Phe Glu Ser Arg Asp Ser Cys Leu Arg Ala Leu Thr Ser Arg Gly Asn		
385	390	395
		400

Glu Leu Glu Ser Ile Ala Phe Arg Ser Glu Asp Ile Thr Gly Gln Leu
405 410 415

Gly Asn Asn Asp Asp Leu Ile Leu Ser Cys Cys Leu His Tyr Cys Lys
420 425 430

Asp Lys Ala Lys Asp Phe Met Pro Ala Ser Lys Glu Glu Pro Ile Arg
435 440 445

Leu Leu Arg Glu Val Val Leu Leu Thr Asp Asp Arg Asn Leu Arg Val
450 455 460

Lys Ala Leu Thr Arg Asn Val Pro Val Arg Asp Ile Pro Ala Phe Leu
465 470 475 480

Thr Trp Ala Gln Val Gly Gly Ser Asp Tyr Lys Asp Asp Asp Asp Lys
485 490 495

<210> 104

<211> 339

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 104

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile

65

70

75

80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro
100 105 110

Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn Leu Asn Ser Lys
115 120 125

Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala Ile Phe Ser Gln
130 135 140

Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln Arg Thr Pro Arg
145 150 155 160

Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser Ala Thr Asn Ala
165 170 175

Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys Pro Met Arg Ile
180 185 190

Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys Met Lys Gly Thr
195 200 205

Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu Ser
210 215 220

Gly Ser Glu Thr Pro Gly Thr Ser Glu Ser Ala Thr Pro Glu Ser Asp
225 230 235 240

Ala Met Phe Gly Gln Pro Gly Ala Leu Gly Ser Thr Pro Phe Leu Gly
245 250 255

Gln His Gly Phe Asn Phe Phe Pro Ser Gly Ile Asp Phe Ser Ala Trp
260 265 270

Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr Gln Ser Ser Gly Tyr Ser
275 280 285

Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu Gly Gly Ala Met Ile Asp
290 295 300

Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu Asn Lys Ala Pro Gly Met
305 310 315 320

Asn Thr Ile Asp Gln Gly Met Ala Ala Gly Ser Asp Tyr Lys Asp Asp
325 330 335

Asp Asp Lys

<210> 105

<211> 405

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 105

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Val Pro

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

Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly Ile Asp Phe Ser
325 330 335

Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr Gln Ser Ser Gly
340 345 350

Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu Gly Gly Ala Met
355 360 365

Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu Asn Lys Ala Pro
370 375 380

Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala Gly Ser Asp Tyr Lys
385 390 395 400

Asp Asp Asp Asp Lys
405

<210> 106

<211> 431

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 106

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile

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

Leu Ala Lys Gly Gln Glu Thr Asp His Arg Ala Gly Gly Tyr Ala Arg
 290 295 300

Val Val Gln Glu Lys Ala Arg Lys Ser Ile Glu Phe Leu Glu Gln Arg
 305 310 315 320

Phe Glu Ser Arg Asp Ser Cys Leu Arg Ala Leu Thr Ser Arg Gly Asn
 325 330 335

Glu Leu Glu Ser Ile Ala Phe Arg Ser Glu Asp Ile Thr Gly Gln Leu
 340 345 350

Gly Asn Asn Asp Asp Leu Ile Leu Ser Cys Cys Leu His Tyr Cys Lys
 355 360 365

Asp Lys Ala Lys Asp Phe Met Pro Ala Ser Lys Glu Glu Pro Ile Arg
 370 375 380

Leu Leu Arg Glu Val Val Leu Leu Thr Asp Asp Arg Asn Leu Arg Val
 385 390 395 400

Lys Ala Leu Thr Arg Asn Val Pro Val Arg Asp Ile Pro Ala Phe Leu
 405 410 415

Thr Trp Ala Gln Val Gly Ser Ser Gly His His His His His His
 420 425 430

<210> 107

<211> 21

<212> RNA

<213> Unknown

<220>

<223> Description of Unknown:
 RNA hairpin binding domain

<400> 107

aaacaugagg auuacccaug u

21

<210> 108

<211> 21

<212> RNA
 <213> Unknown

 <220>
 <223> Description of Unknown:
 RNA hairpin binding domain

 <400> 108
 aaacaugagg aucacccaug u 21

 <210> 109
 <211> 15
 <212> RNA
 <213> Unknown

 <220>
 <223> Description of Unknown:
 RNA hairpin binding domain

 <400> 109
 gcccugaaga agggc 15

 <210> 110
 <211> 15
 <212> RNA
 <213> Unknown

 <220>
 <223> Description of Unknown:
 RNA hairpin binding domain

 <400> 110
 gcccugaaaa agggc 15

 <210> 111
 <211> 25
 <212> RNA
 <213> Pseudomonas aeruginosa

 <400> 111
 uaaggaguuu auauggaaac ccuua 25

 <210> 112
 <211> 28
 <212> RNA
 <213> Bovine immunodeficiency virus

 <400> 112
 ggucugugua gcucauuagc uccgagcc 28

<210> 113
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <220>
 <223> Description of Combined DNA/RNA Molecule: Synthetic
 oligonucleotide

 <400> 113
 ggaauccauu gcacuccgga uuucactag 29

 <210> 114
 <211> 20
 <212> RNA
 <213> Unknown

 <220>
 <223> Description of Unknown:
 RNA hairpin binding domain

 <400> 114
 augcaugucu aagacagcau 20

 <210> 115
 <211> 23
 <212> RNA
 <213> Unknown

 <220>
 <223> Description of Unknown:
 RNA hairpin binding domain

 <400> 115
 aaaacauaag gaaaaccuau guu 23

 <210> 116
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 116
cttgtggtag ttggagctga 20

<210> 117
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 117
agttggagct gatggcgtag 20

<210> 118
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 118
gttggagctg atggcgtagg 20

<210> 119
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 119
tggcgtaggc aagagtcct 20

<210> 120
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 120
ggcgtaggca agagtgcctt 20

<210> 121
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 121
taaggagttt atatggaaac cctta 25

<210> 122
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 122
gtgataagtg gaatgccatg 20

<210> 123
<211> 403
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 123
Leu His Leu Asp Gln Thr Pro Ser Arg Gln Pro Ile Pro Ser Glu Gly
1 5 10 15

Leu Gln Leu His Leu Pro Gln Val Leu Ala Asp Ala Val Ser Arg Leu
20 25 30

Val Leu Gly Lys Phe Gly Asp Leu Thr Asp Asn Phe Ser Ser Pro His
35 40 45

Ala Arg Arg Lys Val Leu Ala Gly Val Val Met Thr Thr Gly Thr Asp

50

55

60

Val Lys Asp Ala Lys Val Ile Ser Val Ser Thr Gly Thr Lys Cys Ile
65 70 75 80

Asn Gly Glu Tyr Met Ser Asp Arg Gly Leu Ala Leu Asn Asp Cys His
85 90 95

Ala Glu Ile Ile Ser Arg Arg Ser Leu Leu Arg Phe Leu Tyr Thr Gln
100 105 110

Leu Glu Leu Tyr Leu Asn Asn Lys Asp Asp Gln Lys Arg Ser Ile Phe
115 120 125

Gln Lys Ser Glu Arg Gly Gly Phe Arg Leu Lys Glu Asn Val Gln Phe
130 135 140

His Leu Tyr Ile Ser Thr Ser Pro Cys Gly Asp Ala Arg Ile Phe Ser
145 150 155 160

Pro His Glu Pro Ile Leu Glu Glu Pro Ala Asp Arg His Pro Asn Arg
165 170 175

Lys Ala Arg Gly Gln Leu Arg Thr Lys Ile Glu Ser Gly Glu Gly Thr
180 185 190

Ile Pro Val Arg Ser Asn Ala Ser Ile Gln Thr Trp Asp Gly Val Leu
195 200 205

Gln Gly Glu Arg Leu Leu Thr Met Ser Cys Ser Asp Lys Ile Ala Arg
210 215 220

Trp Asn Val Val Gly Ile Gln Gly Ser Leu Leu Ser Ile Phe Val Glu
225 230 235 240

Pro Ile Tyr Phe Ser Ser Ile Ile Leu Gly Ser Leu Tyr His Gly Asp
245 250 255

His Leu Ser Arg Ala Met Tyr Gln Arg Ile Ser Asn Ile Glu Asp Leu
260 265 270

Pro Pro Leu Tyr Thr Leu Asn Lys Pro Leu Leu Ser Gly Ile Ser Asn
275 280 285

Ala Glu Ala Arg Gln Pro Gly Lys Ala Pro Asn Phe Ser Val Asn Trp
290 295 300

Thr Val Gly Asp Ser Ala Ile Glu Val Ile Asn Ala Thr Thr Gly Lys
305 310 315 320

Asp Glu Leu Gly Arg Ala Ser Arg Leu Cys Lys His Ala Leu Tyr Cys
325 330 335

Arg Trp Met Arg Val His Gly Lys Val Pro Ser His Leu Leu Arg Ser
340 345 350

Lys Ile Thr Lys Pro Asn Val Tyr His Glu Ser Lys Leu Ala Ala Lys
355 360 365

Glu Tyr Gln Ala Ala Lys Ala Arg Leu Phe Thr Ala Phe Ile Lys Ala
370 375 380

Gly Leu Gly Ala Trp Val Glu Lys Pro Thr Glu Gln Asp Gln Phe Ser
385 390 395 400

Leu Thr Pro

<210> 124

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 124

Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg Leu Thr Leu
1 5 10

<210> 125

<211> 267
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 125

Met Ala Lys Thr Ile Val Leu Ala Val Gly Glu Ala Thr Arg Thr Leu
1 5 10 15

Thr Glu Ile Gln Ser Thr Ala Asp Arg Gln Ile Phe Glu Glu Lys Val
20 25 30

Gly Pro Leu Val Gly Arg Leu Arg Leu Thr Ala Ser Leu Arg Gln Asn
35 40 45

Gly Ala Lys Thr Ala Tyr Arg Val Asn Leu Lys Leu Asp Gln Ala Asp
50 55 60

Val Val Asp Ala Ser Thr Ser Val Ala Gly Glu Leu Pro Lys Val Arg
65 70 75 80

Tyr Thr Gln Val Trp Ser His Asp Val Thr Ile Val Ala Asn Ser Thr
85 90 95

Glu Ala Ser Arg Lys Ser Leu Tyr Asp Leu Thr Lys Ser Leu Val Ala
100 105 110

Thr Ser Gln Val Glu Asp Leu Val Val Asn Leu Val Pro Leu Gly Arg
115 120 125

Ser Leu Glu Gly Gly Ser Gly Gly Met Ala Lys Thr Ile Val Leu Ala
130 135 140

Val Gly Glu Ala Thr Arg Thr Leu Thr Glu Ile Gln Ser Thr Ala Asp
145 150 155 160

Arg Gln Ile Phe Glu Glu Lys Val Gly Pro Leu Val Gly Arg Leu Arg
165 170 175

Leu Thr Ala Ser Leu Arg Gln Asn Gly Ala Lys Thr Ala Tyr Arg Val
180 185 190

Asn Leu Lys Leu Asp Gln Ala Asp Val Val Asp Ala Ser Thr Ser Val
195 200 205

Ala Gly Glu Leu Pro Lys Val Arg Tyr Thr Gln Val Trp Ser His Asp
210 215 220

Val Thr Ile Val Ala Asn Ser Thr Glu Ala Ser Arg Lys Ser Leu Tyr
225 230 235 240

Asp Leu Thr Lys Ser Leu Val Ala Thr Ser Gln Val Glu Asp Leu Val
245 250 255

Val Asn Leu Val Pro Leu Gly Arg Ser Leu Glu
260 265

<210> 126
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 126
gaagaaggaa ggagcgctaa 20

<210> 127
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 127
cctgctacct tcatcaccaa 20

<210> 128
<211> 613
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 128

Met Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr Cys Arg Val Arg Gly
1 5 10 15

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

Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg Arg Lys Lys Gly Gly
35 40 45

Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
50 55 60

Met Ala Val Pro Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn
65 70 75 80

Leu Asn Ser Lys Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala
85 90 95

Ile Phe Ser Gln Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln
100 105 110

Arg Thr Pro Arg Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser
115 120 125

Ala Thr Asn Ala Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys
130 135 140

Pro Met Arg Ile Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys
145 150 155 160

Met Lys Gly Thr Phe Val Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
165 170 175

Gly Ser Gly Gly Ser Gly Gly Ser Leu His Leu Asp Gln Thr Pro Ser
180 185 190

Arg Gln Pro Ile Pro Ser Glu Gly Leu Gln Leu His Leu Pro Gln Val
195 200 205

Leu Ala Asp Ala Val Ser Arg Leu Val Leu Gly Lys Phe Gly Asp Leu
210 215 220

Thr Asp Asn Phe Ser Ser Pro His Ala Arg Arg Lys Val Leu Ala Gly
225 230 235 240

Val Val Met Thr Thr Gly Thr Asp Val Lys Asp Ala Lys Val Ile Ser
245 250 255

Val Ser Thr Gly Thr Lys Cys Ile Asn Gly Glu Tyr Met Ser Asp Arg
260 265 270

Gly Leu Ala Leu Asn Asp Cys His Ala Glu Ile Ile Ser Arg Arg Ser
275 280 285

Leu Leu Arg Phe Leu Tyr Thr Gln Leu Glu Leu Tyr Leu Asn Asn Lys
290 295 300

Asp Asp Gln Lys Arg Ser Ile Phe Gln Lys Ser Glu Arg Gly Gly Phe
305 310 315 320

Arg Leu Lys Glu Asn Val Gln Phe His Leu Tyr Ile Ser Thr Ser Pro
325 330 335

Cys Gly Asp Ala Arg Ile Phe Ser Pro His Glu Pro Ile Leu Glu Glu
340 345 350

Pro Ala Asp Arg His Pro Asn Arg Lys Ala Arg Gly Gln Leu Arg Thr
355 360 365

Lys Ile Glu Ser Gly Glu Gly Thr Ile Pro Val Arg Ser Asn Ala Ser
370 375 380

Ile Gln Thr Trp Asp Gly Val Leu Gln Gly Glu Arg Leu Leu Thr Met
385 390 395 400

Ser Cys Ser Asp Lys Ile Ala Arg Trp Asn Val Val Gly Ile Gln Gly
405 410 415

Ser Leu Leu Ser Ile Phe Val Glu Pro Ile Tyr Phe Ser Ser Ile Ile
420 425 430

Leu Gly Ser Leu Tyr His Gly Asp His Leu Ser Arg Ala Met Tyr Gln
435 440 445

Arg Ile Ser Asn Ile Glu Asp Leu Pro Pro Leu Tyr Thr Leu Asn Lys
450 455 460

Pro Leu Leu Ser Gly Ile Ser Asn Ala Glu Ala Arg Gln Pro Gly Lys
465 470 475 480

Ala Pro Asn Phe Ser Val Asn Trp Thr Val Gly Asp Ser Ala Ile Glu
485 490 495

Val Ile Asn Ala Thr Thr Gly Lys Asp Glu Leu Gly Arg Ala Ser Arg
500 505 510

Leu Cys Lys His Ala Leu Tyr Cys Arg Trp Met Arg Val His Gly Lys
515 520 525

Val Pro Ser His Leu Leu Arg Ser Lys Ile Thr Lys Pro Asn Val Tyr
530 535 540

His Glu Ser Lys Leu Ala Ala Lys Glu Tyr Gln Ala Ala Lys Ala Arg
545 550 555 560

Leu Phe Thr Ala Phe Ile Lys Ala Gly Leu Gly Ala Trp Val Glu Lys
565 570 575

Pro Thr Glu Gln Asp Gln Phe Ser Leu Thr Pro Lys Arg Pro Ala Ala
580 585 590

Thr Lys Lys Ala Gly Gln Ala Lys Lys Lys Lys Gly Ser Asp Tyr Lys
595 600 605

Asp Asp Asp Asp Lys
610

<210> 129

<211> 613

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 129

Met Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr Cys Arg Val Arg Gly
1 5 10 15

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

Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg Arg Lys Lys Gly Gly
35 40 45

Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
50 55 60

Met Ala Val Pro Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn
65 70 75 80

Leu Asn Ser Lys Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala
85 90 95

Ile Phe Ser Gln Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln
100 105 110

Arg Thr Pro Arg Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser
115 120 125

Ala Thr Asn Ala Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys
130 135 140

Pro Met Arg Ile Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys
145 150 155 160

Met Lys Gly Thr Phe Val Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
165 170 175

Gly Ser Gly Gly Ser Gly Gly Ser Leu His Leu Asp Gln Thr Pro Ser
180 185 190

Arg Gln Pro Ile Pro Ser Glu Gly Leu Gln Leu His Leu Pro Gln Val
195 200 205

Leu Ala Asp Ala Val Ser Arg Leu Val Leu Gly Lys Phe Gly Asp Leu
210 215 220

Thr Asp Asn Phe Ser Ser Pro His Ala Arg Arg Lys Val Leu Ala Gly
225 230 235 240

Val Val Met Thr Thr Gly Thr Asp Val Lys Asp Ala Lys Val Ile Ser
245 250 255

Val Ser Thr Gly Thr Lys Cys Ile Asn Gly Glu Tyr Met Ser Asp Arg
260 265 270

Gly Leu Ala Leu Asn Asp Cys His Ala Glu Ile Ile Ser Arg Arg Ser
275 280 285

Leu Leu Arg Phe Leu Tyr Thr Gln Leu Glu Leu Tyr Leu Asn Asn Lys
290 295 300

Asp Asp Gln Lys Arg Ser Ile Phe Gln Lys Ser Glu Arg Gly Gly Phe
305 310 315 320

Arg Leu Lys Glu Asn Val Gln Phe His Leu Tyr Ile Ser Thr Ser Pro
325 330 335

Cys Gly Asp Ala Arg Ile Phe Ser Pro His Glu Pro Ile Leu Glu Glu
340 345 350

Pro Ala Asp Arg His Pro Asn Arg Lys Ala Arg Gly Gln Leu Arg Thr
355 360 365

Lys Ile Glu Ser Gly Gln Gly Thr Ile Pro Val Arg Ser Asn Ala Ser
 370 375 380

Ile Gln Thr Trp Asp Gly Val Leu Gln Gly Glu Arg Leu Leu Thr Met
 385 390 395 400

Ser Cys Ser Asp Lys Ile Ala Arg Trp Asn Val Val Gly Ile Gln Gly
 405 410 415

Ser Leu Leu Ser Ile Phe Val Glu Pro Ile Tyr Phe Ser Ser Ile Ile
 420 425 430

Leu Gly Ser Leu Tyr His Gly Asp His Leu Ser Arg Ala Met Tyr Gln
 435 440 445

Arg Ile Ser Asn Ile Glu Asp Leu Pro Pro Leu Tyr Thr Leu Asn Lys
 450 455 460

Pro Leu Leu Ser Gly Ile Ser Asn Ala Glu Ala Arg Gln Pro Gly Lys
 465 470 475 480

Ala Pro Asn Phe Ser Val Asn Trp Thr Val Gly Asp Ser Ala Ile Glu
 485 490 495

Val Ile Asn Ala Thr Thr Gly Lys Asp Glu Leu Gly Arg Ala Ser Arg
 500 505 510

Leu Cys Lys His Ala Leu Tyr Cys Arg Trp Met Arg Val His Gly Lys
 515 520 525

Val Pro Ser His Leu Leu Arg Ser Lys Ile Thr Lys Pro Asn Val Tyr
 530 535 540

His Glu Ser Lys Leu Ala Ala Lys Glu Tyr Gln Ala Ala Lys Ala Arg
 545 550 555 560

Leu Phe Thr Ala Phe Ile Lys Ala Gly Leu Gly Ala Trp Val Glu Lys
 565 570 575

Pro Thr Glu Gln Asp Gln Phe Ser Leu Thr Pro Lys Arg Pro Ala Ala

580

585

590

Thr Lys Lys Ala Gly Gln Ala Lys Lys Lys Lys Gly Ser Asp Tyr Lys
 595 600 605

Asp Asp Asp Asp Lys
 610

<210> 130

<211> 571

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 130

Met Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr Cys Arg Val Arg Gly
 1 5 10 15

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

Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg Arg Lys Lys Gly Gly
 35 40 45

Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
 50 55 60

Met Ala Val Pro Glu Thr Arg Pro Asn His Thr Ile Tyr Ile Asn Asn
 65 70 75 80

Leu Asn Ser Lys Ile Lys Lys Asp Glu Leu Lys Lys Ser Leu Tyr Ala
 85 90 95

Ile Phe Ser Gln Phe Gly Gln Ile Leu Asp Ile Leu Val Pro Arg Gln
 100 105 110

Arg Thr Pro Arg Gly Gln Ala Phe Val Ile Phe Lys Glu Val Ser Ser
 115 120 125

Ala Thr Asn Ala Leu Arg Ser Met Gln Gly Phe Pro Phe Tyr Asp Lys
130 135 140

Pro Met Arg Ile Gln Tyr Ala Lys Thr Asp Lys Arg Ile Pro Ala Lys
145 150 155 160

Met Lys Gly Thr Phe Val Gly Ser Leu Gln Leu Pro Pro Leu Glu Arg
165 170 175

Leu Thr Leu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
180 185 190

Gly Ser Gly Gly Ser Met Ser Ala Thr Ser Val Asp Thr Gln Arg Thr
195 200 205

Lys Gly Gln Asp Asn Lys Val Gln Asn Gly Ser Leu His Gln Lys Asp
210 215 220

Thr Val His Asp Asn Asp Phe Glu Pro Tyr Leu Thr Gly Gln Ser Asn
225 230 235 240

Gln Ser Asn Ser Tyr Pro Ser Met Ser Asp Pro Tyr Leu Ser Ser Tyr
245 250 255

Tyr Pro Pro Ser Ile Gly Phe Pro Tyr Ser Leu Asn Glu Ala Pro Trp
260 265 270

Ser Thr Ala Gly Asp Pro Pro Ile Pro Tyr Leu Thr Thr Tyr Gly Gln
275 280 285

Leu Ser Asn Gly Asp His His Phe Met His Asp Ala Val Phe Gly Gln
290 295 300

Pro Gly Gly Leu Gly Asn Asn Ile Tyr Gln His Arg Phe Asn Phe Phe
305 310 315 320

Pro Glu Asn Pro Ala Phe Ser Ala Trp Gly Thr Ser Gly Ser Gln Gly
325 330 335

Gln Gln Thr Gln Ser Ser Ala Tyr Gly Ser Ser Tyr Thr Tyr Pro Pro

340

345

350

Ser Ser Leu Gly Gly Thr Val Val Asp Gly Gln Pro Gly Phe His Ser
 355 360 365

Asp Thr Leu Ser Lys Ala Pro Gly Met Asn Ser Leu Glu Gln Gly Met
 370 375 380

Val Gly Leu Lys Ile Gly Asp Val Ser Ser Ser Ala Val Lys Thr Val
 385 390 395 400

Gly Ser Val Val Ser Ser Val Ala Leu Thr Gly Val Leu Ser Gly Asn
 405 410 415

Gly Gly Thr Asn Val Asn Met Pro Val Ser Lys Pro Thr Ser Trp Ala
 420 425 430

Ala Ile Ala Ser Lys Pro Ala Lys Pro Gln Pro Lys Met Lys Thr Lys
 435 440 445

Ser Gly Pro Val Met Gly Gly Gly Leu Pro Pro Pro Pro Ile Lys His
 450 455 460

Asn Met Asp Ile Gly Thr Trp Asp Asn Lys Gly Pro Val Pro Lys Ala
 465 470 475 480

Pro Val Pro Gln Gln Ala Pro Ser Pro Gln Ala Ala Pro Gln Pro Gln
 485 490 495

Gln Val Ala Gln Pro Leu Pro Ala Gln Pro Pro Ala Leu Ala Gln Pro
 500 505 510

Gln Tyr Gln Ser Pro Gln Gln Pro Pro Gln Thr Arg Trp Val Ala Pro
 515 520 525

Arg Asn Arg Asn Ala Ala Phe Gly Gln Ser Gly Gly Ala Gly Ser Asp
 530 535 540

Ser Asn Ser Pro Gly Asn Val Gln Pro Asn Ser Ala Pro Ser Val Glu
 545 550 555 560

Ser Gly Ser Asp Tyr Lys Asp Asp Asp Asp Lys
565 570

<210> 131
<211> 367
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 131
Met Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr Cys Arg Val Arg Gly
1 5 10 15

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

Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg Arg Lys Lys Gly Gly
35 40 45

Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser
50 55 60

Ala Asp Phe Glu Thr Asp Glu Ser Val Leu Met Arg Arg Gln Lys Gln
65 70 75 80

Ile Asn Tyr Gly Lys Asn Thr Ile Ala Tyr Asp Arg Tyr Ile Lys Glu
85 90 95

Val Pro Arg His Leu Arg Gln Pro Gly Ile His Pro Lys Thr Pro Asn
100 105 110

Lys Phe Lys Lys Tyr Ser Arg Arg Ser Trp Asp Gln Gln Ile Lys Leu
115 120 125

Trp Lys Val Ala Leu His Phe Trp Asp Leu Gln Leu Pro Pro Leu Glu
130 135 140

Arg Leu Thr Leu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser

145		150		155		160									
Gly	Gly	Ser	Gly	Gly	Ser	Met	Ser	Ala	Ser	Ser	Leu	Leu	Glu	Gln	Arg
			165						170					175	
Pro	Lys	Gly	Gln	Gly	Asn	Lys	Val	Gln	Asn	Gly	Ser	Val	His	Gln	Lys
			180					185					190		
Asp	Gly	Leu	Asn	Asp	Asp	Asp	Phe	Glu	Pro	Tyr	Leu	Ser	Pro	Gln	Ala
		195					200					205			
Arg	Pro	Asn	Asn	Ala	Tyr	Thr	Ala	Met	Ser	Asp	Ser	Tyr	Leu	Pro	Ser
	210					215					220				
Tyr	Tyr	Ser	Pro	Ser	Ile	Gly	Phe	Ser	Tyr	Ser	Leu	Gly	Glu	Ala	Ala
225					230					235					240
Trp	Ser	Thr	Gly	Gly	Asp	Thr	Ala	Met	Pro	Tyr	Leu	Thr	Ser	Tyr	Gly
			245						250					255	
Gln	Leu	Ser	Asn	Gly	Glu	Pro	His	Phe	Leu	Pro	Asp	Ala	Met	Phe	Gly
			260					265					270		
Gln	Pro	Gly	Ala	Leu	Gly	Ser	Thr	Pro	Phe	Leu	Gly	Gln	His	Gly	Phe
		275					280					285			
Asn	Phe	Phe	Pro	Ser	Gly	Ile	Asp	Phe	Ser	Ala	Trp	Gly	Asn	Asn	Ser
	290					295					300				
Ser	Gln	Gly	Gln	Ser	Thr	Gln	Ser	Ser	Gly	Tyr	Ser	Ser	Asn	Tyr	Ala
305					310					315					320
Tyr	Ala	Pro	Ser	Ser	Leu	Gly	Gly	Ala	Met	Ile	Asp	Gly	Gln	Ser	Ala
			325						330					335	
Phe	Ala	Asn	Glu	Thr	Leu	Asn	Lys	Ala	Pro	Gly	Met	Asn	Thr	Ile	Asp
			340					345					350		
Gln	Gly	Met	Ala	Ala	Gly	Ser	Asp	Tyr	Lys	Asp	Asp	Asp	Asp	Lys	
		355					360					365			

<210> 132

<211> 504

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 132

Met Asp Asp Pro Ser Phe Leu Thr Gly Arg Ser Thr Tyr Ala Lys Arg
1 5 10 15

Arg Arg Ala Arg Arg Met Asn Val Cys Lys Cys Gly Ala Ile Leu His
20 25 30

Asn Asn Lys Asp Cys Arg Ser Ser Thr Ile Ser Gly His Lys Leu Asp
35 40 45

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

Pro Val Tyr Arg Thr Trp Val Lys Trp Val Glu Thr Glu Tyr His Ile
65 70 75 80

Asn Ile Leu Glu Thr Ser Asp Asp Glu Glu Gly Gly Ser Gly Gly Ser
85 90 95

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Met Ala Lys Thr
100 105 110

Ile Val Leu Ala Val Gly Glu Ala Thr Arg Thr Leu Thr Glu Ile Gln
115 120 125

Ser Thr Ala Asp Arg Gln Ile Phe Glu Glu Lys Val Gly Pro Leu Val
130 135 140

Gly Arg Leu Arg Leu Thr Ala Ser Leu Arg Gln Asn Gly Ala Lys Thr
145 150 155 160

Ala Tyr Arg Val Asn Leu Lys Leu Asp Gln Ala Asp Val Val Asp Ala

	165		170		175
Ser Thr Ser Val Ala Gly Glu Leu Pro Lys Val Arg Tyr Thr Gln Val	180	185	190		
Trp Ser His Asp Val Thr Ile Val Ala Asn Ser Thr Glu Ala Ser Arg	195	200	205		
Lys Ser Leu Tyr Asp Leu Thr Lys Ser Leu Val Ala Thr Ser Gln Val	210	215	220		
Glu Asp Leu Val Val Asn Leu Val Pro Leu Gly Arg Ser Leu Glu Gly	225	230	235	240	
Gly Ser Gly Gly Met Ala Lys Thr Ile Val Leu Ala Val Gly Glu Ala	245	250	255		
Thr Arg Thr Leu Thr Glu Ile Gln Ser Thr Ala Asp Arg Gln Ile Phe	260	265	270		
Glu Glu Lys Val Gly Pro Leu Val Gly Arg Leu Arg Leu Thr Ala Ser	275	280	285		
Leu Arg Gln Asn Gly Ala Lys Thr Ala Tyr Arg Val Asn Leu Lys Leu	290	295	300		
Asp Gln Ala Asp Val Val Asp Ala Ser Thr Ser Val Ala Gly Glu Leu	305	310	315	320	
Pro Lys Val Arg Tyr Thr Gln Val Trp Ser His Asp Val Thr Ile Val	325	330	335		
Ala Asn Ser Thr Glu Ala Ser Arg Lys Ser Leu Tyr Asp Leu Thr Lys	340	345	350		
Ser Leu Val Ala Thr Ser Gln Val Glu Asp Leu Val Val Asn Leu Val	355	360	365		
Pro Leu Gly Arg Ser Leu Glu Leu Gln Leu Pro Pro Leu Glu Arg Leu	370	375	380		

Thr Leu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly
 385 390 395 400

Ser Gly Gly Ser Asp Ala Met Phe Gly Gln Pro Gly Ala Leu Gly Ser
 405 410 415

Thr Pro Phe Leu Gly Gln His Gly Phe Asn Phe Phe Pro Ser Gly Ile
 420 425 430

Asp Phe Ser Ala Trp Gly Asn Asn Ser Ser Gln Gly Gln Ser Thr Gln
 435 440 445

Ser Ser Gly Tyr Ser Ser Asn Tyr Ala Tyr Ala Pro Ser Ser Leu Gly
 450 455 460

Gly Ala Met Ile Asp Gly Gln Ser Ala Phe Ala Asn Glu Thr Leu Asn
 465 470 475 480

Lys Ala Pro Gly Met Asn Thr Ile Asp Gln Gly Met Ala Ala Gly Ser
 485 490 495

Asp Tyr Lys Asp Asp Asp Asp Lys
 500

<210> 133
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 133
 Ser Gly Ser Glu Thr Pro Gly Thr Ser Glu Ser Ala Thr Pro Glu Ser
 1 5 10 15

<210> 134
 <211> 73
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 134

Glu Glu Glu Glu Lys Lys Lys Gln Gln Glu Glu Glu Ala Glu Arg Leu
1 5 10 15

Arg Arg Ile Gln Glu Glu Met Glu Lys Glu Arg Lys Arg Arg Glu Glu
20 25 30

Asp Glu Lys Arg Arg Arg Lys Glu Glu Glu Glu Arg Arg Met Lys Leu
35 40 45

Glu Met Glu Ala Lys Arg Lys Gln Glu Glu Glu Glu Arg Lys Lys Arg
50 55 60

Glu Asp Asp Glu Lys Arg Lys Lys Lys
65 70

<210> 135

<211> 403

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 135

Leu His Leu Asp Gln Thr Pro Ser Arg Gln Pro Ile Pro Ser Glu Gly
1 5 10 15

Leu Gln Leu His Leu Pro Gln Val Leu Ala Asp Ala Val Ser Arg Leu
20 25 30

Val Leu Gly Lys Phe Gly Asp Leu Thr Asp Asn Phe Ser Ser Pro His
35 40 45

Ala Arg Arg Lys Val Leu Ala Gly Val Val Met Thr Thr Gly Thr Asp
50 55 60

Val Lys Asp Ala Lys Val Ile Ser Val Ser Thr Gly Thr Lys Cys Ile
65 70 75 80

Asn Gly Glu Tyr Met Ser Asp Arg Gly Leu Ala Leu Asn Asp Cys His
85 90 95

Ala Glu Ile Ile Ser Arg Arg Ser Leu Leu Arg Phe Leu Tyr Thr Gln
100 105 110

Leu Glu Leu Tyr Leu Asn Asn Lys Asp Asp Gln Lys Arg Ser Ile Phe
115 120 125

Gln Lys Ser Glu Arg Gly Gly Phe Arg Leu Lys Glu Asn Val Gln Phe
130 135 140

His Leu Tyr Ile Ser Thr Ser Pro Cys Gly Asp Ala Arg Ile Phe Ser
145 150 155 160

Pro His Glu Pro Ile Leu Glu Glu Pro Ala Asp Arg His Pro Asn Arg
165 170 175

Lys Ala Arg Gly Gln Leu Arg Thr Lys Ile Glu Ser Gly Gln Gly Thr
180 185 190

Ile Pro Val Arg Ser Asn Ala Ser Ile Gln Thr Trp Asp Gly Val Leu
195 200 205

Gln Gly Glu Arg Leu Leu Thr Met Ser Cys Ser Asp Lys Ile Ala Arg
210 215 220

Trp Asn Val Val Gly Ile Gln Gly Ser Leu Leu Ser Ile Phe Val Glu
225 230 235 240

Pro Ile Tyr Phe Ser Ser Ile Ile Leu Gly Ser Leu Tyr His Gly Asp
245 250 255

His Leu Ser Arg Ala Met Tyr Gln Arg Ile Ser Asn Ile Glu Asp Leu
260 265 270

Pro Pro Leu Tyr Thr Leu Asn Lys Pro Leu Leu Ser Gly Ile Ser Asn
275 280 285

Ala Glu Ala Arg Gln Pro Gly Lys Ala Pro Asn Phe Ser Val Asn Trp
 290 295 300

Thr Val Gly Asp Ser Ala Ile Glu Val Ile Asn Ala Thr Thr Gly Lys
 305 310 315 320

Asp Glu Leu Gly Arg Ala Ser Arg Leu Cys Lys His Ala Leu Tyr Cys
 325 330 335

Arg Trp Met Arg Val His Gly Lys Val Pro Ser His Leu Leu Arg Ser
 340 345 350

Lys Ile Thr Lys Pro Asn Val Tyr His Glu Ser Lys Leu Ala Ala Lys
 355 360 365

Glu Tyr Gln Ala Ala Lys Ala Arg Leu Phe Thr Ala Phe Ile Lys Ala
 370 375 380

Gly Leu Gly Ala Trp Val Glu Lys Pro Thr Glu Gln Asp Gln Phe Ser
 385 390 395 400

Leu Thr Pro

<210> 136
 <211> 30
 <212> RNA
 <213> Unknown

<220>
 <223> Description of Unknown:
 RNA hairpin binding domain

<220>
 <221> modified_base
 <222> (1)..(5)
 <223> a, c, u, g, unknown or other

<220>
 <221> modified_base
 <222> (9)..(13)
 <223> a, c, u, g, unknown or other

<220>
<221> modified_base
<222> (19)..(24)
<223> a, c, u, g, unknown or other

<220>
<221> modified_base
<222> (26)..(30)
<223> a, c, u, g, unknown or other

<400> 136
nnnnnnugcnn nnncagugnn nnnncnnnnn

30

<210> 137
<211> 4
<212> PRT
<213> Homo sapiens

<400> 137
Asp Glu Ala His
1

<210> 138
<211> 4
<212> PRT
<213> Homo sapiens

<400> 138
Asp Glu Ala Asp
1

<210> 139
<211> 68
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (32)..(68)
<223> a, c, u, g, unknown or other

<400> 139
ggccagaucu gagccuggga gcucucuggc cnnnnnnnnn nnnnnnnnnn nnnnnnnnnn

60

nnnnnnnnn

68

<210> 140
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (32)..(63)
<223> a, c, t, g, unknown or other

<400> 140
ccaaaggcuc uucucagagc cacccattat tnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn 60
nnn 63

<210> 141
<211> 63
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (32)..(63)
<223> a, c, u, g, unknown or other

<400> 141
ccaaaggcuc uucucagagc cacccauuau unnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn 60
nnn 63

<210> 142
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<220>
 <221> modified_base
 <222> (13)..(15)
 <223> a, c, t, g, unknown or other

<400> 142
 gtagttggag ctnnnggcgt aggcaag 27

<210> 143
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 143
 tgaacaccat caacctgac 20

<210> 144
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 144
 gaacaccatc aacctcgact 20

<210> 145
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 145
 tcaacctcga ctaccgcatc 20

<210> 146	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: Synthetic oligonucleotide	
<400> 146	
caacctcgac taccgcatcc	20
<210> 147	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: Synthetic oligonucleotide	
<400> 147	
accgcatccg ttctcacgga	20
<210> 148	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: Synthetic oligonucleotide	
<400> 148	
ccgcatccgt tctcacggaa	20