

SEQUENCE LISTING

<110> SANOFI

<120> ANTIBODY FORMULATIONS

<130> US2016/011 US PCT; 15-2048-WO

<150> US 62/358,404

<151> 2016-07-05

<150> EP 16306090.8

<151> 2016-07-30

<160> 69

<170> PatentIn version 3.5

<210> 1

<211> 36

<212> PRT

<213> Homo sapiens

<400> 1

Met	Asn	Tyr	Pro	Thr	Leu	Glu	Met	Asp	Leu	Glu	Asn	Leu	Glu	Asp	Leu
1				5					10					15	

Phe	Trp	Glu	Leu	Asp	Arg	Leu	Asp	Asn	Tyr	Asn	Thr	Ser	Leu	Val	Glu
		20						25					30		

Asn	His	Leu	Cys
		35	

<210> 2

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<220>

<221> misc_feature

<222> (18)..(18)

<223> n is a, c, g, or t

<400> 2

cttccggaat tcsargtnma gctgsagsag tc

32

<210> 3
 <211> 35
 <212> DNA
 <213> Artificial Sequence

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

 <220>
 <221> misc_feature
 <222> (18)..(18)
 <223> n is a, c, g, or t

 <400> 3
 cttccggaat tcsargtnma gctgsagsag tcwgg 35

 <210> 4
 <211> 36
 <212> DNA
 <213> Artificial Sequence

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

 <400> 4
 ggaggatcca tagacagatg ggggtgtcgt tttggc 36

 <210> 5
 <211> 31
 <212> DNA
 <213> Artificial Sequence

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

 <400> 5
 ggagctcgay attgtgmtsa cmcarwctmc a 31

 <210> 6
 <211> 46
 <212> DNA
 <213> Artificial Sequence

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

 <400> 6
 tatagagctc aagcttgat ggtgggaaga tggatacagt tggtgc 46

 <210> 7

<211> 18
 <212> DNA
 <213> Artificial Sequence

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

 <400> 7
 ccaagctgtg tcctrctcc 18

<210> 8
 <211> 32
 <212> DNA
 <213> Artificial Sequence

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

 <400> 8
 cgacaagtcg actagccctt gaccaggcat cc 32

<210> 9
 <211> 18
 <212> DNA
 <213> Artificial Sequence

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

 <400> 9
 wtctctrgag tcagtggg 18

<210> 10
 <211> 32
 <212> DNA
 <213> Artificial Sequence

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

 <400> 10
 cgactagtcg actggtggga agatggatac ag 32

<210> 11
 <211> 112
 <212> PRT
 <213> Mus sp.

 <400> 11

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Ala Val Thr Pro Arg

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

<210> 12
 <211> 111
 <212> PRT
 <213> Mus sp.

<400> 12

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

85

90

95

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

<210> 13

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 13

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

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
 20 25 30

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

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

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
 85 90 95

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

<210> 14

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 14

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

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

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

Pro Gln Leu Leu Ile Tyr Arg Leu Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

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

<210> 15

<211> 113

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 15

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

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

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

Pro Gln Leu Leu Ile Tyr Arg Leu Ser Ser Asn Leu Ala Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys
Page 6

65					70					75					80
Ile	Ser	Arg	Val	Glu	Ala	Glu	Asp	Val	Gly	Val	Tyr	Tyr	Cys	Met	Gln
				85					90					95	

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

Lys

<210> 16
 <211> 111
 <212> PRT
 <213> Artificial Sequence

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

<400> 16

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

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

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

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

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

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

Arg	Ile	Val	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser
			100					105					110	

<210> 17
 <211> 238

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 17

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Ala Leu Ser Val Ala Val
20 25 30

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

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

Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser
65 70 75 80

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
85 90 95

Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
100 105 110

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

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

Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
145 150 155 160

Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
165 170 175

Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
180 185 190

Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
195 200 205

Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
210 215 220

Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230 235

<210> 18
<211> 731
<212> DNA
<213> Artificial Sequence

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

<400> 18
gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg 60
cacagcgaca tcgtgatgac ccagagcgcc ctcagcgtgg ccgtgacccc cggcgagagc 120
gtgagcatca gctgccgcag cagcaagagc ctgctgcaca gcagcggcaa gacctacctg 180
tactggttcc tgcagcgccc cggccagagc cccagctgc tgatctaccg catgagcaac 240
ctggccagcg gcgtgcccga ccgcttcagc ggcagcggca gcggcaccgc cttcaccttg 300
aagatcagcc gcgtggaggc cgaggacgtg ggcgtgtact actgcatgca gcacctggag 360
tacccttaca ccttcggcgg cggcaccaag ctggagatca agcgtacggt ggccgctcct 420
tccgtgttca tcttcctcc ctccgacgag cagctgaagt ccggcaccgc ctccgtggtg 480
tgtctgctga acaacttcta ccctcgggag gccaaggtgc agtggaaggt ggacaacgcc 540
ctgcagtccg gcaactccca ggagtccgtc accgagcagg actccaagga cagcacctac 600
tccctgtcct ccaccctgac cctgtccaag gccgactacg agaagcaciaa ggtgtacgcc 660
tgtgaggtga cccaccaggg cctgtccagc cctgtgacca agtccttcaa ccggggcgag 720
tgctgaagct t 731

<210> 19
<211> 238
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 19

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Ala Leu Ser Val Ala Val
20 25 30

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

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

Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Leu Ser Asn Leu Ala Ser
65 70 75 80

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
85 90 95

Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
100 105 110

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

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

Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
145 150 155 160

Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
165 170 175

Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
180 185 190

Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
195 200 205

Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
 210 215 220

Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 225 230 235

<210> 20
 <211> 731
 <212> DNA
 <213> Artificial Sequence

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

<400> 20
 gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg 60
 cacagcgaca tcgtgatgac ccagagcgcc ctgagcgtgg ccgtgacccc cggcgagagc 120
 gtgagcatca gctgccgcag cagcaagagc ctgctgcaca gcagcggcaa gacctacctg 180
 tactggttcc tgcagcgccc cggccagagc cccagctgc tgatctaccg cctgagcaac 240
 ctggccagcg gcgtgcccga ccgcttcagc ggcagcggca gcggcaccgc cttcacctg 300
 aagatcagcc gcgtggaggc cgaggacgtg ggcgtgtact actgcatgca gcacctggag 360
 tacccttaca ccttcggcgg cggcaccaag ctggagatca agcgtacggg ggccgctcct 420
 tccgtgttca tcttcctcc ctccgacgag cagctgaagt ccggcaccgc ctccgtggtg 480
 tgtctgctga acaacttcta ccctcgggag gccaaagggt agtggaagggt ggacaacgcc 540
 ctgcagtccg gcaactccca ggagtccgtc accgagcagg actccaagga cagcacctac 600
 tccctgtcct ccaccctgac cctgtccaag gccgactacg agaagcaciaa ggtgtacgcc 660
 tgtgaggtga cccaccaggg cctgtccagc cctgtgacca agtccttcaa ccggggcgag 720
 tgctgaagct t 731

<210> 21
 <211> 238
 <212> PRT
 <213> Artificial Sequence

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

<400> 21

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
 1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Ala Leu Ser Val Ala Val
 20 25 30

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

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

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

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
 85 90 95

Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
 100 105 110

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

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

Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
 145 150 155 160

Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
 165 170 175

Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
 180 185 190

Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
 195 200 205

Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
 210 215 220

Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 225 230 235

<210> 22
 <211> 731
 <212> DNA
 <213> Artificial Sequence

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

<400> 22
 gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg 60
 cacagcgaca tcgtgatgac ccagagcgcc ctgagcgtgg ccgtgacccc cggcgagagc 120
 gtgagcatca gctgccgcag cagcaagagc ctgctgcaca gcagcggcaa gacctacctg 180
 tactggttcc tgcagcgccc cggccagagc cccagctgc tgatctaccg cctgagcagc 240
 ctggccagcg gcgtgcccga ccgcttcagc ggcagcggca gcggcaccgc cttcaccttg 300
 aagatcagcc gcgtggaggc cgaggacgtg ggcgtgtact actgcatgca gcacctggag 360
 taccctaca ccttcggcgg cggcaccaag ctggagatca agcgtacggt ggccgctcct 420
 tccgtgttca tcttcctcc ctccgacgag cagctgaagt ccggcaccgc ctccgtggtg 480
 tgtctgctga acaacttcta ccctcgggag gccaaaggtgc agtggaaggt ggacaacgcc 540
 ctgcagtccg gcaactccca ggagtccgtc accgagcagg actccaagga cagcacctac 600
 tccctgtcct ccaccctgac cctgtccaag gccgactacg agaagcaciaa ggtgtacgcc 660
 tgtgaggtga cccaccaggg cctgtccagc cctgtgacca agtccttcaa ccggggcgag 720
 tgctgaagct t 731

<210> 23
 <211> 456
 <212> PRT
 <213> Artificial Sequence

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

<400> 23

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
 1 5 10 15

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

Pro Ser Glu Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu
35 40 45

Ile Asp Tyr Gly Val Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu
50 55 60

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

Ser Leu Lys Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln
85 90 95

Val Phe Leu Lys Met Asn Ser Leu Thr Ala Ala Asp Thr Ala Met Tyr
100 105 110

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

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

Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys
145 150 155 160

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
165 170 175

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

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
195 200 205

Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val
210 215 220

Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro
225 230 235 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Lys Ser Leu Ser Leu Ser Leu Gly
450 455

<210> 24
 <211> 1385
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 24

gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg	60
cacagccagg tgcagctgca ggagagcggc cccggcctgg tggccccag cgagagcctg	120
agcatcacct gcaccgtgag cggcttcagc ctgatcgact acggcgtgaa ctggatccgc	180
cagcccccg gcaagggcct ggagtggctg ggcgtgatct ggggcgacgg caccacctac	240
tacaaccca gcctgaagag ccgcctgagc atctccaagg acaacagcaa gagccaggtg	300
ttcctgaaga tgaacagcct gaccgccgcc gacaccgcca tgtactactg cgcccgcatac	360
gtgtactggg gccagggcac cctggtgacc gtgagcagcg ccagcaccaa gggcccttcc	420
gtgttcctc tggccccctg ctcccggctc acctccgagt ccaccgccgc tctgggctgc	480
ctggtgaagg actacttccc tgagcctgtg accgtgtcct ggaactctgg cgccctgacc	540
tccggcgtgc acaccttccc tgccgtgctg cagtcctccg gcctgtactc cctgtcctcc	600
gtggtgaccg tgccttcctc ctccctgggc accaagacct acacctgtaa cgtggaccac	660
aagccttcca acaccaaggt ggacaagcgg gtggagtcca agtacggccc tccttgccct	720
tcctgccctg cccctgagtt cctgggcgga cctagcgtgt tcctgttccc tcctaagcct	780
aaggacacc tgatgatctc ccggaccct gaggtgacct gtgtggtggt ggacgtgtcc	840
caggaggacc ctgaggcca gttcaactgg tacgtggacg gcgtggaggt gcacaacgcc	900
aagaccaagc ctcgaggaga gcagttcaat tccacctacc gggtggtgtc tgtgtgacc	960
gtgctgcacc aggactggct gaacggcaaa gaatacaagt gtaaggtctc caacaagggc	1020
ctgccctcct ccatcgagaa aaccatctcc aaggccaagg gccagcctag ggagcctcag	1080
gtgtacacc tgcctcctag ccaggaagag atgaccaaga accaggtgtc cctgacctgt	1140
ctggtgaagg gcttctaccc ttccgacatc gccgtggagt gggagtccaa cggccagcct	1200
gagaacaact acaagaccac ccctcctgtg ctggactccg acggctcctt cttcctgtac	1260
tccaggctga ccgtggacaa gtcccgggtg caggagggca acgtcttttc ctgctccgtg	1320

atgcacgagg ccctgcacaa ccactacacc cagaagtccc tgtccctgtc tctgggctga 1380
agctt 1385

<210> 25
<211> 22
<212> PRT
<213> Homo sapiens

<400> 25

Lys Pro Gly Gln Pro Pro Arg Leu Leu Ile Tyr Asp Ala Ser Asn Arg
1 5 10 15

Ala Thr Gly Ile Pro Ala
20

<210> 26
<211> 12
<212> PRT
<213> Mus musculus

<400> 26

Thr Asp Asp Thr Ala Met Tyr Tyr Cys Ala Arg Ile
1 5 10

<210> 27
<211> 12
<212> PRT
<213> Homo sapiens

<400> 27

Ser Glu Asp Ser Ala Leu Tyr Tyr Cys Ala Arg Asp
1 5 10

<210> 28
<211> 112
<212> PRT
<213> Mus musculus

<400> 28

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

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

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

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

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

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

<210> 29
<211> 111
<212> PRT
<213> Mus musculus

<400> 29

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

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

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

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

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

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

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

<210> 30
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 30

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

Ala Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

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

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

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

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

<210> 31
<211> 112
<212> PRT
<213> Artificial Sequence

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

<400> 31

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

Ala Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser

20

25

30

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

Pro Gln Leu Leu Ile Tyr Arg Leu Ser Asn Leu Ala Ser Gly Val Pro
 50 55 60

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
 85 90 95

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

<210> 32

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 32

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

Ala Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
 20 25 30

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

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

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
 85 90 95

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

<210> 33

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 33

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

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

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

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

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

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

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

<210> 34

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 34

Glu Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala Pro Gly Gly

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

<210> 35
 <211> 238
 <212> PRT
 <213> Artificial Sequence

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

<400> 35

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

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
85 90 95

Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
100 105 110

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

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

Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
145 150 155 160

Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
165 170 175

Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
180 185 190

Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
195 200 205

Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
210 215 220

Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230 235

<210> 36
<211> 731
<212> DNA
<213> Artificial Sequence

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

<400> 36
gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg 60
cacagcgaca tcgtgatgac ccaggccgcc cccagcgtgg ccgtgacccc ccgcgagagc 120

```

gtgagcatca gctgccgcag cagcaagagc ctgctgcaca gcagcggcaa gacctacctg      180
tactggttcc tgcagcgccc cggccagagc ccccagctgc tgatctaccg catgagcaac      240
ctggccagcg gcgtgcccga ccgcttcagc ggcagcggca gcggcaccgc cttcaccttg      300
cgcatcagcc gcgtggaggc cgaggacgtg ggcgtgtact actgcatgca gcacctggag      360
tacccttaca ctttcggcgg cggcaccaag ctggagatca agcgtacggg ggccgctcct      420
tccgtgttca tcttcctcc ctccgacgag cagctgaagt ccggcaccgc ctccgtgggtg      480
tgtctgctga acaacttcta ccctcgggag gccaaggtgc agtggaaggt ggacaacgcc      540
ctgcagtccg gcaactccca ggagtccgtc accgagcagg actccaagga cagcacctac      600
tccctgtcct ccacctgac cctgtccaag gccgactacg agaagcacia ggtgtacgcc      660
tgtgaggtga cccaccaggg cctgtccagc cctgtgacca agtccttcaa ccggggcgag      720
tgctgaagct t                                                                731

```

<210> 37

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 37

```

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1           5           10          15

```

```

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

```

```

Pro Ser Gln Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu
          35          40          45

```

```

Ile Asp Tyr Gly Val Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu
50          55          60

```

```

Glu Trp Leu Gly Val Ile Trp Gly Asp Gly Thr Thr Tyr Tyr Asn Ser
65          70          75          80

```

```

Ala Leu Lys Ser Arg Leu Ser Ile Arg Lys Asp Asn Ser Gln Ser Gln
          85          90          95

```

Val Phe Leu Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Met Tyr
100 105 110

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

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

Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys
145 150 155 160

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
165 170 175

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

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
195 200 205

Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val
210 215 220

Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro
225 230 235 240

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

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

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

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

Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
Page 25

305		310		315		320
Gln Asp Trp Leu	Asn Gly Lys Glu Tyr	Lys Cys Lys Val Ser	Asn Lys			
	325	330	335			
Gly Leu Pro Ser	Ser Ile Glu Lys Thr	Ile Ser Lys Ala Lys	Gly Gln			
	340	345	350			
Pro Arg Glu Pro	Gln Val Tyr Thr	Leu Pro Pro Ser	Gln Glu Glu Met			
	355	360	365			
Thr Lys Asn Gln	Val Ser Leu Thr	Cys Leu Val Lys	Gly Phe Tyr Pro			
	370	375	380			
Ser Asp Ile Ala	Val Glu Trp Glu Ser	Asn Gly Gln Pro	Glu Asn Asn			
385	390	395	400			
Tyr Lys Thr Thr	Pro Pro Val Leu	Asp Ser Asp Gly	Ser Phe Phe Leu			
	405	410	415			
Tyr Ser Arg Leu	Thr Val Asp Lys	Ser Arg Trp Gln	Glu Gly Asn Val			
	420	425	430			
Phe Ser Cys Ser	Val Met His Glu	Ala Leu His Asn	His Tyr Thr Gln			
	435	440	445			
Lys Ser Leu Ser	Leu Ser Leu Gly					
	450	455				

<210> 38
 <211> 1385
 <212> DNA
 <213> Artificial Sequence

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

<400> 38	
gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg	60
cacagccagg tgcagctgaa ggagagcggc cccggcctgg tggccccag ccagagcctg	120
agcatcacct gcaccgtgag cggcttcagc ctgatcgact acggcgtgaa ctggatccgc	180
cagccccccg gcaagggcct ggagtggctg ggcgtgatct ggggcgacgg caccacctac	240

tacaacagcg ccctgaagag cgcctgagc atccgcaagg acaacagcca gagccaggtg	300
ttcctgaaga tgaacagcct gcagaccgac gacaccgcc a tgtactactg cccccgcatc	360
gtgtactggg gccagggcac cctggtgacc gtgagcgccg ccagcaccaa gggcccttcc	420
gtgttccctc tggccccttg ctcccgggtcc acctccgagt ccaccgccgc tctgggctgc	480
ctgggtgaagg actacttccc tgagcctgtg accgtgtcct ggaactctgg cgccctgacc	540
tccggcgtgc acaccttccc tgccgtgtgt cagtcctccg gcctgtactc cctgtcctcc	600
gtggtgaccg tgccttcctc ctccctgggc accaagacct acacctgtaa cgtggaccac	660
aagccttcca acaccaaggt ggacaagcgg gtggagtcca agtacggccc tccttgccct	720
tcctgccctg cccctgagtt cctgggcgga cctagcgtgt tcctgttccc tcctaagcct	780
aaggacaccc tgatgatctc ccggaccctc gaggtgacct gtgtgggtgt ggacgtgtcc	840
caggaggacc ctgaggtcca gttcaactgg tacgtggacg gcgtggaggt gcacaacgcc	900
aagaccaagc ctcgggagga gcagttcaat tccacctacc ggggtggtgtc tgtgtgacc	960
gtgctgcacc aggactggct gaacggcaaa gaatacaagt gtaaggcttc caacaagggc	1020
ctgccctcct ccatcgagaa aaccatctcc aaggccaagg gccagcctag ggagcctcag	1080
gtgtacaccc tgcctcctag ccaggaagag atgaccaaga accaggtgtc cctgacctgt	1140
ctgggtgaagg gcttctaccc ttccgacatc gccgtggagt gggagtccaa cggccagcct	1200
gagaacaact acaagaccac ccctcctgtg ctggactccg acggctcctt cttcctgtac	1260
tccaggctga ccgtggacaa gtcccgggtg caggagggca acgtcttttc ctgctccgtg	1320
atgcacgagg ccctgcacaa ccactacacc cagaagtccc tgtccctgtc tctgggctga	1380
agctt	1385

<210> 39
 <211> 238
 <212> PRT
 <213> Artificial Sequence

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

<400> 39

Met	Gly	Trp	Ser	Cys	Ile	Ile	Leu	Phe	Leu	Val	Ala	Thr	Ala	Thr	Gly
1				5					10					15	

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

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

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

Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser
65 70 75 80

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
85 90 95

Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
100 105 110

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

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

Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
145 150 155 160

Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
165 170 175

Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
180 185 190

Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
195 200 205

Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
210 215 220

Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230 235

<210> 40
 <211> 731
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 40
 gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg 60
 cacagcgaca tcgtgatgac ccaggccgcc cccagcgtgg ccgtgacccc cggcgccagc 120
 gtgagcatca gctgccgcag cagcaagagc ctgctgcaca gcagcggcaa gacctacctg 180
 tactggttcc tgcagcgccc cggccagagc cccagctgc tgatctaccg catgagcaac 240
 ctggccagcg gcgtgcccga ccgcttcagc ggcagcggca gcggcaccgc cttcaccttg 300
 cgcatcagcc gcgtggaggc cgaggacgtg ggcgtgtact actgcatgca gcacctggag 360
 taccctaca cttcggcgga cggcaccaag ctggagatca agcgtacggt ggccgctcct 420
 tccgtgttca tcttcctcc ctccgacgag cagctgaagt ccggcaccgc ctccgtggtg 480
 tgtctgctga acaacttcta ccctcgggag gccaaaggtgc agtggaaggt ggacaacgcc 540
 ctgcagtccg gcaactccca ggagtccgtc accgagcagg actccaagga cagcacctac 600
 tccctgtcct ccaccctgac cctgtccaag gccgactacg agaagcaciaa ggtgtacgcc 660
 tgtgaggtga cccaccaggg cctgtccagc cctgtgacca agtccttcaa ccggggcgag 720
 tgctgaagct t 731

<210> 41
 <211> 238
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 41

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
 1 5 10 15

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

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

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

Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Leu Ser Asn Leu Ala Ser
65 70 75 80

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
85 90 95

Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
100 105 110

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

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

Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
145 150 155 160

Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
165 170 175

Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
180 185 190

Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
195 200 205

Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
210 215 220

Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230 235

<210> 42
<211> 731

<212> DNA
<213> Artificial Sequence

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

<400> 42
gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg 60
cacagcgaca tcgtgatgac ccaggccgcc cccagcgtgg ccgtgacccc cggcgccagc 120
gtgagcatca gctgccgcag cagcaagagc ctgctgcaca gcagcggcaa gacctacctg 180
tactggttcc tgcagcgcgc cggccagagc cccagctgc tgatctaccg cctgagcaac 240
ctggccagcg gcgtgcccga ccgcttcagc ggcagcggca gcggcaccgc cttcacctg 300
cgcatcagcc gcgtggaggc cgaggacgtg ggcgtgtact actgcatgca gcacctggag 360
taccctaca ccttcggcgg cggcaccaag ctggagatca agcgtacggt ggccgctcct 420
tccgtgttca tcttcctcc ctccgacgag cagctgaagt ccggcaccgc ctccgtggtg 480
tgtctgctga acaacttcta ccctcgggag gccaaggtgc agtggaaggt ggacaacgcc 540
ctgcagtccg gcaactccca ggagtccgtc accgagcagg actccaagga cagcacctac 600
tccctgtcct ccaccctgac cctgtccaag gccgactacg agaagcaciaa ggtgtacgcc 660
tgtgaggtga cccaccaggg cctgtccagc cctgtgacca agtccttcaa ccggggcgag 720
tgctgaagct t 731

<210> 43
<211> 238
<212> PRT
<213> Artificial Sequence

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

<400> 43
Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15
Val His Ser Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Ala Val
20 25 30
Thr Pro Gly Ala Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu
35 40 45

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

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

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
85 90 95

Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
100 105 110

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

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

Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
145 150 155 160

Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
165 170 175

Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
180 185 190

Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
195 200 205

Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
210 215 220

Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230 235

<210> 44

<211> 731

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 44

```
gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg      60
cacagcgaca tcgtgatgac ccaggccgcc cccagcgtgg ccgtgacccc cggcgccagc      120
gtgagcatca gctgccgcag cagcaagagc ctgctgcaca gcagcggcaa gacctacctg      180
tactggttcc tgcagcgccc cggccagagc ccccagctgc tgatctaccg cctgagcagc      240
ctggccagcg gcgtgcccga ccgcttcagc ggcagcggca gcggcaccgc cttcacctg      300
cgcatcagcc gcgtggaggc cgaggacgtg ggcgtgtact actgcatgca gcacctggag      360
tacccttaca ccttcggcgg cggcaccaag ctggagatca agcgtacggt ggccgctcct      420
tccgtgttca tcttcctcc ctccgacgag cagctgaagt ccggcaccgc ctccgtggtg      480
tgtctgctga acaacttcta ccctcgggag gccaaggtgc agtggaaggt ggacaacgcc      540
ctgcagtccg gcaactccca ggagtccgtc accgagcagg actccaagga cagcacctac      600
tccctgtcct ccacctgac cctgtccaag gccgactacg agaagcacia ggtgtacgcc      660
tgtgaggtga cccaccaggg cctgtccagc cctgtgacca agtccttcaa ccggggcgag      720
tgctgaagct t                                     731
```

<210> 45

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 45

```
Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1           5           10          15
```

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

```
Pro Ser Glu Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu
          35          40          45
```

```
Ile Asp Tyr Gly Val Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu
          50          55          60
```

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

Ser Leu Lys Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln
85 90 95

Val Phe Leu Lys Val Thr Ser Leu Thr Thr Asp Asp Thr Ala Met Tyr
100 105 110

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

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

Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys
145 150 155 160

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
165 170 175

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

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
195 200 205

Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val
210 215 220

Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro
225 230 235 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Lys Ser Leu Ser Leu Ser Leu Gly
450 455

<210> 46

<211> 1385

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 46

gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg	60
cacagccagg tgcagctgaa ggagagcggc cccggcctgg tggcccccag cgagagcctg	120
agcatcacct gcaccgtgag cggcttcagc ctgatcgact acggcgtgaa ctggatccgc	180
cagccccccg gcaagggcct ggagtggctg ggcgtgatct ggggcgacgg caccacctac	240
tacaacccca gcctgaagag ccgcctgagc atcagcaagg acaacagcaa gagccagggtg	300
ttcctgaagg tgaccagcct gaccaccgac gacaccgcca tgtactactg cgcccgcatac	360
gtgtactggg gccagggcac cctggtgacc gtgagcgccg ccagcaccaa gggcccttcc	420
gtgttccctc tggccccctg ctcccggctc acctccgagt ccaccgccgc tctgggctgc	480
ctggtgaagg actacttccc tgagcctgtg accgtgtcct ggaactctgg cgccctgacc	540
tccggcgtgc acaccttccc tgccgtgctg cagtcctccg gcctgtactc cctgtcctcc	600
gtggtgaccg tgccttcctc ctccctgggc accaagacct acacctgtaa cgtggaccac	660
aagccttcca acaccaaggt ggacaagcgg gtggagtcca agtacggccc tccttgccct	720
tcctgccctg cccctgagtt cctgggcgga cctagcgtgt tcctgttccc tcctaagcct	780
aaggacaccc tgatgatctc ccggaccctc gaggtgacct gtgtggtggt ggacgtgtcc	840
caggaggacc ctgaggtcca gttcaactgg tacgtggacg gcgtggaggt gcacaacgcc	900
aagaccaagc ctcgggagga gcagttcaat tccacctacc gggtggtgtc tgtgtgacc	960
gtgctgcacc aggactggct gaacggcaaa gaatacaagt gtaaggtctc caacaagggc	1020
ctgccctcct ccatcgagaa aaccatctcc aaggccaagg gccagcctag ggagcctcag	1080
gtgtacaccc tgcctcctag ccaggaagag atgaccaaga accaggtgtc cctgacctgt	1140
ctggtgaagg gcttctaccc ttccgacatc gccgtggagt gggagtccaa cggccagcct	1200
gagaacaact acaagaccac ccctcctgtg ctggactccg acggctcctt cttcctgtac	1260
tccaggctga ccgtggacaa gtcccgggtg caggagggca acgtcttttc ctgctccgtg	1320
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agctt	1385

<210> 47
 <211> 456
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 47

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

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

Pro Gly Gly Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu
35 40 45

Ile Asp Tyr Gly Val Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu
50 55 60

Glu Trp Leu Gly Val Ile Trp Gly Asp Gly Thr Thr Tyr Tyr Asn Ala
65 70 75 80

Pro Leu Lys Gly Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln
85 90 95

Val Phe Leu Gln Met Asn Ser Leu Lys Thr Asp Asp Thr Ala Met Tyr
100 105 110

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

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

Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys
145 150 155 160

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
165 170 175

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

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
195 200 205

Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val
210 215 220

Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro
225 230 235 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Lys Ser Leu Ser Leu Ser Leu Gly
450 455

<210> 48
<211> 1385
<212> DNA
<213> Artificial Sequence

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

<400> 48
gctagcacca tgggctggag ctgcatcatc ctgttcctgg tggccaccgc caccggcgtg 60
cacagcgagg tgcagctgaa ggagagcggc cccggcctgg tggcccccg cggcagcctg 120
agcatcacct gcaccgtgag cggcttcagc ctgatcgact acggcgtgaa ctggatccgc 180
cagcccccg gcaagggcct ggagtggctg ggcgtgatct ggggcgacgg caccacctac 240
tacaacgccc ccctgaaggg ccgcctgagc atcagcaagg acaacagcaa gagccaggtg 300
ttcctgcaga tgaacagcct gaagaccgac gacaccgcca tgtactactg cgcccgcatac 360
gtgtactggg gccagggcac cctggtgacc gtgagcagcg ccagcaccaa gggcccttcc 420
gtgttccttc tggccccttg ctcccgggtc acctccgagt ccaccgccgc tctgggctgc 480
ctggtgaagg actacttccc tgagcctgtg accgtgtcct ggaactctgg cgccctgacc 540
tccggcgtgc acaccttccc tgccgtgctg cagtcctccg gcctgtactc cctgtcctcc 600
gtggtgaccg tgccttcctc ctccctgggc accaagacct acacctgtaa cgtggaccac 660
aagccttcca acaccaaggt ggacaagcgg gtggagtcca agtacggccc tccttgccct 720
tcctgccctg cccctgagtt cctgggcgga cctagcgtgt tcctgttccc tcctaagcct 780
aaggacaccc tgatgatctc ccggaccct gaggtgacct gtgtggtggt ggacgtgtcc 840
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aagaccaagc ctcgaggagga gcagttcaat tccacctacc ggggtggtgtc tgtgtgacc 960
gtgctgcacc aggactggct gaacggcaaa gaatacaagt gtaaggtctc caacaagggc 1020
ctgccctcct ccatcgagaa aaccatctcc aaggccaagg gccagcctag ggagcctcag 1080

gtgtacaccc tgcctcctag ccaggaagag atgaccaaga accaggtgtc cctgacctgt 1140
ctggtgaagg gcttctaccc ttccgacatc gccgtggagt gggagtccaa cggccagcct 1200
gagaacaact acaagaccac ccctcctgtg ctggactccg acggctcctt cttcctgtac 1260
tccaggctga ccgtggacaa gtcccgggtg caggagggca acgtcttttc ctgctccgtg 1320
atgcacgagg ccctgcacaa ccactacacc cagaagtccc tgtccctgtc tctgggctga 1380
agctt 1385

<210> 49
<211> 5
<212> PRT
<213> Homo sapiens

<400> 49

Glu Leu Leu Gly Gly
1 5

<210> 50
<211> 5
<212> PRT
<213> Homo sapiens

<400> 50

Met Ile Ser Arg Thr
1 5

<210> 51
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic 6x His tag

<400> 51

His His His His His His
1 5

<210> 52
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 52

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

<210> 53

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 53

Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile	Tyr	Ala	Ala	Ser	Ser	Leu
1				5					10					15

<210> 54

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 54

Ser	Leu	Ile	Asp	Tyr	Gly	Val	Asn	Trp	Ile	Arg	Gln	Pro	Pro	Gly
1				5					10					15

<210> 55

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 55

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

Gln	Ser	Val	Ser	Ile	Ser	Cys	Arg	Ser	Ser	Lys	Ser	Leu	Leu	His	Ser
			20						25				30		

Ser	Gly	Lys	Thr	Tyr	Leu	Tyr	Trp	Phe	Leu	Gln	His	Pro	Gly	Lys	Ala
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

35

40

45

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

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

Ser Gly Val Gln Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
 85 90 95

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

<210> 56

<211> 113

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 56

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

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

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

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

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

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

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

Lys

<210> 57
<211> 113
<212> PRT
<213> Artificial Sequence

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

<400> 57

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

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

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

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

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

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

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

Lys

<210> 58
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 58

Arg Ser Ser Lys Ser Leu Leu His Ser Ser Gly Lys Thr Tyr Leu Tyr
1 5 10 15

<210> 59

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 59

Arg Met Ser Asn Leu Ala Ser
1 5

<210> 60

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 60

Met Gln His Leu Glu Tyr Pro Tyr Thr
1 5

<210> 61

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 61

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

<210> 62

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 62

Val Ile Trp Gly Asp Gly Thr Thr Tyr
1 5

<210> 63

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 63

Ile Val Tyr
1

<210> 64

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 64

Arg Leu Ser Asn Leu Ala Ser
1 5

<210> 65

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 65

Arg Leu Ser Ser Asn Leu Ala Ser
1 5

<210> 66

<211> 6

<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 66

Arg Met Ser Asn Leu Ala
1 5

<210> 67
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 67

Arg Leu Ser Asn Leu Ala
1 5

<210> 68
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 68

Arg Leu Ser Ser Leu Ala
1 5

<210> 69
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 69

Arg Ser Ser Lys Ser Leu Leu His Ser Ser Gly Lys Thr Tyr Leu Tyr
1 5 10 15

Trp