

SEQUENCE LISTING

<110> PROMEGA CORPORATION

<120> COMPOSITIONS AND METHODS FOR ANALYTE DETECTION USING BIOLUMINESCENCE

<130> PRMG-35851.601

<150> US 62/832052

<151> 2019-04-10

<160> 730

<170> PatentIn version 3.5

<210> 1

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<213> Artificial sequence

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<400> 1

Met Phe Thr Leu Ala Asp Phe Val Gly Asp Trp Gln Gln Thr Ala Gly
1 5 10 15

Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe
20 25 30

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

Gly Glu Asn Gly Leu Lys Ala Asp Ile His Val Ile Ile Pro Tyr Glu
50 55 60

Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys Val
65 70 75 80

Val Tyr Pro Val Asp Asp His His Phe Lys Ile Ile Leu His Tyr Gly
85 90 95

Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly
100 105 110

Arg Pro Tyr Pro Gly Ile Ala Val Phe Asp Gly Lys Gln Ile Thr Val
115 120 125

Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Tyr Asp Glu Arg Leu Ile
130 135 140

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

Gly Trp Arg Leu Cys Glu Asn Ile Leu Ala
165 170

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<400> 2

Met Phe Thr Leu Ala Asp Phe Val Gly Asp Trp Gln Gln Thr Ala Gly
1 5 10 15

Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe
20 25 30

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

Gly Glu Asn Gly Leu Lys Ala Asp Ile His Val Ile Ile Pro Tyr Glu
50 55 60

Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys Val
65 70 75 80

Val Tyr Pro Val Asp Asp His His Phe Lys Ile Ile Leu His Tyr Gly
85 90 95

Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly
100 105 110

Arg Pro Tyr Pro Gly Ile Ala Val Phe Asp Gly Lys Gln Ile Thr Val
115 120 125

Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Tyr Asp Glu Arg Leu Ile
130 135 140

Asn Pro Asp
145

<210> 3
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<400> 3

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn
1 5 10

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<400> 4

Gly Val Thr Gly Trp Arg Leu Cys Glu Asn Ile Leu Ala
1 5 10

<210> 5
<211> 171
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<213> Artificial sequence

<220>
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<400> 5

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala

1	5	10	15
Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu	20	25	30
Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu	35	40	45
Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr	50	55	60
Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys	65	70	75
Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr	85	90	95
Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe	100	105	110
Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr	115	120	125
Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu	130	135	140
Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val	145	150	155
Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala	165	170	

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 <400> 6

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

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

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp
 145

<210> 7
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<220>
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<400> 7

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Val
 1 5 10

<210> 8
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<220>
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<400> 8

Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 1 5 10

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<220>
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<400> 9

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
 1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp Gly Ser Met Leu Phe Arg Val Thr Ile Asn
145 150 155

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

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<400> 10

Val Thr Gly Tyr Arg Leu Phe Glu Glu Ile Leu
1 5 10

<210> 11
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<400> 11

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
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<213> Artificial sequence

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<400> 12

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
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Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
145 150 155

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<400> 13

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser
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<211> 22

<212> PRT
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<400> 14

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser Gly Trp Arg
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Leu Phe Lys Lys Ile Ser
20

<210> 15
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<400> 15

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
1 5 10

<210> 16
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<400> 16

Gly Lys Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 17
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<400> 17

Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
1 5 10

<210> 18
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<220>
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<400> 18

Val Ser Gly Trp Arg Leu Phe Arg Arg Ile Ser
1 5 10

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<211> 13
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<400> 19

Val Ser Val Ser Gly Trp Arg Leu Phe Arg Arg Ile Ser
1 5 10

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<400> 20

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

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<400> 21

Gly Lys Met Leu Phe Arg Val Thr Ile Asn Lys Trp Lys
1 5 10

<210> 22

<211> 13

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<400> 22

Asp Lys Leu Leu Phe Thr Val Thr Ile Glu Lys Tyr Lys
1 5 10

<210> 23

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<223> synthetic

<400> 23

Lys Lys Met Leu Phe Arg Val Thr Ile Gln Lys Trp Lys
1 5 10

<210> 24

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 24

Gly Arg Leu Leu Phe Val Val Val Ile Glu Arg Tyr Arg
1 5 10

<210> 25

<211> 13

<212> PRT

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<400> 25

Arg	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Gln	Arg	Trp	Arg
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<400> 26

Val	Ser	Gly	Trp	Arg	Leu	Phe	Arg	Arg	Ile	Ser	Cys
1				5					10		

<210> 27

<211> 14

<212> PRT

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<220>

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<400> 27

Gly	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Arg	Cys
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<211> 513

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acccaatcc	agaaagttgt	gctgtctggg	gagaatgggt	taaaagctga	tattcatgtc	180

atcatccctt acgagggact cagtgggtttt caaatgggtc tgattgaaat gatcttcaaa	240
gttgtttacc cagtggatga tcatcatttc aagattattc tccattatgg tacactcggt	300
attgacgggtg tgacaccaaa catgattgac tactttggac gcccttacct tggaattgct	360
gtgtttgacg gcaagcagat cacagttact ggaactctgt ggaacggcaa caagatctat	420
gatgagcgcc tgatcaacct agatgggttca ctctcttcc gcgttactat caatggagtc	480
accggatggc gcctttgcga gaacattctt gcc	513

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ggggactggc gacagacagc cggctacaac ctggaccaag tccttgaaca gggaggtgtg	120
tccagtttgt ttcagaatct cgggggtgtcc gtaactccga tccaaaggat tgtcctgagc	180
ggtgaaaatg ggctgaagat cgacatccat gtcacatcc cgtatgaagg tctgagcggc	240
gaccaaattg gccagatcga aaaaattttt aagggtggtg accctgtgga tgatcatcac	300
tttaagggtga tcctgcacta tggcacactg gtaatcgacg gggttacgcc gaacatgac	360
gactatttcg gacggccgta tgaaggcatc gccgtgttcg acggcaaaaa gatcactgta	420
acagggaccc tgtggaacgg caacaaaatt atcgacgagc gcctgatcaa ccccgacggc	480
tccctgctgt tccgagtaac catcaacgga gtgaccggct ggcggtgtg cgaacgcatt	540
ctggcggtt	549

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<400> 30

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gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta	120
actccgatcc aaaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc	180
atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag	240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta	300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcattgcc	360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc	420
gacgagcgcc tgatcacccc cgacggctcc atgctgttcc gagtaaccat caacagccat	480
catcaccatc accac	495

<210> 31
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 <212> DNA
 <213> Artificial sequence

<220>
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<400> 31	
gtgaccggct accggctggt cgaggagatt ctg	33

<210> 32
 <211> 33
 <212> DNA
 <213> Artificial sequence

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<400> 32	
gtgagcggct ggcggctggt caagaagatt agc	33

<210> 33
 <211> 148
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 33

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
 1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Thr Pro Asp
 145

<210> 34
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 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120

actccgatcc aaaggattgt cgggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccggt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtgggtgtacc ctgtggatga tcatcacttt aagggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcatcgcc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcacccc cgac 444

<210> 35
<211> 155
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 35

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
 145 150 155

<210> 36
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 <212> DNA
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<220>
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<400> 36
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 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgata caaaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggta tgagcgccga ccaaattggc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggatgatc 300
 ctgccctatg gcacactggt aatcgacggg gttacgccga acatgctgaa ctatttcgga 360
 cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcaactgtaac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcaccc ccgac 465

<210> 37
 <211> 148
 <212> PRT
 <213> Artificial sequence

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<400> 37

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
 1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp
145

<210> 38
<211> 444
<212> DNA
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<220>
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<400> 38
atggtcttca cactcgacga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggtct gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcacgcgc 360

gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcacccc cgac 444

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<211> 33
<212> DNA
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<400> 39
ggctccatgc tggtccgagt aaccatcaac agc 33

<210> 40
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<400> 40
gtgagcggct ggcggctgtt caagaagatt agc 33

<210> 41
<211> 148
<212> PRT
<213> Artificial sequence

<220>
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<400> 41

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr

50

55

60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp
145

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<212> DNA
<213> Artificial sequence

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<400> 42
atggtcttca cactcgaaga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgc cgtgtccgta 120
actccgatcc aaaggattgt cctgagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggctc gagcgccgac caaatggccc agatcgaaaa aatttttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgcactatgg cacactggta 300
atcgacgggg ttacgccgaa catgatcaac tatttcggac ggccgtatga aggcacgcc 360
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gacgagcgcc tgatcacccc cgac 444

<210> 43
<211> 11
<212> PRT
<213> Artificial sequence

<220>
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<400> 43

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Val
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<210> 44
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 44
ggctccatgc tgttccgagt aaccatcaac

30

<210> 45
<211> 155
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 45

Met Lys His His His His His Val Phe Thr Leu Glu Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Gln Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala

65		70		75		80									
Gln	Ile	Glu	Glu	Val	Phe	Lys	Val	Val	Tyr	Pro	Val	Asp	Asp	His	His
				85					90					95	

Phe	Lys	Val	Ile	Leu	Pro	Tyr	Gly	Thr	Leu	Val	Ile	Asp	Gly	Val	Thr
			100					105					110		

Pro	Asn	Met	Leu	Asn	Tyr	Phe	Gly	Arg	Pro	Tyr	Glu	Gly	Ile	Ala	Val
		115					120					125			

Phe	Asp	Gly	Lys	Lys	Ile	Thr	Val	Thr	Gly	Thr	Leu	Trp	Asn	Gly	Asn
	130						135					140			

Lys	Ile	Ile	Asp	Glu	Arg	Leu	Ile	Thr	Pro	Asp
145					150					155

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cagaatctcg ccgtgtccgt aactccgatc caaaggattg tccggagcgg tgaaaatgcc	180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc	240
cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggtgatc	300
ctgccctatg gcacactggg aatcgacggg gttacgccga acatgctgaa ctatttcgga	360
cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tctactgtaac agggaccctg	420
tggaacggca acaaaattat cgacgagcgc ctgatcaccc ccgac	465

<210> 47
 <211> 66
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic
 <400> 47
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 attagc 66

<210> 48
 <211> 16
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 48
 Ser Ser Trp Lys Arg Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser
 1 5 10 15

<210> 49
 <211> 48
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 49
 agcagctgga agcgcggctc catgctgttc cgagtaacca tcaacagc 48

<210> 50
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 50
 Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Asp Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Asp Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
145 150 155

<210> 51
<211> 465
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 51
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggt aatcgacggg gatacgccga acaagctgaa ctatttcgga 360

cggccgtatg atggcatcgc cgtgttcgac ggcaaaaaga tcactgtaac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcaccc ccgac 465

<210> 52
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 52

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Ser Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp

145

150

155

<210> 53
 <211> 465
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 53
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 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggg aatcgacggg gttacgccga gcaagctgaa ctatttcgga 360
 cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactgtaac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcaccc ccgac 465

<210> 54
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 54

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Phe Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
145 150 155

<210> 55
<211> 465
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 55
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cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatac atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccc tatgaaggta tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggatgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgtatg aaggcttcgc cgtgttcgac ggcaaaaaga tcaactgtaac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcacc cccgac 465

<210> 56

<211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 56

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Cys Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
 145 150 155

<210> 57
 <211> 465
 <212> DNA
 <213> Artificial sequence

<220>

<223> synthetic

<400> 57

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cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg      120
cagaatctcg ccgtgtccgt aactccgacg atgaggattg tccggagcgg tgaatatgcc      180
ctgaagatcg acatccatgt catcatcccg tatgaaggctc tgagcgccga ccaaatggcc      240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggatgatc      300
ctgccctatg gcacactggt aatcgacggg gttacgccga acaagctgaa ctatttcgga      360
cggccgtatg aaggcatcgc cgtgtgacgac ggcaaaaaga tcaactgtaac agggaccctg      420
tggaacggca acaaaattat cgacgagcgc ctgatcaccc ccgac                        465
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<210> 58

<211> 155

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 58

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Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
1           5           10          15
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Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
          20          25          30
```

```
Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser Val Thr
          35          40          45
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```
Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
          50          55          60
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```
Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65          70          75          80
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```
Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
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85

90

95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly Lys Lys Ile Ser Val Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
 145 150 155

<210> 59
 <211> 465
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 59
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 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcggg 360
 cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tctctgtaac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgacaccc cgcac 465

<210> 60
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 60

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Ala Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
145 150 155

<210> 61

<211> 465

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 61

atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa

60

cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgata atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggctc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggatgatc 300
ctgccctatg gcacactggt aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactgcaac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcacc cgcac 465

<210> 62
<211> 465
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 62
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgata atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggctc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggatgatc 300
ctgccctatg gcacactggt aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcacc cgcac 465

<210> 63
<211> 149
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 63

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp Gly
145

<210> 64
<211> 447
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 64
atggtcttca cactcgacga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180

atcatcccgt atgaaggtct gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
 atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcatcgcc 360
 gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaaattatc 420
 gacgagcgcc tgatcacccc cgacggc 447

<210> 65
 <211> 147
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 65

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
 1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Thr Pro
 145

<210> 66
 <211> 441
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 66
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 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
 actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
 atcatcccgt atgaaggtct gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
 atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcacgcgc 360
 gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaaattatc 420
 gacgagcgcc tgatcacccc c 441

<210> 67
 <211> 146
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 67

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
 1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Leu Gln Asn Leu Ala Val Ser Val Thr Pro Ile Met Arg Ile Val Arg

35

40

45

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Thr
 145

<210> 68
 <211> 438
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 68
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 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
 actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
 atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgccctatgg cacactggta 300
 atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcatcgcc 360
 gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaaattatc 420

gacgagcgcc tgatcacc

438

<210> 69
<211> 150
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 69

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp Gly Ser
145 150

<210> 70
 <211> 450
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 70
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 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
 actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
 atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgccctatgg cacactggta 300
 atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcatcgcc 360
 gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaaattatc 420
 gacgagcgcc tgatcacccc cgacggcagc 450

<210> 71
 <211> 164
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 71

Met Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala
 1 5 10 15

Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu
 20 25 30

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

Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu
 50 55 60

Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val
65 70 75 80

Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr Gly
85 90 95

Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe Gly
100 105 110

Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val
115 120 125

Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile
130 135 140

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

His His His His

<210> 72
<211> 495
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 72
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caagtccttg aacagggagg tgtgtccagt ttgctgcaga atctcgccgt gtccgtaact 120
ccgatccaaa ggattgtccg gagcgggtgaa aatgccctga agatcgacat ccatgtcatc 180
atccccgatg aaggtctgag cgccgaccaa atggcccaga tcgaagaggt gtttaaggtg 240
gtgtaccctg tggatgatca tcactttaag gtgacacctgc cctatggcac actggtaatc 300
gacgggggta cgccgaacat gctgaactat ttcggacggc cgtatgaagg catcgccgtg 360
ttcgacggca aaaagatcac tgtaacaggg accctgtgga acggcaacaa aattatcgac 420
gagcgcctga tcacccccga cggctccatg ctgttccgag taaccatcaa cagccatcat 480

<210> 73
 <211> 163
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 73

Met Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr
 1 5 10 15

Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln
 20 25 30

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

Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly
 50 55 60

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

Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr Gly Thr
 85 90 95

Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe Gly Arg
 100 105 110

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
 115 120 125

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr
 130 135 140

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

His His His

<210> 74
<211> 492
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 74
atgacactcg aagatttcgt tggggactgg gaacagacag cgcctacaa cctggaccaa 60
gtccttgaac agggaggtgt gtccagtttg ctgcagaatc tcgccgtgtc cgtaactccg 120
atccaaagga ttgtccggag cggtgaaaat gccctgaaga tcgacatcca tgtcatcatc 180
ccgtatgaag gtctgagcgc cgaccaaattg gccagatcg aagaggtggt taaggtggtg 240
taccctgtgg atgatcatca ctttaaggtg atcctgccct atggcacact ggtaatcgac 300
ggggttacgc cgaacatgct gaactatttc ggacggccgt atgaaggcat cgccgtgttc 360
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 420
cgcctgatca ccccgacgg ctccatgctg ttccgagtaa ccatcaacag ccatcatcac 480
catcaccact aa 492

<210> 75
<211> 162
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 75

Met Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn
1 5 10 15

Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn
20 25 30

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

Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu
50 55 60

Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr
65 70 75 80

Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu
85 90 95

Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe Gly Arg Pro
100 105 110

Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
115 120 125

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

Asp Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser His His His His
145 150 155 160

His His

<210> 76
<211> 489
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 76
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cttgaacagg gaggtgtgtc cagtttgctg cagaatctcg ccgtgtccgt aactccgata 120
caaaggattg tccggagcgg tgaaaatgcc ctgaagatcg acatccatgt catcatcccc 180
tatgaaggctc tgagcgccga ccaaattggcc cagatcgaag aggtgtttta ggtggtgtac 240
cctgtggatg atcatcactt taaggatgatc ctgccctatg gcacactggt aatcgacggg 300
gttacgccga acatgctgaa ctatttcgga cggccgtatg aaggcatcgc cgtgttcgac 360

ggcaaaaaga tcactgtaac agggaccctg tggaacggca acaaaattat cgacgagcgc 420
 ctgatcacc cgcacggctc catgctgttc cgagtaacca tcaacagcca tcataccat 480
 caccactaa 489

<210> 77
 <211> 161
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 77

Met Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu
 1 5 10 15

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu
 20 25 30

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

Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 50 55 60

Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro
 65 70 75 80

Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val
 85 90 95

Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe Gly Arg Pro Tyr
 100 105 110

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 115 120 125

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

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser His His His His His
 145 150 155 160

His

<210> 78
 <211> 486
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 78
 atggaagatt tcgttgggga ctgggaacag acagccgcct acaacctgga ccaagtcctt 60
 gaacagggag gtgtgtccag tttgctgcag aatctcgccg tgtccgtaac tccgatccaa 120
 aggattgtcc ggagcggatga aaatgccctg aagatcgaca tccatgtcat catcccgtat 180
 gaaggtctga gcgccgacca aatggcccag atcgaagagg tgtttaaggt ggtgtaccct 240
 gtggatgata atcactttaa ggtgatcctg ccctatggca cactggtaat cgacgggggtt 300
 acgccgaaca tgctgaacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc 360
 aaaaagatca ctgtaacagg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 420
 atcacccccg acggctccat gctgttccga gtaaccatca acagccatca tcaccatcac 480
 cactaa 486

<210> 79
 <211> 174
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 79

Met Phe Lys Lys Ile Ser Gly Ser Ser Gly Val Phe Thr Leu Glu Asp
 1 5 10 15

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

Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser
35 40 45

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

Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln
65 70 75 80

Met Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp
85 90 95

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

Val Thr Pro Asn Met Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
115 120 125

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
130 135 140

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met
145 150 155 160

Leu Phe Arg Val Thr Ile Asn Ser His His His His His His
165 170

<210> 80
<211> 525
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 80
atgttcaaga agattagcgg ctcgagcggg gtcttcacac tcgaagattt cgttggggac 60
tgggaaacaga cagccgccta caacctggac caagtccttg aacagggagg tgtgtccagt 120
ttgctgcaga atctcgccgt gtccgtaact ccgatccaaa ggattgtccg gagcgggtgaa 180

aatgccctga agatcgacat ccatgtcatc atcccgtatg aaggtctgag cgccgaccaa 240
atggcccaga tcgaagaggt gtttaaggtg gtgtaccctg tggatgatca tcactttaag 300
gtgatcctgc cctatggcac actggtaatc gacgggggta cgccgaacat gctgaactat 360
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg 420
accctgtgga acggcaacaa aattatcgac gagcgcctga tcacccccga cggctccatg 480
ctgttccgag taaccatcaa cagccatcat caccatcacc actaa 525

<210> 81
<211> 173
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 81

Met Lys Lys Ile Ser Gly Ser Ser Gly Val Phe Thr Leu Glu Asp Phe
1 5 10 15

Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu
20 25 30

Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser Val
35 40 45

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

Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met
65 70 75 80

Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His
85 90 95

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

Thr Pro Asn Met Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala
115 120 125

Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly
 130 135 140

Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met Leu
 145 150 155 160

Phe Arg Val Thr Ile Asn Ser His His His His His
 165 170

<210> 82
 <211> 522
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 82
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 gaacagacag ccgcctacaa cctggaccaa gtccttgaac agggaggtgt gtccagtttg 120
 ctgcagaatc tcgccgtgtc cgtaactccg atccaaagga ttgtccggag cggtgaaaat 180
 gccctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgc cgaccaaattg 240
 gcccagatcg aagaggtggt taagggtggtg taccctgtgg atgatcatca ctttaagggtg 300
 atcctgccct atggcacact ggtaatcgac ggggttacgc cgaacatgct gaactatttc 360
 ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aacagggacc 420
 ctgtggaacg gcaacaaaat tatcgacgag cgcctgatca ccccgacgg ctccatgctg 480
 ttccgagtaa ccatcaacag ccatcatcac catcaccact aa 522

<210> 83
 <211> 172
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 83

Met Lys Ile Ser Gly Ser Ser Gly Val Phe Thr Leu Glu Asp Phe Val

1	5	10	15
Gly Asp Trp	Glu Gln Thr	Ala Ala Tyr	Asn Leu Asp
	20	25	30
Gln Gly Gly	Val Ser Ser	Leu Leu Gln	Asn Leu Ala
	35	40	45
Pro Ile Gln	Arg Ile Val	Arg Ser Gly	Glu Asn Ala
	50	55	60
Ile His Val	Ile Ile Pro	Tyr Glu Gly	Leu Ser Ala
65	70	75	80
Gln Ile Glu	Glu Val Phe	Lys Val Val	Tyr Pro Val
	85	90	95
Phe Lys Val	Ile Leu Pro	Tyr Gly Thr	Leu Val Ile
	100	105	110
Pro Asn Met	Leu Asn Tyr	Phe Gly Arg	Pro Tyr Glu
	115	120	125
Phe Asp Gly	Lys Lys Ile	Thr Val Thr	Gly Thr Leu
130	135	140	
Lys Ile Ile	Asp Glu Arg	Leu Ile Thr	Pro Asp Gly
145	150	155	
Arg Val Thr	Ile Asn Ser	His His His	His His His
	165	170	

<210> 84
 <211> 519
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 84
 atgaagatta gcggctcgag cggtgtcttc acactcgaag atttcgttgg ggactgggaa

60

cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgata caaaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggta tgagcgccga ccaaatggcc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggt aatcgacggg gttacgccga acatgctgaa ctatttcgga 360
 cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactgtaac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcacc cgcacggctc catgctgttc 480
 cgagtaacca tcaacagcca tcatcaccat caccactaa 519

<210> 85
 <211> 171
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 85

Met Ile Ser Gly Ser Ser Gly Val Phe Thr Leu Glu Asp Phe Val Gly
 1 5 10 15

Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln
 20 25 30

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

Ile Gln Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile
 50 55 60

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln
 65 70 75 80

Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 85 90 95

Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro

100

105

110

Asn Met Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 115 120 125

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
 130 135 140

Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met Leu Phe Arg
 145 150 155 160

Val Thr Ile Asn Ser His His His His His His
 165 170

<210> 86
 <211> 516
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 86
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 acagccgcct acaacctgga ccaagtcctt gaacagggag gtgtgtccag tttgctgcag 120
 aatctcgccg tgtccgtaac tccgatccaa aggattgtcc ggagcgggtga aaatgccctg 180
 aagatcgaca tccatgtcat catcccgtat gaaggtctga gcgccgacca aatggcccag 240
 atcgaagagg tgtttaaggt ggtgtaccct gtggatgatc atcactttaa ggtgatcctg 300
 ccctatggca cactggtaat cgacgggggtt acgccgaaca tgctgaacta tttcggacgg 360
 ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctgtaacagg gaccctgtgg 420
 aacggcaaca aaattatcga cgagcgcctg atcaccccg acggctccat gctgttccga 480
 gtaaccatca acagccatca tcaccatcac cactaa 516

<210> 87
 <211> 170
 <212> PRT
 <213> Artificial sequence

<220>

<223> synthetic

<400> 87

Met Ser Gly Ser Ser Gly Val Phe Thr Leu Glu Asp Phe Val Gly Asp
1 5 10 15

Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly
20 25 30

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

Gln Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His
50 55 60

Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile
65 70 75 80

Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys
85 90 95

Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn
100 105 110

Met Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp
115 120 125

Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
130 135 140

Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met Leu Phe Arg Val
145 150 155 160

Thr Ile Asn Ser His His His His His His
165 170

<210> 88

<211> 513

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 88

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atgagcggct cgagcgggtgt cttcacactc gaagatttcg ttggggactg ggaacagaca      60
gccgcctaca acctggacca agtccttgaa caggaggtg tgtccagttt gctgcagaat      120
ctcgccgtgt ccgtaactcc gatccaaagg attgtccgga gcggtgaaaa tgccctgaag      180
atcgacatcc atgtcatcat cccgtatgaa ggtctgagcg ccgaccaaatt ggcccagatc      240
gaagaggtgt ttaaggtggt gtaccctgtg gatgatcatc actttaaggt gatcctgccc      300
tatggcacac tggtaatcga cggggttacg ccgaacatgc tgaactatct cggacggccg      360
tatgaaggca tcgccgtgtt cgacggcaaa aagatcactg taacagggac cctgtggaac      420
ggcaacaaaa ttatcgacga ggcctgatc acccccgacg gtcctatgct gttccagta      480
accatcaaca gccatcatca ccatcaccac taa                                     513
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<210> 89

<211> 158

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 89

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Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
1           5           10          15
```

```
Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
          20          25          30
```

```
Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser Val Thr
          35          40          45
```

```
Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
          50          55          60
```

```
Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65          70          75          80
```

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met
145 150 155

<210> 90
<211> 477
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 90
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cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaatggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcacc cgcacggcag catgtaa 477

<210> 91
<211> 159
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 91

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met Leu
145 150 155

<210> 92

<211> 480

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 92

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60

cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcacc cgcacggcag catgctgtaa 480

<210> 93
 <211> 160
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 93

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met Leu Phe
145 150 155 160

<210> 94
<211> 483
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 94
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cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcaccc ccgacggcag catgctgttc 480
taa 483

<210> 95
<211> 152
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 95

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile
145 150

<210> 96
<211> 459
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 96
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180

ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatctaa 459

<210> 97
<211> 151
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 97

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu
 145 150

<210> 98
 <211> 456
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 98
 atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgac atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgtaa 456

<210> 99
 <211> 150
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 99

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser Val Thr

35

40

45

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg
 145 150

<210> 100
 <211> 453
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 100
 atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggt aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420

tggaacggca acaaaattat cgacgagcgc taa

453

<210> 101
<211> 123
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 101

Met Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu
1 5 10 15

Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu
20 25 30

Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu
35 40 45

Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala
50 55 60

Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu
65 70 75 80

Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Gly
85 90 95

Gly Ser Gly Gly Gly Gly Ser Gly Gly Ser Ser Ser Gly Gly Ala Ile
100 105 110

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
115 120

<210> 102
<211> 372
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 102
atggtggcca tcctctggca tgagatgtgg catgaaggcc tggaagaggc atctcgtttg 60
tactttgggg aaaggaacgt gaaaggcatg tttgaggtgc tggagccctt gcatgctatg 120
atggaacggg gccccagac tctgaaggaa acatccttta atcaggccta tggtcgagat 180
ttaatggagg cccaagagtg gtgcaggaag tacatgaaat cagggaatgt caaggacctc 240
acccaagcct gggacctcta ttatcatgtg ttccgacgaa tcagtgggtg ttcaggtggt 300
ggcgggagcg gtggctcgag cagcgggtgga gcgatcgtga gcggctggcg gctgttcaag 360
aagattagct aa 372

<210> 103
<211> 125
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 103

Met Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu
1 5 10 15

Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu
20 25 30

Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu
35 40 45

Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala
50 55 60

Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu
65 70 75 80

Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Gly
85 90 95

Gly Ser Gly Gly Gly Gly Ser Gly Gly Ser Ser Ser Gly Gly Ala Ile
100 105 110

Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
 115 120 125

<210> 104
 <211> 378
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 104
 atggtggcca tcctctggca tgagatgtgg catgaaggcc tggaagaggc atctcgtttg 60
 tactttgggg aaaggaacgt gaaaggcatg tttgaggtgc tggagccctt gcatgctatg 120
 atggaacggg gccccagac tctgaaggaa acatccttta atcaggccta tggtcgagat 180
 ttaatggagg cccaagagtg gtgcaggaag tacatgaaat cagggaatgt caaggacctc 240
 acccaagcct gggacctcta ttatcatgtg ttccgacgaa tcagtgggtg ttcaggtggt 300
 ggcgggagcg gtggctcgag cagcgggtgga gcgatcgta gcgttagcgg ctggcgcctg 360
 ttcaagaaga tcagctaa 378

<210> 105
 <211> 129
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 105

Met Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu
 1 5 10 15

Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu
 20 25 30

Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu
 35 40 45

Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala

50

55

60

Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu
65 70 75 80

Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Gly
85 90 95

Gly Ser Gly Gly Gly Gly Ser Gly Gly Ser Ser Ser Gly Gly Ala Ile
100 105 110

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser His His His His His
115 120 125

His

<210> 106
<211> 390
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 106
atggtggcca tcctctggca tgagatgtgg catgaaggcc tggaagaggc atctcgtttg 60
tactttgggg aaaggaacgt gaaaggcatg tttgaggtgc tggagccctt gcatgctatg 120
atggaacggg gccccagac tctgaaggaa acatccttta atcaggccta tggtcgagat 180
ttaatggagg cccaagagtg gtgcaggaag tacatgaaat cagggaatgt caaggacctc 240
acccaagcct gggacctcta ttatcatgtg ttccgacgaa tcagtgggtg ttcaggtggt 300
ggcgggagcg gtggctcgag cagcgggtgga gcgatcgtga gcggctggcg gctgttcaag 360
aagattagcc atcatcacca tcaccactaa 390

<210> 107
<211> 131
<212> PRT
<213> Artificial sequence

<220>

<223> synthetic

<400> 107

Met Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu
1 5 10 15

Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu
20 25 30

Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu
35 40 45

Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala
50 55 60

Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu
65 70 75 80

Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Gly
85 90 95

Gly Ser Gly Gly Gly Gly Ser Gly Gly Ser Ser Ser Gly Gly Ala Ile
100 105 110

Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser His His His
115 120 125

His His His
130

<210> 108

<211> 396

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 108

atggtggcca tcctctggca tgagatgtgg catgaaggcc tggagaggc atctcgtttg 60

tactttgggg aaaggaacgt gaaaggcatg tttgaggtgc tggagccctt gcatgctatg 120

atggaacggg gccccagac tctgaaggaa acatccttta atcaggccta tggtcgagat 180
 ttaatggagg cccaagagtg gtgcaggaag tacatgaaat cagggaatgt caaggacctc 240
 acccaagcct gggacctcta ttatcatgtg ttccgacgaa tcagtgggtggt ttcaggtggt 300
 ggcgaggagcg gtggctcgag cagcggtgga gcgatcgta gcgtgagcgg ctggcggctg 360
 ttcaagaaga ttagccatca tcaccatcac cactaa 396

<210> 109
 <211> 118
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 109

Met Lys His His His His His Val Ala Ile Leu Trp His Glu Met
 1 5 10 15

Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg
 20 25 30

Asn Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met
 35 40 45

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

Gly Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys
 65 70 75 80

Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His
 85 90 95

Val Phe Arg Arg Ile Ser Gly Gly Ser Gly Gly Val Ser Gly Trp Arg
 100 105 110

Leu Phe Lys Lys Ile Ser
 115

<210> 110
 <211> 357
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 110
 atgaaacatc accatcacca tcatgtggcc atcctctggc atgagatgtg gcatgaaggc 60
 ctggaagagg catctcgttt gtactttggg gaaaggaacg tgaaaggcat gtttgaggtg 120
 ctggagccct tgcattgctat gatggaacgg ggccccaga ctctgaagga aacatccttt 180
 aatcaggcct atggtcgaga tttaatggag gcccaagagt ggtgcaggaa gtacatgaaa 240
 tcagggaatg tcaaggacct cacccaagcc tgggacctct attatcatgt gttccgacga 300
 atcagtgggtg gttcaggtgg tgtgagcggc tggcggctgt tcaagaagat tagctaa 357

<210> 111
 <211> 123
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 111

Met	Lys	His	His	His	His	His	His	Val	Ala	Ile	Leu	Trp	His	Glu	Met
1				5				10						15	

Trp	His	Glu	Gly	Leu	Glu	Glu	Ala	Ser	Arg	Leu	Tyr	Phe	Gly	Glu	Arg
			20					25					30		

Asn	Val	Lys	Gly	Met	Phe	Glu	Val	Leu	Glu	Pro	Leu	His	Ala	Met	Met
		35					40					45			

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

Gly	Arg	Asp	Leu	Met	Glu	Ala	Gln	Glu	Trp	Cys	Arg	Lys	Tyr	Met	Lys
65					70				75						80

Ser	Gly	Asn	Val	Lys	Asp	Leu	Thr	Gln	Ala	Trp	Asp	Leu	Tyr	Tyr	His
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

85

90

95

Val Phe Arg Arg Ile Ser Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 100 105 110

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
 115 120

<210> 112
 <211> 372
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 112
 atgaaacatc accatcacca tcatgtggcc atcctctggc atgagatgtg gcatgaaggc 60
 ctggaagagg catctcgttt gtactttggg gaaaggaacg tgaaaggcat gtttgaggtg 120
 ctggagccct tgcattgctat gatggaacgg ggcccccaga ctctgaagga aacatccttt 180
 aatcaggcct atggctcgaga tttaatggag gcccaagagt ggtgcaggaa gtacatgaaa 240
 tcagggaatg tcaaggacct cacccaagcc tgggacctct attatcatgt gttccgacga 300
 atcagtgggtg gttcaggtgg tggcgggagc ggtggcgtga gcggctggcg gctgttcaag 360
 aagattagct aa 372

<210> 113
 <211> 128
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 113

Met Lys His His His His His His Val Ala Ile Leu Trp His Glu Met
 1 5 10 15

Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg
 20 25 30

Asn Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met
35 40 45

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

Gly Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys
65 70 75 80

Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His
85 90 95

Val Phe Arg Arg Ile Ser Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
100 105 110

Ser Ser Ser Gly Gly Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
115 120 125

<210> 114
<211> 387
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 114
atgaaacatc accatcacca tcatgtggcc atcctctggc atgagatgtg gcatgaaggc 60
ctggaagagg catctcgttt gtactttggg gaaaggaacg tgaaaggcat gtttgaggtg 120
ctggagccct tgcattgctat gatggaacgg ggccccaga ctctgaagga aacatccttt 180
aatcaggcct atggctcaga tttaatggag gcccaagagt ggtgcaggaa gtacatgaaa 240
tcagggaatg tcaaggacct cacccaagcc tgggacctct attatcatgt gttccgacga 300
atcagtgggtg gttcaggtgg tggcgggagc ggtggctcga gcagcgggtg agtgagcggc 360
tggcggctgt tcaagaagat tagctaa 387

<210> 115
<211> 120
<212> PRT
<213> Artificial sequence

<220>

<223> synthetic

<400> 115

Met Lys His His His His His His Val Ala Ile Leu Trp His Glu Met
1 5 10 15

Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg
20 25 30

Asn Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met
35 40 45

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

Gly Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys
65 70 75 80

Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His
85 90 95

Val Phe Arg Arg Ile Ser Gly Gly Ser Gly Gly Val Ser Val Ser Gly
100 105 110

Trp Arg Leu Phe Lys Lys Ile Ser
115 120

<210> 116

<211> 363

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 116

atgaaacatc accatcacca tcatgtggcc atcctctggc atgagatgtg gcatgaaggc 60
ctggaagagg catctcgttt gtactttggg gaaaggaacg tgaaaggcat gtttgagggtg 120
ctggagccct tgcatacctat gatggaacgg ggccccaga ctctgaagga aacatccttt 180
aatcaggcct atggctcaga tttaatggag gcccaagagt ggtgcaggaa gtacatgaaa 240

tcaggaatg tcaaggacct cacccaagcc tgggacctct attatcatgt gttccgacga 300
atcagtgggtg gttcaggtgg tgtttagcggt agcggctggc gcctgttcaa gaagatcagc 360
taa 363

<210> 117
<211> 125
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 117

Met Lys His His His His His Val Ala Ile Leu Trp His Glu Met
1 5 10 15

Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg
20 25 30

Asn Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met
35 40 45

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

Gly Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys
65 70 75 80

Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His
85 90 95

Val Phe Arg Arg Ile Ser Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
100 105 110

Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
115 120 125

<210> 118
<211> 378
<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 118

```
atgaaacatc accatcacca tcatgtggcc atcctctggc atgagatgtg gcatgaaggc      60
ctggaagagg catctcgttt gtactttggg gaaaggaacg tgaaaggcat gtttgaggtg      120
ctggagccct tgcattgctat gatggaacgg ggccccaga ctctgaagga aacatccttt      180
aatcaggcct atggctgaga tttaatggag gcccaagagt ggtgcaggaa gtacatgaaa      240
tcagggaatg tcaaggacct cacccaagcc tgggacctct attatcatgt gttccgacga      300
atcagtgggtg gttcaggtgg tggcgggagc ggtggcggtta gcgttagcgg ctggcgcctg      360
ttcaagaaga tcagctaa                                     378
```

<210> 119

<211> 130

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 119

```
Met Lys His His His His His His Val Ala Ile Leu Trp His Glu Met
1           5           10           15
```

```
Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg
          20           25           30
```

```
Asn Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met
          35           40           45
```

```
Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr
          50           55           60
```

```
Gly Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys
          65           70           75           80
```

```
Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His
          85           90           95
```


Val Phe Arg Arg Ile Ser Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
100 105 110

Ser Ser Ser Gly Gly Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys
115 120 125

Ile Ser
130

<210> 120
<211> 393
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 120
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ctggaagagg catctcgttt gtactttggg gaaaggaacg tgaaaggcat gtttgaggtg 120
ctggagccct tgcattgctat gatggaacgg ggccccaga ctctgaagga aacatccttt 180
aatcaggcct atggctcaga tttaatggag gcccaagagt ggtgcaggaa gtacatgaaa 240
tcagggaatg tcaaggacct cacccaagcc tgggacctct attatcatgt gttccgacga 300
atcagtgggtg gttcaggtgg tggcgggagc ggtggctcga gcagcgggtg agtttagcgtt 360
agcggctggc gcctgttcaa gaagatcagc taa 393

<210> 121
<211> 134
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 121

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

Gly Gly Gly Ser Gly Gly Gly Ser Ser Gly Gly Gly Val Gln Val Glu

20

25

30

Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe Pro Lys Arg Gly Gln Thr
 35 40 45

Cys Val Val His Tyr Thr Gly Met Leu Glu Asp Gly Lys Lys Phe Asp
 50 55 60

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

Glu Val Ile Arg Gly Trp Glu Glu Gly Val Ala Gln Met Ser Val Gly
 85 90 95

Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp Tyr Ala Tyr Gly Ala Thr
 100 105 110

Gly His Pro Gly Ile Ile Pro Pro His Ala Thr Leu Val Phe Asp Val
 115 120 125

Glu Leu Leu Lys Leu Glu
 130

<210> 122
 <211> 405
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 122
 atgggctcca tgctgttccg agtaaccatc aacagctcga gttcaggtgg tggcgggagc 60
 ggtggaggga gcagcgggtgg aggagtgcag gtggaaacca tctccccagg agacgggcg 120
 accttcccca agcgcggcca gacctgcgtg gtgcactaca ccgggatgct tgaagatgga 180
 aagaaatttg attcctcccg ggacagaaac aagcccttta agtttatgct aggcaagcag 240
 gaggtgatcc gaggtggga agaaggggtt gccagatga gtgtgggtca gagagccaaa 300
 ctgactatat ctccagatta tgcctatggt gccactgggc acccaggcat catccacca 360
 catgccactc tcgtcttcga tgtggagctt ctaaaactgg aataa 405

<210> 123
 <211> 136
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 123

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Ser Gly
 100 105 110

Gly Gly Gly Ser Gly Gly Ser Ser Ser Gly Gly Ala Ile Gly Ser Met
 115 120 125

Leu Phe Arg Val Thr Ile Asn Ser
 130 135

<210> 124
 <211> 408
 <212> DNA
 <213> Artificial sequence

<220>

<223> synthetic

<400> 124

```
atgggagtg c aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc      60
cagacctgcg tgggtgcacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc      120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg      180
gaagaagggg ttgccagat  gagtgtgggt cagagagcca aactgactat atctccagat      240
tatgcctatg gtgccactgg gcacccaggc atcatccac  cacatgccac tctcgtcttc      300
gatgtggagc ttctaaaact ggaaggtggt tcaggtggtg gcgggagcgg tggctcgagc      360
agcgggtggag cgatcggctc catgctgttc cgagtaacca tcaacagc      408
```

<210> 125

<211> 165

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 125

```
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1           5           10           15
```

```
Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
          20           25           30
```

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

```
Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
          50           55           60
```

```
Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
          65           70           75           80
```

```
Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
          85           90           95
```

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

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

His His His His His
165

<210> 126
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 126
atggtcttca cactcgaaga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatcc aaaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcacgcc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420
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<400> 127

Asn	Val	Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser	Asn
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<400> 128

Asn	Val	Thr	Gly	Tyr	Arg	Leu	Phe	Lys	Lys	Ile	Ser	Asn
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<400> 129

Val	Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser	Asn
1				5					10		

<210> 130

<211> 11

<212> PRT

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<400> 130

Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser	Asn
1				5					10	

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<400> 131

Gly Trp Arg Leu Phe Lys Lys Ile Ser Asn
1 5 10

<210> 132
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<400> 132

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

<210> 133
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<400> 133

Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
1 5 10

<210> 134
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<400> 134

Val Ser Gly Trp Arg Leu
1 5

<210> 135
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<400> 135

Val Ser Gly Trp Arg Leu Phe
1 5

<210> 136
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<400> 136

Val Ser Gly Trp Arg Leu Phe Lys
1 5

<210> 137
<211> 9
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<400> 137

Val Ser Gly Trp Arg Leu Phe Lys Lys
1 5

<210> 138
<211> 10
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<400> 138

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile
1 5 10

<210> 139
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<213> Artificial sequence

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<400> 139

Val Ser Gly Trp Arg Leu Tyr Lys Lys Ile Ser
1 5 10

<210> 140
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<400> 140

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

Leu Phe Lys Lys Ile Ser
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<210> 141
<211> 22
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<220>
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<400> 141

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

Leu Phe Glu Glu Ile Leu
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<210> 142
<211> 16
<212> PRT
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<400> 142

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Ser	Ser	Trp	Lys	Arg
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<220>
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<400> 143

Val	Ser	Gly	Val	Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser
1			5					10					

<210> 144
<211> 12
<212> PRT
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<400> 144

Val	Val	Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser
1			5					10			

<210> 145
<211> 15
<212> PRT
<213> Artificial sequence

<220>
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<400> 145

Ser Ser Trp Lys Arg Ser Met Leu Phe Arg Val Thr Ile Asn Ser
 1 5 10 15

<210> 146
 <211> 14
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 146

Ser Ser Trp Lys Arg Met Leu Phe Arg Val Thr Ile Asn Ser
 1 5 10

<210> 147
 <211> 17
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 147

Ser Ser Trp Lys Arg Asp Gly Ser Met Leu Phe Arg Val Thr Ile Asn
 1 5 10 15

Ser

<210> 148
 <211> 18
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 148

Ser Ser Trp Lys Arg Pro Asp Gly Ser Met Leu Phe Arg Val Thr Ile
 1 5 10 15

Asn Ser

<210> 149
<211> 16
<212> PRT
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<220>
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<400> 149

Ser	Ser	Trp	Lys	Arg	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Val
1				5					10					15	

<210> 150
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<400> 150

Ser	Ser	Trp	Lys	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Val
1				5					10				15	

<210> 151
<211> 18
<212> PRT
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<400> 151

Ser	Ser	Trp	Lys	Arg	Asp	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn
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Ser Val

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<400> 152

Ser	Ser	Trp	Lys	Arg	Pro	Asp	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile
1				5					10					15	

Asn Ser Val

<210> 153

<211> 17

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<400> 153

Ser	Ser	Trp	Lys	Arg	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Val
1				5					10					15	

Ser

<210> 154

<211> 16

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<400> 154

Ser	Ser	Trp	Lys	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Val	Ser
1				5					10					15	

<210> 155

<211> 19

<212> PRT

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<220>

<223> synthetic

<400> 155

Ser Ser Trp Lys Arg Asp Gly Ser Met Leu Phe Arg Val Thr Ile Asn
1 5 10 15

Ser Val Ser

<210> 156
<211> 20
<212> PRT
<213> Artificial sequence

<220>
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<400> 156

Ser Ser Trp Lys Arg Pro Asp Gly Ser Met Leu Phe Arg Val Thr Ile
1 5 10 15

Asn Ser Val Ser
20

<210> 157
<211> 15
<212> PRT
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<400> 157

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

<210> 158
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<220>
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<400> 158

Ser Ser Trp Lys Arg Gly Ser Met Leu Phe Arg Val Thr Ile
1 5 10

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<400> 159

Ser Ser Trp Lys Arg Ser Met Leu Phe Arg Val Thr Ile Asn
1 5 10

<210> 160
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<400> 160

Ser Ser Trp Lys Arg Met Leu Phe Arg Val Thr Ile Asn
1 5 10

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<400> 161

Ser Ser Trp Lys Arg Asp Gly Ser Met Leu Phe Arg Val Thr Ile Asn
1 5 10 15

<210> 162
<211> 17
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<400> 162

Ser	Ser	Trp	Lys	Arg	Pro	Asp	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile
1				5					10					15	

Asn

<210> 163
 <211> 13
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<220>
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<400> 163

Ser	Ser	Trp	Lys	Arg	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile
1				5					10			

<210> 164
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<220>
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<400> 164

Ser	Ser	Trp	Lys	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile
1				5					10		

<210> 165
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<400> 165

Ser	Ser	Trp	Lys	Arg	Asp	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile
1				5					10					15

<210> 166
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<212> PRT
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<400> 166

Ser	Ser	Trp	Lys	Arg	Pro	Asp	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile
1				5					10					15	

<210> 167
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<400> 167

Val	Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser	Val	Phe	Thr	Leu
1				5					10					15

<210> 168
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<400> 168

Val	Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser	Val	Phe	Thr
1				5					10				

<210> 169
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<400> 169

Val	Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser	Val	Phe
1				5					10			

<210> 170
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<400> 170

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Val
1 5 10

<210> 171
<211> 11
<212> PRT
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<400> 171

Val Ser Gly Trp Arg Leu Cys Lys Lys Ile Ser
1 5 10

<210> 172
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<220>
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<400> 172

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser Met Leu Phe
1 5 10 15

Arg Val Thr Ile Asn Ser
20

<210> 173
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<400> 173

Ser Ser Trp Lys Arg Leu Phe Arg Val Thr Ile Asn Ser
1 5 10

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<400> 174

Ser Ser Trp Lys Arg Phe Arg Val Thr Ile Asn Ser
1 5 10

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<400> 175

Ser Ser Trp Lys Arg Arg Val Thr Ile Asn Ser
1 5 10

<210> 176

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<400> 176

Ser Ser Trp Lys Arg Thr Pro Asp Gly Ser Met Leu Phe Arg Val Thr
1 5 10 15

Ile Asn Ser

<210> 177
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<400> 177

Ser	Ser	Trp	Lys	Arg	Ile	Thr	Pro	Asp	Gly	Ser	Met	Leu	Phe	Arg	Val
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Thr	Ile	Asn	Ser
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1				5					10					15	

Val	Thr	Ile	Asn	Ser
				20

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Ser	Ser	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
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Ser	Lys	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Ser
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<210> 181
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<400> 181

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

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<400> 182

Ser	Ser	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Lys
1				5					10				

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<400> 183

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

<210> 184
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<400> 184

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

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<400> 185

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

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Ser	Ser	Trp	Lys	Arg	Gly	Ser	Leu	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser
1				5					10					15	

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<400> 187

Ser Ser Trp Lys Arg Gly Ser Lys Leu Phe Arg Val Thr Ile Asn Ser
1 5 10 15

<210> 188
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<400> 188

Ser Ser Trp Lys Arg Gly Ser Arg Leu Phe Arg Val Thr Ile Asn Ser
1 5 10 15

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<400> 189

Ser Ser Trp Lys Arg Gly Ser Phe Leu Phe Arg Val Thr Ile Asn Ser
1 5 10 15

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<400> 190

Ser Ser Trp Lys Arg Gly Ser Trp Leu Phe Arg Val Thr Ile Asn Ser
1 5 10 15

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<400> 191

Ser	Ser	Trp	Lys	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Ser	Ile	Asn	Ser
1				5					10					15	

<210> 192

<211> 16

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<400> 192

Ser	Ser	Trp	Lys	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Gln	Ile	Asn	Ser
1				5					10					15	

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Ser	Ser	Trp	Lys	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Asn	Ile	Asn	Ser
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<210> 194

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<400> 194

Ser	Ser	Trp	Lys	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser
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Cys

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<400> 195

Cys Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
1 5 10

<210> 196
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<400> 196

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

Lys

<210> 197
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<400> 197

Lys Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
1 5 10

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<400> 198

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
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Leu Cys Glu Asn Ile Leu Ala
20

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<400> 199

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Val Gly Val Thr Gly Trp
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Arg Leu Cys Glu Arg Ile Leu Ala
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<400> 200

Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
1 5 10

<210> 201

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<212> PRT

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<400> 201

Asn Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
 1 5 10

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<400> 202

Gly Trp Arg Leu Phe Lys Lys Ile Ser
 1 5

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<400> 204

Met Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser His His His His
1 5 10 15

His His His His Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln
20 25 30

Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser
35 40 45

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

Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile
65 70 75 80

Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val
85 90 95

Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu
100 105 110

Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn
115 120 125

Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys
130 135 140

Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu
145 150 155 160

Arg Leu Ile Thr Pro Asp
165

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<211> 510

<212> DNA

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gtaatcgacg gggttacgcc gaacaagctg aactattttc gacggccgta tgaaggcatc      420
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<400> 206

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

90

95

Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys
 100 105 110

Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn
 115 120 125

Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp
 130 135 140

Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
 145 150 155 160

Ile Asp Glu Arg Leu Ile Thr Pro Asp
 165

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<210> 208
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<400> 208

Met Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu
1 5 10 15

Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu
20 25 30

Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu
35 40 45

Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala
50 55 60

Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu
65 70 75 80

Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Gly
85 90 95

Gly Ser Gly Gly Gly Gly Ser Gly Gly Ser Ser Ser Gly Gly Val Ser
100 105 110

Gly Trp Arg Leu Phe Lys Lys Ile Ser
115 120

<210> 209

<211> 372

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 209

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atggaacggg gccccagac tctgaaggaa acatccttta atcaggccta tggtcgagat 180

ttaatggagg cccaagagtg gtgcaggaag tacatgaaat cagggaatgt caaggacctc 240

acccaagcct gggacctcta ttatcatgtg ttccgacgaa tcagtgggtgg ttcaggtggt 300
 ggcgggagcg gtggctcgag cagcgggtgga gttagcgta gcggctggcg cctgttcaag 360
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<210> 210
 <211> 123
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 210

Met Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu
 1 5 10 15

Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu
 20 25 30

Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu
 35 40 45

Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala
 50 55 60

Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu
 65 70 75 80

Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser Gly
 85 90 95

Gly Ser Gly Gly Gly Gly Ser Gly Gly Ser Ser Ser Gly Gly Val Ser
 100 105 110

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
 115 120

<210> 211
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 <212> DNA
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<400> 211

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cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
gaagaagggg ttgccagat gagggtgggt cagagagcca aactgactat atctccagat 240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
gatgtggagc ttctaaaact ggaaggtggt tcaggtggtg gcgggagcgg tggctcgagc 360
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<210> 212

<211> 123

<212> PRT

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<220>

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<400> 212

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Ser Gly
100 105 110

Gly Gly Gly Ser Gly Gly Ser Ser Ser Gly Gly
115 120

<210> 213
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<212> PRT
<213> Artificial sequence

<220>
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<400> 213

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Val
1 5 10

<210> 214
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 214

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser
1 5 10

<210> 215
<211> 12
<212> PRT
<213> Artificial sequence

<220>
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<400> 215

Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser Gly
1 5 10

<210> 216
<211> 13

<212> PRT
<213> Artificial sequence

<220>
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<400> 216

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

<210> 217
<211> 14
<212> PRT
<213> Artificial sequence

<220>
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<400> 217

Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser Gly Trp Lys
1 5 10

<210> 218
<211> 14
<212> PRT
<213> Artificial sequence

<220>
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<400> 218

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

<210> 219
<211> 14
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<220>
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<400> 219

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser Gly
1 5 10

<210> 220
<211> 15
<212> PRT
<213> Artificial sequence

<220>
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<400> 220

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Val	Ser	Gly	Trp
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<210> 221
<211> 16
<212> PRT
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<220>
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<400> 221

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

<210> 222
<211> 16
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<220>
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<400> 222

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

<210> 223
<211> 11
<212> PRT
<213> Artificial sequence

<220>
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<400> 223

Gly Ser Met Leu Phe Arg Val Thr Ile Trp Lys
1 5 10

<210> 224
<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 224

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 225
<211> 11
<212> PRT
<213> Artificial sequence

<220>
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<400> 225

Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 226
<211> 11
<212> PRT
<213> Artificial sequence

<220>
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<400> 226

Met Leu Phe Arg Val Thr Ile Asn Ser Trp Ser
1 5 10

<210> 227
<211> 9
<212> PRT
<213> Artificial sequence

<220>
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<400> 227

Met Leu Phe Arg Val Thr Ile Trp Ser
1 5

<210> 228

<211> 9

<212> PRT

<213> Artificial sequence

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<223> synthetic

<400> 228

Met Leu Phe Arg Val Thr Ile Trp Lys
1 5

<210> 229

<211> 9

<212> PRT

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<220>

<223> synthetic

<400> 229

Met Leu Phe Arg Val Lys Ile Asn Ser
1 5

<210> 230

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 230

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

<210> 231

<211> 11

<212> PRT

<213> Artificial sequence

<220>

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<400> 231

Gly	Ser	Met	Leu	Phe	Arg	Val	Lys	Ile	Asn	Ser
1				5					10	

<210> 232

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 232

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Ser
1				5					10	

<210> 233

<211> 9

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 233

Met	Leu	Phe	Arg	Val	Asn	Ile	Asn	Ser
1				5				

<210> 234

<211> 9

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 234

Met	Leu	Phe	Arg	Val	Trp	Ile	Asn	Ser
1				5				

<210> 235

<211> 9
<212> PRT
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<220>
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<400> 235

Leu Leu Phe Arg Val Lys Ile Asn Ser
1 5

<210> 236
<211> 9
<212> PRT
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<220>
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<400> 236

Phe Leu Phe Arg Val Thr Ile Asn Ser
1 5

<210> 237
<211> 17
<212> PRT
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<220>
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<400> 237

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

Val

<210> 238
<211> 18
<212> PRT
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<220>
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<400> 238

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

Val Ser

<210> 239

<211> 17

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 239

Ser Ser Trp Lys Arg Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser
1 5 10 15

Gly

<210> 240

<211> 18

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 240

Ser Ser Trp Lys Arg Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser
1 5 10 15

Gly Trp

<210> 241

<211> 19

<212> PRT

<213> Artificial sequence

<220>

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<400> 241

Ser Ser Trp Lys Arg Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser
1 5 10 15

Gly Trp Arg

<210> 242

<211> 19

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<400> 242

Ser Ser Trp Lys Arg Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser
1 5 10 15

Gly Trp Lys

<210> 243

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<400> 243

Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser Gly Trp Lys
1 5 10

<210> 244

<211> 19

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<400> 244

Ser	Ser	Trp	Lys	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser
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Val Ser Gly

<210> 245
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<220>
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<400> 245

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

Val Ser Gly Trp
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<210> 246
 <211> 21
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 246

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

Val Ser Gly Trp Arg
 20

<210> 247
 <211> 21
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 247

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

Val Ser Gly Trp Lys
20

<210> 248
<211> 16
<212> PRT
<213> Artificial sequence

<220>
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<400> 248

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

<210> 249
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<212> PRT
<213> Artificial sequence

<220>
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<400> 249

Ser Ser Trp Lys Arg Gly Ser Met Leu Phe Arg Val Lys Ile Asn Ser
1 5 10 15

<210> 250
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<212> PRT
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<220>
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<400> 250

Ser Ser Trp Lys Arg Gly Ser Met Leu Phe Arg Val Arg Ile Asn Ser
1 5 10 15

<210> 251
<211> 16

<212> PRT
<213> Artificial sequence

<220>
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<400> 251

Ser	Ser	Trp	Lys	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Trp	Ile	Asn	Ser
1				5					10					15	

<210> 252
<211> 16
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<220>
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<400> 252

Ser	Ser	Lys	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Ser	Val
1				5					10					15	

<210> 253
<211> 17
<212> PRT
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<220>
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<400> 253

Ser	Ser	Lys	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Ser	Val
1				5					10					15	

Ser

<210> 254
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 254

Ser	Ser	Trp	Arg	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Lys	Ser
1				5					10					15

<210> 255
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 <212> PRT
 <213> Artificial sequence

<220>
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<400> 255

Lys	Arg	Ser	Ser	Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Ser
1				5					10					15

<210> 256
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<220>
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<400> 256

Ser	Ser	Lys	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Ser
1				5					10			

<210> 257
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<220>
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<400> 257

Lys	Arg	Ser	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Ser
1				5					10			

<210> 258
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<400> 258

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 259

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<400> 259

Gly	Ser	Met	Leu	Phe	Arg	Lys	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 260

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<400> 260

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Lys	Asn	Ser	Trp	Lys
1				5					10			

<210> 261

<211> 11

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<220>

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<400> 261

Gly	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Lys
1				5					10	

<210> 262

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<213> Artificial sequence

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<400> 262

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 263

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<400> 263

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Trp	Lys
1				5					10	

<210> 264

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<400> 264

Gly	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 265

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<400> 265

Gly	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Lys
1				5					10	

<210> 266
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<400> 266

Gly Ser Met Arg Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 267
<211> 11
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<400> 267

Gly Ser Met Arg Phe Arg Val Thr Ile Trp Lys
1 5 10

<210> 268
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<400> 268

Gly Asp Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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Gly Asp Met Leu Phe Arg Val Thr Ile Trp Lys

1 5 10

<210> 270
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Gly Ser Met Asp Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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<400> 271

Gly Ser Met Asp Phe Arg Val Thr Ile Trp Lys
1 5 10

<210> 272
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<400> 272

Gly Glu Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 273
<211> 13
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<220>
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<400> 273

Gly Ser Met Glu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 274

<211> 11

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<213> Artificial sequence

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<400> 274

Gly Ser Met Glu Phe Arg Val Thr Ile Trp Lys
1 5 10

<210> 275

<211> 13

<212> PRT

<213> Artificial sequence

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<223> synthetic

<400> 275

Gly Ser Met Leu Phe Arg Val Thr Ile Trp Lys Val Lys
1 5 10

<210> 276

<211> 13

<212> PRT

<213> Artificial sequence

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<223> synthetic

<400> 276

Gly Ser Met Leu Phe Arg Val Thr Ile Trp Ser Val Lys
1 5 10

<210> 277

<211> 12

<212> PRT

<213> Artificial sequence

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<400> 277

Gly Ser Met Leu Phe Arg Val Thr Ile Trp Ser Lys
1 5 10

<210> 278

<211> 13

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<400> 278

Gly Ser Met Leu Phe Arg Val Thr Ile Trp Lys Trp Lys
1 5 10

<210> 279

<211> 12

<212> PRT

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<400> 279

Gly Ser Met Leu Phe Arg Val Thr Ile Trp Lys Lys
1 5 10

<210> 280

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<213> Artificial sequence

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<400> 280

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser
1 5 10

<210> 281

<211> 9

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<400> 281

Met Leu Phe Arg Val Thr Ile Asn Ser
1 5

<210> 282
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<400> 282

Met Leu Phe Val Thr Ile Asn Ser Val
1 5

<210> 283
<211> 11
<212> PRT
<213> Artificial sequence

<220>
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<400> 283

Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser
1 5 10

<210> 284
<211> 10
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<220>
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<400> 284

Gly Ser Met Leu Phe Arg Val Thr Ile Asn
1 5 10

<210> 285
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Gly Ser Met Leu Phe Arg Val Thr Ile
1 5

<210> 286
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<400> 286

Ser Met Leu Phe Arg Val Thr Ile Asn
1 5

<210> 287
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<400> 287

Met Leu Phe Arg Val Thr Ile Asn
1 5

<210> 288
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<400> 288

Met Leu Phe Arg Val Thr Ile
1 5

<210> 289
<211> 15
<212> PRT
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<400> 289

Ser Ser Lys Arg Gly Ser Met Leu Phe Arg Val Thr Ile Trp Ser
1 5 10 15

<210> 290
<211> 23
<212> PRT
<213> Artificial sequence

<220>
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<400> 290

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

Ala Leu Phe Lys Lys Ile Ser
20

<210> 291
<211> 23
<212> PRT
<213> Artificial sequence

<220>
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<400> 291

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

Arg Leu Phe Lys Lys Ile Ser
20

<210> 292
<211> 11
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<220>
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<400> 292

Val Ser Gly Trp Ala Leu Phe Lys Lys Ile Ser
1 5 10

<210> 293
<211> 25
<212> PRT
<213> Artificial sequence

<220>
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<400> 293

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

Gly Trp Arg Leu Phe Lys Lys Ile Ser
20 25

<210> 294
<211> 148
<212> PRT
<213> Artificial sequence

<220>
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<400> 294

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp
145

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<400> 295
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actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcatcgcc 360
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gacgagcgcc tgatcacccc cgac

444

<210> 296
<211> 148
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 296

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp
145

<210> 297
 <211> 444
 <212> DNA
 <213> Artificial sequence

<220>
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<400> 297
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 actccgatcc aaaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
 atcatcccgt atgaaggtct gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
 atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcatcgcc 360
 gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420
 gacgagcgcc tgatcacccc cgac 444

<210> 298
 <211> 12
 <212> PRT
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<220>
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<400> 298
 Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
 1 5 10

<210> 299
 <211> 13
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 299
 Asn Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
 1 5 10

<210> 300
<211> 9
<212> PRT
<213> Artificial sequence

<220>
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<400> 300

Gly Trp Arg Leu Phe Lys Lys Ile Ser
1 5

<210> 301
<211> 23
<212> PRT
<213> Artificial sequence

<220>
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<400> 301

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

Arg Leu Phe Lys Lys Ile Ser
20

<210> 302
<211> 13
<212> PRT
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<220>
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<400> 302

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 303
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<213> Artificial sequence

<220>

<223> synthetic

<400> 303

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 304

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 304

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 305

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 305

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Lys	Trp	Lys
1				5					10			

<210> 306

<211> 13

<212> PRT

<213> Artificial sequence

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<223> synthetic

<400> 306

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Lys	Ser	Trp	Lys
1				5					10			

<210> 307

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 307

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Arg	Trp	Lys
1				5					10			

<210> 308

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 308

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Arg	Ser	Trp	Lys
1				5					10			

<210> 309

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 309

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Asp	Trp	Lys
1				5					10			

<210> 310

<211> 13

<212> PRT

<213> Artificial sequence

<220>

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<400> 310

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asp	Ser	Trp	Lys
1				5					10			

<210> 311
<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 311

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Glu Trp Lys
1 5 10

<210> 312
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 312

Gly Ser Met Leu Phe Arg Val Thr Ile Glu Ser Trp Lys
1 5 10

<210> 313
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 313

Gly Ser Met Arg Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 314
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 314

Gly Ser Met Asp Phe Arg Val Thr Ile Asn Ser Trp Lys

1 5 10

<210> 315
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 315

Gly Ser Met Glu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 316
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 316

Gly Ser Met Leu Phe Arg Arg Thr Ile Asn Ser Trp Lys
1 5 10

<210> 317
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 317

Gly Ser Met Leu Phe Arg Asp Thr Ile Asn Ser Trp Lys
1 5 10

<210> 318
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 318

Gly Ser Met Leu Phe Arg Glu Thr Ile Asn Ser Trp Lys
1 5 10

<210> 319

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 319

Gly Ser Met Leu Phe Arg Val Thr Asp Asn Ser Trp Lys
1 5 10

<210> 320

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 320

Gly Ser Met Leu Phe Arg Val Thr Glu Asn Ser Trp Lys
1 5 10

<210> 321

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 321

Gly Ser Met Lys Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 322

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 322

Gly	Ser	Met	Leu	Phe	Arg	Lys	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 323

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 323

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Lys	Asn	Ser	Trp	Lys
1				5					10			

<210> 324

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 324

Gly	Ser	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser
1				5					10	

<210> 325

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 325

Gly	Ser	Met	Leu	Phe	Arg	Val	Ser	Ile	Asn	Ser
1				5					10	

<210> 326

<211> 11

<212> PRT
<213> Artificial sequence

<220>
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<400> 326

Gly	Ser	Met	Leu	Phe	Arg	Val	Asn	Ile	Asn	Ser
1				5					10	

<210> 327
<211> 11
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<213> Artificial sequence

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<400> 327

Gly	Ser	Lys	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser
1				5					10	

<210> 328
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<220>
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<400> 328

Gly	Ser	Arg	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser
1				5					10	

<210> 329
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<400> 329

Gly	Ser	Met	Trp	Phe	Arg	Val	Thr	Ile	Asn	Ser
1				5					10	

<210> 330
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<400> 330

Gly	Ser	Met	Ser	Phe	Arg	Val	Thr	Ile	Asn	Ser
1				5					10	

<210> 331
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<212> PRT
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<220>
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<400> 331

Gly	Ser	Met	Asn	Phe	Arg	Val	Thr	Ile	Asn	Ser
1				5					10	

<210> 332
<211> 11
<212> PRT
<213> Artificial sequence

<220>
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<400> 332

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Asn	Ser
1				5					10	

<210> 333
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<212> PRT
<213> Artificial sequence

<220>
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<400> 333

Gly Ser Met Leu Phe Arg Trp Thr Ile Asn Ser
1 5 10

<210> 334
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 334

Gly Ser Met Leu Phe Arg Ser Thr Ile Asn Ser
1 5 10

<210> 335
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 335

Gly Ser Met Leu Phe Arg Asn Thr Ile Asn Ser
1 5 10

<210> 336
<211> 11
<212> PRT
<213> Artificial sequence

<220>
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<400> 336

Gly Ser Met Leu Phe Arg Lys Thr Ile Asn Ser
1 5 10

<210> 337
<211> 11
<212> PRT
<213> Artificial sequence

<220>
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<400> 337

Gly Ser Met Leu Phe Arg Val Thr Trp Asn Ser
1 5 10

<210> 338

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 338

Gly Ser Met Leu Phe Arg Val Thr Ser Asn Ser
1 5 10

<210> 339

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 339

Gly Ser Met Leu Phe Arg Val Thr Asn Asn Ser
1 5 10

<210> 340

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 340

Gly Ser Met Leu Phe Arg Val Thr Lys Asn Ser
1 5 10

<210> 341

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 341

Gly Ser Met Leu Phe Arg Val Thr Ile Lys Ser
1 5 10

<210> 342

<211> 634

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 342

Met Lys His His His His His Val Ser Lys Gly Glu Glu Leu Ile
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Lys Glu Asn Met Arg Ser Lys Leu Tyr Leu Glu Gly Ser Val Asn Gly
20 25 30

His Gln Phe Lys Cys Thr His Glu Gly Glu Gly Lys Pro Tyr Glu Gly
35 40 45

Lys Gln Thr Asn Arg Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe
50 55 60

Ala Phe Asp Ile Leu Ala Thr His Phe Met Tyr Gly Ser Lys Val Phe
65 70 75 80

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

Glu Gly Phe Thr Trp Glu Arg Val Met Val Phe Glu Asp Gly Gly Val
100 105 110

Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asp Gly Glu Leu Ile Tyr
115 120 125

Asn Val Lys Val Arg Gly Val Asn Phe Pro Ala Asn Gly Pro Val Met

130

135

140

Gln Lys Lys Thr Leu Gly Trp Glu Pro Ser Thr Glu Thr Met Tyr Pro
 145 150 155 160

Ala Asp Gly Gly Leu Glu Gly Arg Cys Asp Lys Ala Leu Lys Leu Val
 165 170 175

Gly Gly Gly His Leu His Val Asn Phe Lys Thr Thr Tyr Lys Ser Lys
 180 185 190

Lys Pro Val Lys Met Pro Gly Val His Tyr Val Asp Arg Arg Leu Glu
 195 200 205

Arg Ile Lys Glu Ala Asp Asn Glu Thr Tyr Val Glu Gln Tyr Glu His
 210 215 220

Ala Val Ala Arg Tyr Ser Asn Leu Gly Gly Gly Phe Thr Leu Glu Asp
 225 230 235 240

Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val
 245 250 255

Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
 260 265 270

Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys
 275 280 285

Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln
 290 295 300

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
 305 310 315 320

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
 325 330 335

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
 340 345 350

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
355 360 365

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
370 375 380

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
385 390 395 400

Arg Ile Leu Ala Arg His Glu Leu Ile Lys Glu Asn Met Arg Ser Lys
405 410 415

Leu Tyr Leu Glu Gly Ser Val Asn Gly His Gln Phe Lys Cys Thr His
420 425 430

Glu Gly Glu Gly Lys Pro Tyr Glu Gly Lys Gln Thr Asn Arg Ile Lys
435 440 445

Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Thr
450 455 460

His Phe Met Tyr Gly Ser Lys Val Phe Ile Lys Tyr Pro Ala Asp Leu
465 470 475 480

Pro Asp Tyr Phe Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg
485 490 495

Val Met Val Phe Glu Asp Gly Gly Val Leu Thr Ala Thr Gln Asp Thr
500 505 510

Ser Leu Gln Asp Gly Glu Leu Ile Tyr Asn Val Lys Val Arg Gly Val
515 520 525

Asn Phe Pro Ala Asn Gly Pro Val Met Gln Lys Lys Thr Leu Gly Trp
530 535 540

Glu Pro Ser Thr Glu Thr Met Tyr Pro Ala Asp Gly Gly Leu Glu Gly
545 550 555 560

Arg Cys Asp Lys Ala Leu Lys Leu Val Gly Gly Gly His Leu His Val
565 570 575

Asn Phe Lys Thr Thr Tyr Lys Ser Lys Lys Pro Val Lys Met Pro Gly
580 585 590

Val His Tyr Val Asp Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Asn
595 600 605

Glu Thr Tyr Val Glu Gln Tyr Glu His Ala Val Ala Arg Tyr Ser Asn
610 615 620

Leu Gly Gly Gly Met Asp Glu Leu Tyr Lys
625 630

<210> 343
<211> 1902
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<220>
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accgtgacag gaacactgtg gaatggaaac aagatcatcg acgagcggct gatcaaccct	1140
gatggatctc tgctgttcag agtgaccatc aacggagtga caggatggag actgtgcbag	1200
agaattctgg ctagacatga gctaatacag gaaaatatga gaagtaagct atacttagag	1260
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tacaacgta aggtccgcgg cgtcaatttc ccagccaatg gtccagtgat gcagaagaaa	1620
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agatgtgata aggcattgaa actcgtcggg ggcggccacc ttcatgtgaa tttcaagact	1740
acataaaaa gtaaaaaacc agtcaagatg cctggagtgc actacgtgga tcgtaggttg	1800
gagaggataa aagaagccga caacgaaact tatgtagagc aatatgagca cgccgtggct	1860
cgttattcca acttgggcgg aggaatggat gaactgtaca ag	1902

<210> 344
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 <212> PRT
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<220>
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<400> 344

Met Lys His His His His His Val Ser Lys Gly Glu Glu Leu Ile

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Lys Glu Asn Met Arg Ser Lys Leu Tyr Leu Glu Gly Ser Val Asn Gly	20	25	30
His Gln Phe Lys Cys Thr His Glu Gly Glu Gly Lys Pro Tyr Glu Gly	35	40	45
Lys Gln Thr Asn Arg Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe	50	55	60
Ala Phe Asp Ile Leu Ala Thr His Phe Met Tyr Gly Ser Lys Val Phe	65	70	75
Ile Lys Tyr Pro Ala Asp Leu Pro Asp Tyr Phe Lys Gln Ser Phe Pro	85	90	95
Glu Gly Phe Thr Trp Glu Arg Val Met Val Phe Glu Asp Gly Gly Val	100	105	110
Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asp Gly Glu Leu Ile Tyr	115	120	125
Asn Val Lys Val Arg Gly Val Asn Phe Pro Ala Asn Gly Pro Val Met	130	135	140
Gln Lys Lys Thr Leu Gly Trp Glu Pro Ser Thr Glu Thr Met Tyr Pro	145	150	155
Ala Asp Gly Gly Leu Glu Gly Arg Cys Asp Lys Ala Leu Lys Leu Val	165	170	175
Gly Gly Gly His Leu His Val Asn Phe Lys Thr Thr Tyr Lys Ser Lys	180	185	190
Lys Pro Val Lys Met Pro Gly Val His Tyr Val Asp Arg Arg Leu Glu	195	200	205
Arg Ile Lys Glu Ala Asp Asn Glu Thr Tyr Val Glu Gln Tyr Glu His	210	215	220

Ala Val Ala Arg Tyr Ser Asn Leu Gly Gly Gly Phe Thr Leu Glu Asp
 225 230 235 240

Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val
 245 250 255

Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser
 260 265 270

Val Thr Pro Ile Gln Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys
 275 280 285

Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln
 290 295 300

Met Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp
 305 310 315 320

His His Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly
 325 330 335

Val Thr Pro Asn Met Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
 340 345 350

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
 355 360 365

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met
 370 375 380

Leu Phe Arg Val Thr Ile Asn Ser Arg His Glu Leu Ile Lys Glu Asn
 385 390 395 400

Met Arg Ser Lys Leu Tyr Leu Glu Gly Ser Val Asn Gly His Gln Phe
 405 410 415

Lys Cys Thr His Glu Gly Glu Gly Lys Pro Tyr Glu Gly Lys Gln Thr
 420 425 430

Asn Arg Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe Asp
435 440 445

Ile Leu Ala Thr His Phe Met Tyr Gly Ser Lys Val Phe Ile Lys Tyr
450 455 460

Pro Ala Asp Leu Pro Asp Tyr Phe Lys Gln Ser Phe Pro Glu Gly Phe
465 470 475 480

Thr Trp Glu Arg Val Met Val Phe Glu Asp Gly Gly Val Leu Thr Ala
485 490 495

Thr Gln Asp Thr Ser Leu Gln Asp Gly Glu Leu Ile Tyr Asn Val Lys
500 505 510

Val Arg Gly Val Asn Phe Pro Ala Asn Gly Pro Val Met Gln Lys Lys
515 520 525

Thr Leu Gly Trp Glu Pro Ser Thr Glu Thr Met Tyr Pro Ala Asp Gly
530 535 540

Gly Leu Glu Gly Arg Cys Asp Lys Ala Leu Lys Leu Val Gly Gly Gly
545 550 555 560

His Leu His Val Asn Phe Lys Thr Thr Tyr Lys Ser Lys Lys Pro Val
565 570 575

Lys Met Pro Gly Val His Tyr Val Asp Arg Arg Leu Glu Arg Ile Lys
580 585 590

Glu Ala Asp Asn Glu Thr Tyr Val Glu Gln Tyr Glu His Ala Val Ala
595 600 605

Arg Tyr Ser Asn Leu Gly Gly Gly Met Asp Glu Leu Tyr Lys
610 615 620

<210> 345
<211> 1866
<212> DNA
<213> Artificial sequence

<220>

<223> synthetic

<400> 345

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ggtgagggaa agccctatga ggggaagcag acaaaccgca tcaaggtcgt cgaaggggga	180
cccctcccgt ttgcctttga tatcttggct actcacttta tgtacggaag caaagttttc	240
ataaagtatc ctgccgacct tcctgattat tttaaacagt catttcccga gggtttcaca	300
tgggaaaggg tcatggtggt tgaggatgga ggcgtgctca ctgcaactca ggacacctca	360
ctgcaggacg gcgagctgat ctacaatgtg aagggtccggg gtgtaaactt ccctgccaac	420
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gctgatggtg ggctggaggg ccgatgtgac aaggctctga agctcgttgg aggtggtcat	540
ttgcacgtaa atttcaagac aacttacaag agcaaaaaac ccgtaaaaat gcccggggtt	600
cattacgttg acagaaggct tgaacgcata aaggaagctg ataacgagac atacgtggag	660
cagtacgagc acgccgttgc ccggtactca aacctggggg gtggcttcac actcgaagat	720
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agcgccgacc aaatggccca gatcgaagag gtgtttaagg tgggtgtacc tgtggatgat	960
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gacggctcca tgctgttccg agtaaccatc aacagcagac atgagctaata caaggaaaat	1200
atgagaagta agctatactt agaggggtcc gtcaacggtc accagtttaa atgcactcat	1260
gaaggtgagg ggaaacctta tgaaggtaag cagactaatc gaataaaagt ggtcgagggc	1320
ggtcctctgc cattcgcttt cgatattctg gccactcact ttatgtatgg gtctaaggtc	1380
tttattaaat accccgctga ttgcccagac tacttttaaac agtccttccc tgaaggattc	1440

acatgggagc gggatgatggg gttcgaggat ggaggcggtt ttactgcaac tcaggataact 1500
 tccttgcaag acgggggaact gatctacaac gttaaggtcc gcggcggtcaa tttcccagcc 1560
 aatgggtccag tgatgcagaa gaaaaccttg gggatgggagc cctcaacgga gacaatgtac 1620
 cctgcggacg gcgggcttga gggtagatgt gataaggcat tgaaactcgt cgggggcggc 1680
 caccttcacg tgaatttcaa gactacatat aaaagtaaaa aaccagtcaa gatgcctgga 1740
 gtgcactacg tggatcgtag gttggagagg ataaaagaag ccgacaacga aacttatgta 1800
 gagcaatatg agcacgccgt ggctcgttat tccaacttgg gcggaggaat ggatgaactg 1860
 tacaag 1866

<210> 346
 <211> 611
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 346

Met Lys His His His His His His Val Ser Lys Gly Glu Glu Leu Ile
 1 5 10 15

Lys Glu Asn Met Arg Ser Lys Leu Tyr Leu Glu Gly Ser Val Asn Gly
 20 25 30

His Gln Phe Lys Cys Thr His Glu Gly Glu Gly Lys Pro Tyr Glu Gly
 35 40 45

Lys Gln Thr Asn Arg Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe
 50 55 60

Ala Phe Asp Ile Leu Ala Thr His Phe Met Tyr Gly Ser Lys Val Phe
 65 70 75 80

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

Glu Gly Phe Thr Trp Glu Arg Val Met Val Phe Glu Asp Gly Gly Val
 100 105 110

Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asp Gly Glu Leu Ile Tyr
115 120 125

Asn Val Lys Val Arg Gly Val Asn Phe Pro Ala Asn Gly Pro Val Met
130 135 140

Gln Lys Lys Thr Leu Gly Trp Glu Pro Ser Thr Glu Thr Met Tyr Pro
145 150 155 160

Ala Asp Gly Gly Leu Glu Gly Arg Cys Asp Lys Ala Leu Lys Leu Val
165 170 175

Gly Gly Gly His Leu His Val Asn Phe Lys Thr Thr Tyr Lys Ser Lys
180 185 190

Lys Pro Val Lys Met Pro Gly Val His Tyr Val Asp Arg Arg Leu Glu
195 200 205

Arg Ile Lys Glu Ala Asp Asn Glu Thr Tyr Val Glu Gln Tyr Glu His
210 215 220

Ala Val Ala Arg Tyr Ser Asn Leu Gly Gly Gly Phe Thr Leu Asp Asp
225 230 235 240

Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val
245 250 255

Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser
260 265 270

Val Thr Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys
275 280 285

Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln
290 295 300

Met Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp
305 310 315 320

His His Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly
325 330 335

Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
340 345 350

Ala Val Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn
355 360 365

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Arg His Glu
370 375 380

Leu Ile Lys Glu Asn Met Arg Ser Lys Leu Tyr Leu Glu Gly Ser Val
385 390 395 400

Asn Gly His Gln Phe Lys Cys Thr His Glu Gly Glu Gly Lys Pro Tyr
405 410 415

Glu Gly Lys Gln Thr Asn Arg Ile Lys Val Val Glu Gly Gly Pro Leu
420 425 430

Pro Phe Ala Phe Asp Ile Leu Ala Thr His Phe Met Tyr Gly Ser Lys
435 440 445

Val Phe Ile Lys Tyr Pro Ala Asp Leu Pro Asp Tyr Phe Lys Gln Ser
450 455 460

Phe Pro Glu Gly Phe Thr Trp Glu Arg Val Met Val Phe Glu Asp Gly
465 470 475 480

Gly Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asp Gly Glu Leu
485 490 495

Ile Tyr Asn Val Lys Val Arg Gly Val Asn Phe Pro Ala Asn Gly Pro
500 505 510

Val Met Gln Lys Lys Thr Leu Gly Trp Glu Pro Ser Thr Glu Thr Met
515 520 525

Tyr Pro Ala Asp Gly Gly Leu Glu Gly Arg Cys Asp Lys Ala Leu Lys
530 535 540

Leu Val Gly Gly Gly His Leu His Val Asn Phe Lys Thr Thr Tyr Lys
545 550 555 560

Ser Lys Lys Pro Val Lys Met Pro Gly Val His Tyr Val Asp Arg Arg
565 570 575

Leu Glu Arg Ile Lys Glu Ala Asp Asn Glu Thr Tyr Val Glu Gln Tyr
580 585 590

Glu His Ala Val Ala Arg Tyr Ser Asn Leu Gly Gly Gly Met Asp Glu
595 600 605

Leu Tyr Lys
610

<210> 347
<211> 1833
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 347
atgaaacatc accatcacca tcatgtgagc aaggagagaag aacttataaa agaaaacatg 60
cggctctaaac tgtacctcga gggctccgtc aatgggcacc agtttaagtg taccacagag 120
ggtagaggga agccctatga ggggaagcag acaaaccgca tcaaggtcgt cgaaggggga 180
cccctcccgt ttgcctttga tatcttggct actcacttta tgtacggaag caaagttttc 240
ataaagtatc ctgccgacct tcctgattat tttaaacagt catttcccga gggtttcaca 300
tgaggaaagg tcatggtggt tgaggatgga ggcgtgctca ctgcaactca ggacacctca 360
ctgcaggacg gcgagctgat ctacaatgtg aagggtccggg gtgtaaactt ccctgccaac 420
gggcctgtaa tgcagaagaa gaccctggga tgggagccgt ccaccgaaac catgtaccct 480
gctgatggtg ggctggaggg ccgatgtgac aaggctctga agctcgttgg aggtgggtcat 540
ttgcacgtaa atttcaagac aacttacaag agcaaaaaac ccgtaaaaat gcccgggggtt 600

cattacgttg acagaaggct tgaacgcata aaggaagctg ataacgagac atacgtggag	660
cagtacgagc acgccgttgc ccggtactca aacctggggg gtggcttcac actcgacgat	720
ttcgttgggg actgggaaca gacagccgcc tacaacctgg accaagtcct tgaacaggga	780
ggtgtgtcca gtttgctgca gaatctcgcc gtgtccgtaa ctccgatcat gaggattgtc	840
cggagcgggtg aaaatgccct gaagatcgac atccatgtca tcatcccgta tgaaggtctg	900
agcgccgacc aaatggccca gatcgaagag gtgtttaagg tgggtgtacc tgtggatgat	960
catcacttta aggtgatcct gccctatggc aactggtaa tcgacggggt tacgccgaac	1020
aagctgaact atttcggacg gccgtatgaa ggcatcgccg tgttcgacgg caaaaagatc	1080
actaccacag ggaccctgtg gaacggcaac aaaattatcg acgagcgcct gatcaccccc	1140
gacagacatg agctaataa ggaaaatatg agaagtaagc tatacttaga ggggtccgtc	1200
aacggtcacc agtttaaatg cactcatgaa ggtgagggga aaccttatga aggtaagcag	1260
actaatcgaa taaaagtggc cgagggcggc cctctgccat tcgctttcga tattctggcc	1320
actcacttta tgtatgggtc taaggtcttt attaaatacc ccgctgattt gccagactac	1380
tttaaacagt ctttcctga aggattcaca tgggagcggg tgatgggtgtt cgaggatgga	1440
ggcgttctta ctgcaactca ggatacttcc ttgcaagacg gggaactgat ctacaacgtt	1500
aaggtccgcg gcgtcaattt ccagccaat ggtccagtga tgcagaagaa aaccttgggg	1560
tgggagccct caacggagac aatgtaccct gcggacggcg ggcttgaggg tagatgtgat	1620
aaggcattga aactcgtcgg gggcggccac cttcatgtga atttcaagac tacatataaa	1680
agtaaaaaac cagtcaagat gcctggagtg cactacgtgg atcgtaggtt ggagaggata	1740
aaagaagccg acaacgaaac ttatgtagag caatatgagc acgccgtggc tcgttattcc	1800
aacttgggcg gaggaatgga tgaactgtac aag	1833

<210> 348
 <211> 401
 <212> PRT
 <213> Artificial sequence

 <220>
 <223> synthetic

 <400> 348

Met Lys His His His His His His Phe Thr Leu Glu Asp Phe Val Gly
 1 5 10 15

Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln
 20 25 30

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

Ile Gln Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile
 50 55 60

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln
 65 70 75 80

Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 85 90 95

Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
 100 105 110

Asn Met Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 115 120 125

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
 130 135 140

Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met Leu Phe Arg
 145 150 155 160

Val Thr Ile Asn Ser Gly Gly Ser Gly Gly Ser Ser Gly Glu Leu Ile
 165 170 175

Lys Glu Asn Met Arg Ser Lys Leu Tyr Leu Glu Gly Ser Val Asn Gly
 180 185 190

His Gln Phe Lys Cys Thr His Glu Gly Glu Gly Lys Pro Tyr Glu Gly
 195 200 205

Lys Gln Thr Asn Arg Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe

210

215

220

Ala Phe Asp Ile Leu Ala Thr His Phe Met Tyr Gly Ser Lys Val Phe
 225 230 235 240

Ile Lys Tyr Pro Ala Asp Leu Pro Asp Tyr Phe Lys Gln Ser Phe Pro
 245 250 255

Glu Gly Phe Thr Trp Glu Arg Val Met Val Phe Glu Asp Gly Gly Val
 260 265 270

Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asp Gly Glu Leu Ile Tyr
 275 280 285

Asn Val Lys Val Arg Gly Val Asn Phe Pro Ala Asn Gly Pro Val Met
 290 295 300

Gln Lys Lys Thr Leu Gly Trp Glu Pro Ser Thr Glu Thr Met Tyr Pro
 305 310 315 320

Ala Asp Gly Gly Leu Glu Gly Arg Cys Asp Lys Ala Leu Lys Leu Val
 325 330 335

Gly Gly Gly His Leu His Val Asn Phe Lys Thr Thr Tyr Lys Ser Lys
 340 345 350

Lys Pro Val Lys Met Pro Gly Val His Tyr Val Asp Arg Arg Leu Glu
 355 360 365

Arg Ile Lys Glu Ala Asp Asn Glu Thr Tyr Val Glu Gln Tyr Glu His
 370 375 380

Ala Val Ala Arg Tyr Ser Asn Leu Gly Gly Gly Met Asp Glu Leu Tyr
 385 390 395 400

Lys

<210> 349

<211> 1203

<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 349
atgaaacatc accatcacca tcatttcaca ctcgaagatt tcgttgggga ctgggaacag 60
acagccgcct acaacctgga ccaagtcctt gaacagggag gtgtgtccag ttgctgcag 120
aatctcgccg tgtccgtaac tccgatccaa aggattgtcc ggagcgggtga aaatgccctg 180
aagatcgaca tccatgtcat catcccgtat gaaggtctga gcgccgacca aatggcccag 240
atcgaagagg tgtttaaggt ggtgtaccct gtggatgata atcactttaa ggtgatcctg 300
ccctatggca cactggtaat cgacgggggtt acgccgaaca tgctgaacta tttcggacgg 360
ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctgtaacagg gaccctgtgg 420
aacggcaaca aaattatcga cgagcgcctg atcaccccg acggctccat gctgttccga 480
gtaaccatca acagcggagg ctgaggtgga tcctcaggtg agctaataca ggaaaatatg 540
agaagtaagc tataactaga ggggtccgtc aacggtcacc agtttaaagt cactcatgaa 600
ggtaggggga aaccttatga aggtaagcag actaatcgaa taaaagtggg cgagggcggt 660
cctctgccat tcgctttcga tattctggcc actcacttta tgtatgggtc taaggtcttt 720
attaaatacc ccgctgattt gccagactac tttaaacagt cttccctga aggattcaca 780
tgggagcggg tgatgggtgt cgaggatgga ggcgttctta ctgcaactca ggatacttcc 840
ttgcaagacg gggaactgat ctacaacgtt aaggtccgcg gcgtcaattt cccagccaat 900
ggtccagtga tgcagaagaa aaccttgggg tgggagccct caacggagac aatgtaccct 960
gcggacggcg ggcttgaggg tagatgtgat aaggcattga aactcgtcgg gggcggccac 1020
cttcatgtga atttcaagac tacatataaa agtaaaaaac cagtcaagat gcctggagtg 1080
cactacgtgg atcgtaggtt ggagaggata aaagaagccg acaacgaaac ttatgtagag 1140
caatatgagc acgccgtggc tcgttattcc aacttgggcg gaggaatgga tgaactgtac 1200
aag 1203

<210> 350
<211> 395
<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 350

Met Lys His His His His His His Phe Thr Leu Glu Asp Phe Val Gly
1 5 10 15

Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln
20 25 30

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

Ile Gln Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile
50 55 60

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln
65 70 75 80

Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
85 90 95

Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
100 105 110

Asn Met Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
115 120 125

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
130 135 140

Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met Leu Phe Arg
145 150 155 160

Val Thr Ile Asn Ser Arg His Glu Leu Ile Lys Glu Asn Met Arg Ser
165 170 175

Lys Leu Tyr Leu Glu Gly Ser Val Asn Gly His Gln Phe Lys Cys Thr
180 185 190

His Glu Gly Glu Gly Lys Pro Tyr Glu Gly Lys Gln Thr Asn Arg Ile
195 200 205

Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala
210 215 220

Thr His Phe Met Tyr Gly Ser Lys Val Phe Ile Lys Tyr Pro Ala Asp
225 230 235 240

Leu Pro Asp Tyr Phe Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu
245 250 255

Arg Val Met Val Phe Glu Asp Gly Gly Val Leu Thr Ala Thr Gln Asp
260 265 270

Thr Ser Leu Gln Asp Gly Glu Leu Ile Tyr Asn Val Lys Val Arg Gly
275 280 285

Val Asn Phe Pro Ala Asn Gly Pro Val Met Gln Lys Lys Thr Leu Gly
290 295 300

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

Gly Arg Cys Asp Lys Ala Leu Lys Leu Val Gly Gly Gly His Leu His
325 330 335

Val Asn Phe Lys Thr Thr Tyr Lys Ser Lys Lys Pro Val Lys Met Pro
340 345 350

Gly Val His Tyr Val Asp Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp
355 360 365

Asn Glu Thr Tyr Val Glu Gln Tyr Glu His Ala Val Ala Arg Tyr Ser
370 375 380

Asn Leu Gly Gly Gly Met Asp Glu Leu Tyr Lys
385 390 395

<210> 351
 <211> 1185
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 351
 atgaaacatc accatcacca tcatttcaca ctcgaagatt tcgttgggga ctgggaacag 60
 acagccgcct acaacctgga ccaagtcctt gaacagggag gtgtgtccag tttgctgcag 120
 aatctcgccg tgtccgtaac tccgatccaa aggattgtcc ggagcggatga aaatgccctg 180
 aagatcgaca tccatgtcat catcccgtat gaaggtctga gcgccgacca aatggcccag 240
 atcgaagagg tgtttaaggt ggtgtaccct gtggatgata atcactttaa ggtgatcctg 300
 ccctatggca cactggtaat cgacgggggtt acgccgaaca tgctgaacta tttcggacgg 360
 ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctgtaacagg gaccctgtgg 420
 aacggcaaca aaattatcga cgagcgcctg atcaccccg acggctccat gctgttccga 480
 gtaaccatca acagcagaca tgagctaatac aaggaaaata tgagaagtaa gctataactta 540
 gaggggtccg tcaacggtca ccagtttaaa tgcactcatg aaggtagagg gaaaccttat 600
 gaaggtaaagc agactaatcg aataaaaagt gtcgagggcg gtcctctgcc attcgctttc 660
 gatattcttg ccactcactt tatgtatggg tctaaggtct ttattaaata ccccgctgat 720
 ttgccagact actttaaaaca gtccttcctt gaaggattca catgggagcg ggtgatgggtg 780
 ttcgaggatg gaggcgttct tactgcaact caggatactt ccttgcaaga cggggaactg 840
 atctacaacg ttaaggtccg cggcgtcaat ttcccagcca atgggtccagt gatgcagaag 900
 aaaaccttgg ggtgggagcc ctcaacggag acaatgtacc ctgcggacgg cgggcttgag 960
 ggtagatgtg ataaggcatt gaaactcgtc gggggcggcc accttcatgt gaatttcaag 1020
 actacatata aaagtaaaaa accagtcaag atgcctggag tgcactacgt ggatcgtagg 1080
 ttggagagga taaaagaagc cgacaacgaa acttatgtag agcaatatga gcacgccgtg 1140
 gtcggttatt ccaacttggg cggaggaatg gatgaactgt acaag 1185

<210> 352
 <211> 390

<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 352

Met Lys His His His His His His Phe Thr Leu Asp Asp Phe Val Gly
1 5 10 15

Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln
20 25 30

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

Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile
50 55 60

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln
65 70 75 80

Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
85 90 95

Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
100 105 110

Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
115 120 125

Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys
130 135 140

Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Gly Ser Gly Gly Ser
145 150 155 160

Ser Gly Glu Leu Ile Lys Glu Asn Met Arg Ser Lys Leu Tyr Leu Glu
165 170 175

Gly Ser Val Asn Gly His Gln Phe Lys Cys Thr His Glu Gly Glu Gly

180	185	190
Lys Pro Tyr Glu Gly Lys Gln Thr Asn Arg Ile Lys Val Val Glu Gly		
195	200	205
Gly Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Thr His Phe Met Tyr		
210	215	220
Gly Ser Lys Val Phe Ile Lys Tyr Pro Ala Asp Leu Pro Asp Tyr Phe		
225	230	235
Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Val Met Val Phe		
245	250	255
Glu Asp Gly Gly Val Leu Thr Ala Thr Gln Asp Thr Ser Leu Gln Asp		
260	265	270
Gly Glu Leu Ile Tyr Asn Val Lys Val Arg Gly Val Asn Phe Pro Ala		
275	280	285
Asn Gly Pro Val Met Gln Lys Lys Thr Leu Gly Trp Glu Pro Ser Thr		
290	295	300
Glu Thr Met Tyr Pro Ala Asp Gly Gly Leu Glu Gly Arg Cys Asp Lys		
305	310	315
Ala Leu Lys Leu Val Gly Gly Gly His Leu His Val Asn Phe Lys Thr		
325	330	335
Thr Tyr Lys Ser Lys Lys Pro Val Lys Met Pro Gly Val His Tyr Val		
340	345	350
Asp Arg Arg Leu Glu Arg Ile Lys Glu Ala Asp Asn Glu Thr Tyr Val		
355	360	365
Glu Gln Tyr Glu His Ala Val Ala Arg Tyr Ser Asn Leu Gly Gly Gly		
370	375	380
Met Asp Glu Leu Tyr Lys		
385	390	

<210> 353
 <211> 1170
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 353
 atgaaacatc accatcacca tcatttcaca ctcgacgatt tcgttgggga ctgggaacag 60
 acagccgcct acaacctgga ccaagtcctt gaacagggag gtgtgtccag tttgctgcag 120
 aatctcgccg tgtccgtaac tccgatcatg aggattgtcc ggagcgggtga aaatgccctg 180
 aagatcgaca tccatgtcat catcccgtat gaaggtctga gcgccgacca aatggcccag 240
 atcgaagagg tgtttaaggt ggtgtaccct gtggatgata atcactttaa ggtgatcctg 300
 ccctatggca cactggtaat cgacgggggtt acgccgaaca agctgaacta tttcggacgg 360
 ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctaccacagg gaccctgtgg 420
 aacggcaaca aaattatcga cgagcgcctg atcacccccg acggaggctc aggtggatcc 480
 tcaggtgagc taatcaagga aaatatgaga agtaagctat acttagaggg gtccgtcaac 540
 ggtcaccagt ttaaatgcac tcatgaaggt gaggggaaac cttatgaagg taagcagact 600
 aatcgaataa aagtggtcga gggcgggtcct ctgccattcg ctttcgatat tctggccact 660
 cactttatgt atgggtctaa ggtctttatt aaataccccc ctgatttgcc agactacttt 720
 aaacagtcct tccctgaagg attcacatgg gagcgggtga tgggtgttcga ggatggaggc 780
 gttcttactg caactcagga tacttccttg caagacgggg aactgatcta caacgttaag 840
 gtccgcggcg tcaatttccc agccaatggt ccagtgatgc agaagaaaac cttgggggtgg 900
 gagccctcaa cggagacaat gtaccctgcg gacggcgggc ttgagggtag atgtgataag 960
 gcattgaaac tcgtcggggg cgccacctt catgtgaatt tcaagactac atataaaagt 1020
 aaaaaaccag tcaagatgcc tggagtgcac tacgtggatc gtaggttgga gaggataaaa 1080
 gaagccgaca acgaaactta tgtagagcaa tatgagcacg ccgtggctcg ttattccaac 1140
 ttgggcggag gaatggatga actgtacaag 1170

<210> 354

<211> 384
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 354

Met Lys His His His His His His Phe Thr Leu Asp Asp Phe Val Gly
 1 5 10 15

Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln
 20 25 30

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

Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile
 50 55 60

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln
 65 70 75 80

Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 85 90 95

Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
 100 105 110

Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 115 120 125

Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys
 130 135 140

Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Arg His Glu Leu Ile Lys
 145 150 155 160

Glu Asn Met Arg Ser Lys Leu Tyr Leu Glu Gly Ser Val Asn Gly His
 165 170 175

Gln Phe Lys Cys Thr His Glu Gly Glu Gly Lys Pro Tyr Glu Gly Lys
180 185 190

Gln Thr Asn Arg Ile Lys Val Val Glu Gly Gly Pro Leu Pro Phe Ala
195 200 205

Phe Asp Ile Leu Ala Thr His Phe Met Tyr Gly Ser Lys Val Phe Ile
210 215 220

Lys Tyr Pro Ala Asp Leu Pro Asp Tyr Phe Lys Gln Ser Phe Pro Glu
225 230 235 240

Gly Phe Thr Trp Glu Arg Val Met Val Phe Glu Asp Gly Gly Val Leu
245 250 255

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

Val Lys Val Arg Gly Val Asn Phe Pro Ala Asn Gly Pro Val Met Gln
275 280 285

Lys Lys Thr Leu Gly Trp Glu Pro Ser Thr Glu Thr Met Tyr Pro Ala
290 295 300

Asp Gly Gly Leu Glu Gly Arg Cys Asp Lys Ala Leu Lys Leu Val Gly
305 310 315 320

Gly Gly His Leu His Val Asn Phe Lys Thr Thr Tyr Lys Ser Lys Lys
325 330 335

Pro Val Lys Met Pro Gly Val His Tyr Val Asp Arg Arg Leu Glu Arg
340 345 350

Ile Lys Glu Ala Asp Asn Glu Thr Tyr Val Glu Gln Tyr Glu His Ala
355 360 365

Val Ala Arg Tyr Ser Asn Leu Gly Gly Gly Met Asp Glu Leu Tyr Lys
370 375 380

<210> 355

<211> 1152
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 355
 atgaaacatc accatcacca tcatttcaca ctcgacgatt tcgttgggga ctgggaacag 60
 acagccgcct acaacctgga ccaagtcctt gaacagggag gtgtgtccag tttgctgcag 120
 aatctcgccg tgtccgtaac tccgatcatg aggattgtcc ggagcggatga aaatgccctg 180
 aagatcgaca tccatgtcat catcccgtat gaaggtctga gcgccgacca aatggcccag 240
 atcgaagagg tgtttaaggt ggtgtaccct gtggatgata atcactttta ggtgatcctg 300
 ccctatggca cactggtaat cgacgggggtt acgccgaaca agctgaacta tttcggacgg 360
 ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctaccacagg gaccctgtgg 420
 aacggcaaca aaattatcga cgagcgcctg atcaccccg acagacatga gctaatacag 480
 gaaaatatga gaagtaagct atacttagag ggggtccgtca acggtcacca gtttaaatgc 540
 actcatgaag gtgaggggaa accttatgaa ggtaagcaga ctaatcgaat aaaagtggtc 600
 gagggcggtc ctctgccatt cgctttcgat attctggcca ctactttat gtatgggtct 660
 aaggtcttta ttaaataccc cgctgatttg ccagactact ttaaacagtc cttccctgaa 720
 ggattcacat gggagcgggt gatgggtgtt gaggatggag gcgttcttac tgcaactcag 780
 gatacttcct tgcaagacgg ggaactgata tacaacgtta aggtccgcgg cgtcaatttc 840
 ccagccaatg gtccagtgat gcagaagaaa accttgggggt gggagccctc aacggagaca 900
 atgtaccctg cggacggcgg gcttgagggt agatgtgata aggcattgaa actcgtcggg 960
 ggcggccacc ttcattgtgaa tttcaagact acatataaaa gtaaaaaacc agtcaagatg 1020
 cctggagtgc actacgtgga tcgtaggttg gagaggataa aagaagccga caacgaaact 1080
 tatgtagagc aatatgagca cgccgtggct cgttattcca acttgggcgg aggaatggat 1140
 gaactgtaca ag 1152

<210> 356
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>

<223> synthetic

<400> 356

Met Lys His His His His His Val Phe Thr Leu Glu Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Leu Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Met Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
145 150 155

<210> 357

<211> 465

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 357
atgaaacatc accatcacca tcatgtcttc acactcgaag atttcgttgg ggactgggaa 60
cagaccgccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgac ctaaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggatgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acatgctgaa ctatttcgga 360
cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcaactgtaac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcacc cgcac 465

<210> 358
<211> 396
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 358
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgac atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggatgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgtatg aaggcatcgc cgtgttcgac ggctaa 396

<210> 359
<211> 131
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 359

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly
 130

<210> 360
 <211> 654
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 360
 gggagctccg gtggtggcgg gagcggaggt ggaggctcga gcggtatgac gtataagtta 60
 atccttaatg gtaaaacatt gaaaggcgag acaactactg aagctgttga tgctgctact 120
 gcagaaaaag tcttcaaaca atacgctaac gacaacggtg ttgacggtga atggacttac 180
 gacgatgcga cgaaaacctt tacggtcacc gaaaaaccag aagtgatcga tgcgtctgaa 240

ttaacaccag ccgtgacaac ttacaaactt gttattaatg gtaaaacatt gaaaggcgaa 300
 acaactactg aggctgttga tgctgctact gcagagaagg tgttcaaaca atatgcgaat 360
 gacaacggtg ttgacggtga gtggacttac gacgatgcga ctaagacctt tacagttact 420
 gaaaaaccag aagtgatcga tgcgtctgag ttaacaccag ccgtgacaac ttacaaactt 480
 gttattaatg gtaaaacatt gaaaggcgaa acaactacta aagcagtaga cgcagaaact 540
 gcggagaagg ccttcaaaca atacgctaac gacaacggtg ttgatggtgt ttggacttat 600
 gatgatgccca caaaaacctt tacggtaact gagcatcatc accatcacca ctaa 654

<210> 361
 <211> 217
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 361

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

Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr
 20 25 30

Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys Gln Tyr
 35 40 45

Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp Ala Thr
 50 55 60

Lys Thr Phe Thr Val Thr Glu Lys Pro Glu Val Ile Asp Ala Ser Glu
 65 70 75 80

Leu Thr Pro Ala Val Thr Thr Tyr Lys Leu Val Ile Asn Gly Lys Thr
 85 90 95

Leu Lys Gly Glu Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu
 100 105 110

Lys Val Phe Lys Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp
115 120 125

Thr Tyr Asp Asp Ala Thr Lys Thr Phe Thr Val Thr Glu Lys Pro Glu
130 135 140

Val Ile Asp Ala Ser Glu Leu Thr Pro Ala Val Thr Thr Tyr Lys Leu
145 150 155 160

Val Ile Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr Thr Lys Ala Val
165 170 175

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

Gly Val Asp Gly Val Trp Thr Tyr Asp Asp Ala Thr Lys Thr Phe Thr
195 200 205

Val Thr Glu His His His His His His
210 215

<210> 362
<211> 363
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 362
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggt aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
taa 363

<210> 363

<211> 120
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 363

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly
 115 120

<210> 364
 <211> 396
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 364

atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60

cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120

cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaatatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaatggcc 240
 cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 cggccgtatg aaggcatcgc cgtgttcgac ggctaa 396

<210> 365
 <211> 131
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 365

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly
130

<210> 366
<211> 423
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 366
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
taa 423

<210> 367
<211> 140
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 367

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu
130 135 140

<210> 368
<211> 432
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 368
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggatgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
tggaacggct aa 432

<210> 369
<211> 143
<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 369

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly
130 135 140

<210> 370

<211> 483

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 370

atggtttccg tgagcggctg gcggtgttc aagaagatta gcttcacact cgacgatttc

60

gttggggact gggaacagac agccgcctac aacctggacc aagtccttga acaggagagt 120
gtgtccagtt tgctgcagaa tctcgccgtg tccgtaactc cgatcatgag gattgtccgg 180
agcggtgaaa atgccctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc 240
gccgacaaa tggcccagat cgaagaggtg ttttaaggtgg tgtaccctgt ggatgatcat 300
cactttaagg tgatcctgcc ctatggcaca ctggtaatcg acggggttac gccgaacaag 360
ctgaactatt tcggacggcc gtatgaaggc atcgccgtgt tcgacggcaa aaagatcact 420
accacagga ccctgtggaa cggcaacaaa attatcgacg agcgcctgat ccccccgac 480
taa 483

<210> 371
<211> 160
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 371

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Phe Thr
1 5 10 15

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

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu
35 40 45

Ala Val Ser Val Thr Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn
50 55 60

Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
65 70 75 80

Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro
85 90 95

Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val

100

105

110

Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr
 115 120 125

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr
 130 135 140

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
 145 150 155 160

<210> 372
 <211> 495
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 372
 atggtttccg tgagcggctg gcggtgttc aagaagatta gcggcagctc cggtttcaca 60
 ctcgacgatt tcgttgggga ctgggaacag acagccgcct acaacctgga ccaagtcctt 120
 gaacaggag gtgtgtccag ttgtctgcag aatctcgccg tgtccgtaac tccgatcatg 180
 aggattgtcc ggagcgggtga aaatgccctg aagatcgaca tccatgtcat catcccgtat 240
 gaaggtctga gcgccgacca aatggcccag atcgaagagg tgtttaaggt ggtgtaccct 300
 gtggatgatc atcactttaa ggtgatcctg ccctatggca cactggtaat cgacgggggtt 360
 acgccgaaca agctgaacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc 420
 aaaaagatca ctaccacagg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 480
 atcacccccg actaa 495

<210> 373
 <211> 164
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 373

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
 1 5 10 15

Ser Gly Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
 20 25 30

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 35 40 45

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 65 70 75 80

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 85 90 95

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 100 105 110

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
 115 120 125

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 130 135 140

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 145 150 155 160

Ile Thr Pro Asp

<210> 374
 <211> 507
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 374

atggtttccg tgagcggctg gcggctgttc aagaagatta gcggctcgag cgggtggctcg 60
 agcggtttca cactcgacga tttcgttggg gactgggaac agacagccgc ctacaacctg 120
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaattctgc cgtgtccgta 180
 actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 240
 atcatcccgt atgaaggtct gagcgccgac caaatggccc agatcgaaga ggtgtttaag 300
 gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccttatgg cacactggta 360
 atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcattgcc 420
 gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaattatc 480
 gacgagcgcc tgatcacccc cgactaa 507

<210> 375
 <211> 168
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 375

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
 1 5 10 15

Ser Gly Gly Ser Ser Gly Phe Thr Leu Asp Asp Phe Val Gly Asp Trp
 20 25 30

Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly
 35 40 45

Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser Val Thr Pro Ile Met
 50 55 60

Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val
 65 70 75 80

Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu
 85 90 95

Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
100 105 110

Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys
115 120 125

Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly
130 135 140

Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
145 150 155 160

Asp Glu Arg Leu Ile Thr Pro Asp
165

<210> 376
<211> 519
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 376
atggtttccg tgagcggctg gcggtgttc aagaagatta gcggtctgag cggtggctcg 60
agcgggtggct cgagcggttt cacactcgac gatttcgttg gggactggga acagacagcc 120
gcctacaacc tggaccaagt cttgaacag ggaggtgtgt ccagtttgct gcagaatctc 180
gccgtgtccg taactccgat catgaggatt gtccggagcg gtgaaaatgc cctgaagatc 240
gacatccatg tcatcatccc gtatgaaggt ctgagcgccg accaaatggc ccagatcgaa 300
gaggtgttta aggtgggtgta ccctgtggat gatcatcact ttaaggtgat cctgcccctat 360
ggcacactgg taatcgacgg ggttacgccg aacaagctga actatttcgg acggccgtat 420
gaaggcatcg ccgtgttcga cggcaaaaag atcactacca cagggaccct gtggaacggc 480
aacaaaatta tcgacgagcg cctgatcacc cccgactaa 519

<210> 377
<211> 172
<212> PRT
<213> Artificial sequence

<220>

<223> synthetic

<400> 377

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
1 5 10 15

Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Phe Thr Leu Asp Asp Phe
20 25 30

Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu
35 40 45

Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser Val
50 55 60

Thr Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile
65 70 75 80

Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met
85 90 95

Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His
100 105 110

His Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val
115 120 125

Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala
130 135 140

Val Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly
145 150 155 160

Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
165 170

<210> 378

<211> 531

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 378

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atggtttccg tgagcggctg gcggctgttc aagaagatta gcggctcgag cgggtggctcg      60
agcgggtggct cgagcggtag ctcgagcggg ttcacactcg acgatttcgt tggggactgg      120
gaacagacag ccgcctacaa cctggaccaa gtccttgaac agggaggtgt gtccagtttg      180
ctgcagaatc tcgccgtgtc cgtaactccg atcatgagga ttgtccggag cggtgaaaat      240
gccctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgc cgaccaaattg      300
gcccagatcg aagaggtggt taaggtggtg taccctgtgg atgatcatca ctttaaggtg      360
atcctgccct atggcacact ggtaatcgac ggggttacgc cgaacaagct gaactatttc      420
ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactac cacagggacc      480
ctgtggaacg gcaacaaaat tatcgacgag cgcctgatca ccccgacta a                    531
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<210> 379

<211> 176

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 379

```
Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
1          5          10         15
```

```
Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Phe Thr
20          25          30
```

```
Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu
35          40          45
```

```
Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu
50          55          60
```

```
Ala Val Ser Val Thr Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn
65          70          75          80
```

Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
85 90 95

Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro
100 105 110

Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val
115 120 125

Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr
130 135 140

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr
145 150 155 160

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
165 170 175

<210> 380
<211> 543
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 380
atggtttccg tgagcggctg gcggctgttc aagaagatta gcggctcgag cggtggctcg 60
agcgggtggct cgagcggctg ctcgagcggg ggctcgagcg gtttcacact cgacgatttc 120
gttggggact gggaacagac agccgcctac aacctggacc aagtccttga acagggaggt 180
gtgtccagtt tgctgcagaa tctcgccgtg tccgtaactc cgatcatgag gattgtccgg 240
agcggtgaaa atgccctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc 300
gccgacaaa tggcccagat cgaagaggtg ttttaaggtg tgtaccctgt ggatgatcat 360
cactttaagg tgatcctgcc ctatggcaca ctggtaatcg acgggggttac gccgaacaag 420
ctgaactatt tcggacggcc gtatgaaggc atcgccgtgt tcgacggcaa aaagatcact 480
accacaggga ccctgtggaa cggcaacaaa attatcgacg agcgcctgat ccccccgac 540
taa 543

<210> 381
<211> 180
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 381

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
1 5 10 15

Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser
20 25 30

Ser Gly Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
35 40 45

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
50 55 60

Leu Gln Asn Leu Ala Val Ser Val Thr Pro Ile Met Arg Ile Val Arg
65 70 75 80

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
85 90 95

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
100 105 110

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
115 120 125

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
130 135 140

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
145 150 155 160

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu

Ile Thr Pro Asp
180

<210> 382
<211> 537
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 382
atggtgagcg gctggcggct gttcaagaag attagcggct cgagcgggtg ctcgagcggg 60
ggctcgagcg gtggctcgag cgggtggctcg agcggtttca cactcgacga tttcgttggg 120
gactgggaac agacagccgc ctacaacctg gaccaagtcc ttgaacaggg aggtgtgtcc 180
agtttgctgc agaatctcgc cgtgtccgta actccgatca tgaggattgt ccggagcggg 240
gaaaatgccc tgaagatcga catccatgtc atcatcccgat atgaaggctc gagcgccgac 300
caaatggccc agatcgaaga ggtgtttaag gtgggtgtacc ctgtggatga tcatcacttt 360
aaggatgatcc tgccctatgg cacactggta atcgacgggg ttacgccgaa caagctgaac 420
tatttcggac ggccgtatga aggcacgccc gtgttcgacg gcaaaaagat cactaccaca 480
gggaccctgt ggaacggcaa caaaattatc gacgagcgcc tgatcacccc cgactaa 537

<210> 383
<211> 178
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 383

Met Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser Ser Gly
1 5 10 15

Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly
20 25 30

Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr
 35 40 45

Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln
 50 55 60

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

Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly
 85 90 95

Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val Val
 100 105 110

Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr Gly Thr
 115 120 125

Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg
 130 135 140

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

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr
 165 170 175

Pro Asp

<210> 384
 <211> 486
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 384
 atggtcttca cactcgacga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120

actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccggt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtgggtgtacc ctgtggatga tcatcacttt aagggtgatcc tggcctatgg cacactggta 300
atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcatcgcc 360
gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcacccc cgacgtttcc gtgagcggct ggcggctgtt caagaagatt 480
agctaa 486

<210> 385
<211> 161
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 385

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Thr Pro Asp Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile
 145 150 155 160

Ser

<210> 386
 <211> 498
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 386
 atggtcttca cactcgacga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
 actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
 atcatcccgt atgaaggtct gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
 atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcacgcgc 360
 gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaaattatc 420
 gacgagcgcc tgatcacccc cgacggctcg agcgggtgtt ccgtgagcgg ctggcggctg 480
 ttcaagaaga ttagctaa 498

<210> 387
 <211> 165
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 387

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
 1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Thr Pro Asp Gly Ser Ser Gly Val Ser Val Ser Gly Trp Arg Leu
 145 150 155 160

Phe Lys Lys Ile Ser
 165

<210> 388
 <211> 510
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 388
atggtcttca cactcgacga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggtct gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcacgcc 360
gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcacccc cgacggctcg agcgggtggc cgagcgggtgt ttccgtgagc 480
ggctggcggc tgttcaagaa gattagctaa 510

<210> 389
<211> 169
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 389

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp Gly Ser Ser Gly Gly Ser Ser Gly Val Ser Val Ser
145 150 155 160

Gly Trp Arg Leu Phe Lys Lys Ile Ser
165

<210> 390
<211> 504
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 390
atggtcttca cactcgacga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcatcgcc 360
gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcacccc cgacggctcg agcgggtggc cgagcgggtgt gagcggctgg 480
cggctgttca agaagattag ctaa 504

<210> 391
<211> 167
<212> PRT
<213> Artificial sequence

<220>

<223> synthetic

<400> 391

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp Gly Ser Ser Gly Gly Ser Ser Gly Val Ser Gly Trp
145 150 155 160

Arg Leu Phe Lys Lys Ile Ser
165

<210> 392

<211> 501

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 392

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gttggggact gggaacagac agccgcctac aacctggacc aagtccttga acagggaggt      120
gtgtccagtt tgctgcagaa tctcgccgtg tccgtaactc cgatcatgag gattgtccgg      180
agcggtgaaa atgccctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc      240
gccgacaaa tggcccagat cgaagaggtg ttttaaggtgg tgtaccctgt ggatgatcat      300
cactttaagg tgatcctgcc ctatggcaca ctggtaatcg acggggttac gccgaacaag      360
ctgaactatt tcggacggcc gtatgaaggc atcgccgtgt tcgacggcaa aaagatcact      420
accacaggga ccctgtggaa cggcaacaaa attatcgacg agcgcctgat ccccccgac      480
catcaccatc accatcatta a                                              501
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<210> 393

<211> 166

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 393

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Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Phe Thr
1           5           10          15
```

```
Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu
          20          25          30
```

```
Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu
          35          40          45
```

```
Ala Val Ser Val Thr Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn
          50          55          60
```

```
Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
65          70          75          80
```

Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro
85 90 95

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

Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr
115 120 125

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr
130 135 140

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
145 150 155 160

His His His His His His
165

<210> 394
<211> 513
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 394
atggtttccg tgagcggctg gcggctgttc aagaagatta gcggcagctc cggtttcaca 60
ctcgacgatt tcgttgggga ctgggaacag acagccgcct acaacctgga ccaagtcctt 120
gaacagggag gtgtgtccag tttgctgcag aatctcgccg tgtccgtaac tccgatcatg 180
aggattgtcc ggagcgggtga aaatgccctg aagatcgaca tccatgtcat catcccgtat 240
gaaggctctga gcgccgacca aatggcccag atcgaagagg tgtttaaggt ggtgtaccct 300
gtggatgatc atcactttaa ggtgatcctg ccctatggca cactggtaat cgacgggggtt 360
acgccgaaca agctgaacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc 420
aaaaagatca ctaccacagg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 480
atcacccccc accatcacca tcaccatcat taa 513

<210> 395
<211> 170
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 395

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
1 5 10 15

Ser Gly Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
20 25 30

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
35 40 45

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
65 70 75 80

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
85 90 95

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
100 105 110

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
115 120 125

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
130 135 140

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
145 150 155 160

Ile Thr Pro Asp His His His His His His
165 170

<210> 396
 <211> 525
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 396
 atggtttccg tgagcggctg gcggtgttc aagaagatta gcggtctgag cgggtggctcg 60
 agcggtttca cactcgacga tttcgttggg gactgggaac agacagccgc ctacaacctg 120
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaattctgc cgtgtccgta 180
 actccgatca tgaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 240
 atcatcccgt atgaaggctc gagcgccgac caaatggccc agatcgaaga ggtgtttaag 300
 gtgggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgccctatgg cacactggta 360
 atcgacgggg ttacgccgaa caagctgaac tatttcggac ggccgtatga aggcacgcgc 420
 gtgttcgacg gcaaaaagat cactaccaca gggaccctgt ggaacggcaa caaaattatc 480
 gacgagcgcc tgatcacccc cgaccatcac catcaccatc attaa 525

<210> 397
 <211> 174
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 397

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
 1 5 10 15

Ser Gly Gly Ser Ser Gly Phe Thr Leu Asp Asp Phe Val Gly Asp Trp
 20 25 30

Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly
 35 40 45

Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser Val Thr Pro Ile Met

50

55

60

Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val
65 70 75 80

Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu
85 90 95

Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
100 105 110

Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys
115 120 125

Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly
130 135 140

Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
145 150 155 160

Asp Glu Arg Leu Ile Thr Pro Asp His His His His His His
165 170

<210> 398

<211> 537

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 398

atggtttccg tgagcggctg gcggctgttc aagaagatta gcggctcgag cggtggctcg 60

agcgggtggct cgagcggttt cacactcgac gatttcgttg gggactggga acagacagcc 120

gcctacaacc tggaccaagt ccttgaacag ggaggtgtgt ccagtttgct gcagaatctc 180

gccgtgtccg taactccgat catgaggatt gtccggagcg gtgaaaatgc cctgaagatc 240

gacatccatg tcatcatccc gtatgaaggc ctgagcgccg accaaatggc ccagatcgaa 300

gaggtgttta aggtggtgta ccctgtggat gatcatcact ttaagtgat cctgccctat 360

ggcacactgg taatcgacgg ggttacgccg aacaagctga actatttcgg acggccgtat 420

200

gaaggcatcg ccgtgttcga cggcaaaaag atcactacca cagggaccct gtggaacggc 480

aacaaaatta tcgacgagcg cctgatcacc cccgaccatc accatcacca tcattaa 537

<210> 399

<211> 178

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 399

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
1 5 10 15

Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Phe Thr Leu Asp Asp Phe
20 25 30

Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu
35 40 45

Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser Val
50 55 60

Thr Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile
65 70 75 80

Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met
85 90 95

Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His
100 105 110

His Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val
115 120 125

Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala
130 135 140

Val Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly

145	150	155	160
Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp His His His His			
	165	170	175

His His

<210> 400
 <211> 549
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 400
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 agcgggtggct cgagcggtag ctcgagcggg ttcacactcg acgatttcgt tggggactgg 120
 gaacagacag ccgcctacaa cctggaccaa gtccttgaac agggaggtgt gtccagtttg 180
 ctgcagaatc tcgccgtgtc cgtaactccg atcatgagga ttgtccggag cggtgaaaat 240
 gccctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgc cgaccaaattg 300
 gcccagatcg aagaggtggt taaggtgggtg taccctgtgg atgatcatca ctttaaggtg 360
 atcctgccct atggcacact ggtaatcgac ggggttacgc cgaacaagct gaactatttc 420
 ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactac cacagggacc 480
 ctgtggaacg gcaacaaaat tatcgacgag cgcctgatca ccccgacca tcaccatcac 540
 catcattaa 549

<210> 401
 <211> 182
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 401

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
1 5 10 15

Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Phe Thr
20 25 30

Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu
35 40 45

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu
50 55 60

Ala Val Ser Val Thr Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn
65 70 75 80

Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
85 90 95

Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro
100 105 110

Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val
115 120 125

Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr
130 135 140

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr
145 150 155 160

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
165 170 175

His His His His His His
180

<210> 402
<211> 555
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 402
atggtgagcg gctggcggct gttcaagaag attagcggct cgagcgggtg ctcgagcggg 60
ggctcgagcg gtggctcgag cgggtggctcg agcggtttca cactcgacga tttcgttggg 120
gactgggaac agacagccgc ctacaacctg gaccaagtcc ttgaacaggg aggtgtgtcc 180
agtttgctgc agaatctcgc cgtgtccgta actccgatca tgaggattgt ccggagcggg 240
gaaaatgccc tgaagatcga catccatgtc atcatcccggt atgaaggtct gagcgccgac 300
caaatggccc agatcgaaga ggtgtttaag gtgggtgtacc ctgtggatga tcatcacttt 360
aaggtgatcc tgccctatgg cacactggta atcgacgggg ttacgccgaa caagctgaac 420
tatttcggac ggccgtatga aggcacgccc gtgttcgacg gcaaaaagat cactaccaca 480
gggaccctgt ggaacggcaa caaaattatc gacgagcgcc tgatcacccc cgaccatcac 540
catcaccatc attaa 555

<210> 403
<211> 184
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 403

Met Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser Ser Gly
1 5 10 15

Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly
20 25 30

Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr
35 40 45

Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln
50 55 60

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

Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly
85 90 95

Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val Val
100 105 110

Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr Gly Thr
115 120 125

Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg
130 135 140

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

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr
165 170 175

Pro Asp His His His His His His
180

<210> 404
<211> 561
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 404
atggtttccg tgagcggctg gcggctgttc aagaagatta gcggctcgag cggtggctcg 60
agcgggtggct cgagcggctg ctcgagcggg ggctcgagcg gtttcacact cgacgatttc 120
gttggggact gggaacagac agccgcctac aacctggacc aagtccttga acagggaggt 180
gtgtccagtt tgctgcagaa tctcgccgtg tccgtaactc cgatcatgag gattgtccgg 240
agcggtgaaa atgccctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc 300
gccgaccaa tggcccagat cgaagaggtg ttttaaggtgg tgtaccctgt ggatgatcat 360
cactttaagg tgatcctgcc ctatggcaca ctggtaatcg acgggggttac gccgaacaag 420
ctgaactatt tcggacggcc gtatgaaggc atcgccgtgt tcgacggcaa aaagatcact 480

accacagga ccctgtggaa cggcaacaaa attatcgacg agcgcctgat ccccccgac 540
catcaccatc accatcatta a 561

<210> 405
<211> 186
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 405

Met Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser
1 5 10 15

Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly Ser
20 25 30

Ser Gly Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
35 40 45

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
50 55 60

Leu Gln Asn Leu Ala Val Ser Val Thr Pro Ile Met Arg Ile Val Arg
65 70 75 80

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
85 90 95

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
100 105 110

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
115 120 125

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
130 135 140

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
145 150 155 160

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
165 170 175

Ile Thr Pro Asp His His His His His His
180 185

<210> 406
<211> 507
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 406
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgacg atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcaccc cgcacgtttc cgtgagcggc 480
tggcggctgt tcaagaagat tagctaa 507

<210> 407
<211> 168
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 407

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu

20

25

30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Val Ser Val Ser Gly
 145 150 155 160

Trp Arg Leu Phe Lys Lys Ile Ser
 165

<210> 408

<211> 519

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 408

atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60

cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120

cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180

ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcacc cgcacggctc gagcgggtgtt 480
tccgtgagcg gctggcggct gttcaagaag attagctaa 519

<210> 409
<211> 172
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 409

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val

115

120

125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Ser Gly Val
 145 150 155 160

Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
 165 170

<210> 410
 <211> 525
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 410
 atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgacg atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggctc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcacc cgcgagcgtc gagcgggtggc 480
 tcgagcgggtg tgagcggctg gcggctgttc aagaagatta gctaa 525

<210> 411
 <211> 174
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 411

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Ser Gly Gly
 145 150 155 160

Ser Ser Gly Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
 165 170

<210> 412
 <211> 531
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 412

atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcacc cgcacggctc gagcgggtggc 480
 tcgagcgggtg tttccgtgag cggctggcgg ctgttcaaga agattagcta a 531

<210> 413
 <211> 176
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 413

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Ser Gly Gly
145 150 155 160

Ser Ser Gly Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
165 170 175

<210> 414
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 414
atggtcttca cactcgaaga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatcc aaaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcacgcc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcacccc cgacggctcc atgctgttcc gagtaaccat caacagccat 480
catcaccatc accactaa 498

<210> 415
<211> 165
<212> PRT
<213> Artificial sequence

<220>

<223> synthetic

<400> 415

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

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

His His His His His
165

<210> 416

<211> 501

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 416

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atggtgagcg gctggcggct gttcaagaag attagccacc atcaccatca ccatcatcac      60
ttcacactcg acgatttcgt tggggactgg gaacagacag cgcctacaa cctggaccaa      120
gtccttgaac agggaggtgt gtccagtttg ctgcagaatc tcgccgtgtc cgtaactccg      180
atcatgagga ttgtccggag cggtgaaaat gccctgaaga tcgacatcca tgtcatcatc      240
ccgtatgaag gtctgagcgc cgaccaaatt gccagatcg aagaggtggt taaggtggtg      300
taccctgtgg atgatcatca ctttaaggtg atcctgccct atggcacact ggtaatcgac      360
ggggttacgc cgaacaagct gaactatttc ggacggccgt atgaaggcat cgccgtgttc      420
gacggcaaaa agatcactac cacagggacc ctgtggaacg gcaacaaaat tatcgacgag      480
cgcctgatca ccccgacta a                                          501
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<210> 417

<211> 166

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 417

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Met Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser His His His His
1           5           10          15
```

```
His His His His Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln
20           25          30
```

```
Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser
35           40          45
```

```
Ser Leu Leu Gln Asn Leu Ala Val Ser Val Thr Pro Ile Met Arg Ile
50           55          60
```

```
Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile
65           70          75          80
```

Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val
85 90 95

Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu
100 105 110

Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn
115 120 125

Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys
130 135 140

Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu
145 150 155 160

Arg Leu Ile Thr Pro Asp
165

<210> 418
<211> 510
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 418
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agctccggtt tcacactcga cgatttcgtt ggggactggg aacagacagc cgcctacaac 120
ctggaccaag tccttgaaca gggaggtgtg tccagtttgc tgcagaatct cgccgtgtcc 180
gtaactccga tcatgaggat tgtccggagc ggtgaaaatg ccctgaagat cgacatccat 240
gtcatcatcc cgtatgaagg tctgagcgcc gaccaaattg cccagatcga agaggtgttt 300
aaggtggtgt accctgtgga tgatcatcac tttaaggtga tcctgcccta tggcacactg 360
gtaatcgacg gggttacgcc gaacaagctg aactattttc gacggccgta tgaaggcatc 420
gccgtgttcg acggcaaaaa gatcactacc acagggaccc tgtggaacgg caacaaaatt 480
atcgacgagc gcctgatcac ccccgactaa 510

<210> 419
 <211> 169
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 419

Met Lys His His His His His His Val Ser Gly Trp Arg Leu Phe Lys
 1 5 10 15

Lys Ile Ser Gly Ser Ser Gly Phe Thr Leu Asp Asp Phe Val Gly Asp
 20 25 30

Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly
 35 40 45

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

Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His
 65 70 75 80

Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile
 85 90 95

Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys
 100 105 110

Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn
 115 120 125

Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp
 130 135 140

Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
 145 150 155 160

Ile Asp Glu Arg Leu Ile Thr Pro Asp
 165

<210> 420
 <211> 507
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 420
 atggtgagcg gctggcggct gttcaagaag attagcggca gctccggttt cacactcgac 60
 gatttcgttg gggactggga acagacagcc gcctacaacc tggaccaagt ctttgaacag 120
 ggagggtgtg ccagtttgct gcagaatctc gccgtgtccg taactccgat catgaggatt 180
 gtccggagcg gtgaaaatgc cctgaagatc gacatccatg tcatcatccc gtatgaaggt 240
 ctgagcgccg accaaatggc ccagatcgaa gaggtgttta aggtgggtgta ccctgtggat 300
 gatcatcact ttaagggtgat cctgccctat ggcacactgg taatcgacgg ggttacgccg 360
 aacaagctga actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag 420
 atcactacca cagggaccct gtggaacggc aaaaaatta tcgacgagcg cctgatcacc 480
 cccgaccatc accatcacca tcattaa 507

<210> 421
 <211> 168
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 421

Met Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser Gly Ser Ser Gly
 1 5 10 15

Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala Ala Tyr
 20 25 30

Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Leu Gln
 35 40 45

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

Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly
65 70 75 80

Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys Val Val
85 90 95

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

Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg
115 120 125

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Thr Thr
130 135 140

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr
145 150 155 160

Pro Asp His His His His His His
165

<210> 422
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 422
atggtcttca cactcgaaga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatcc aaaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcatcgcc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacgagaa caaaattatc 420

gacgagcgcc tgatcacccc cgacggctcc atgctgttcc gagtaaccat caacagccat 480
catcaccatc accactaa 498

<210> 423
<211> 165
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 423

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Glu Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

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

220

His His His His His
165

<210> 424
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 424
atggtcttca cactcgaaga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatcc aaaggattgt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcatcgcc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcgt taaaattatc 420
gacgagcgcc tgatcacccc cgacggctcc atgctgttcc gagtaaccat caacagccat 480
catcaccatc accactaa 498

<210> 425
<211> 165
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 425

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Leu Gln Asn Leu Ala Val Ser Val Thr Pro Ile Gln Arg Ile Val Arg

35

40

45

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Val Lys Ile Ile Asp Glu Arg Leu
 130 135 140

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

His His His His His
 165

<210> 426
 <211> 498
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 426
 atggtcttca cactcgaaga tttcgttggg gactgggaac agacagccgc ctacaacctg 60
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
 actccgatcc aaaggatggg ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
 atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300

atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcatcgcc 360
 gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420
 gacgagcgcc tgatcacccc cgacggctcc atgctgttcc gagtaaccat caacagccat 480
 catcaccatc accactaa 498

<210> 427
 <211> 165
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 427

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
 1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu

130

135

140

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

His His His His His
 165

<210> 428
 <211> 498
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 428
 atggtcttca cactcgaaga tttcgttggg gactggaagc agacagccgc ctacaacctg 60
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
 actccgatcc aaaggatggg ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
 atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgccctatgg cacttggtta 300
 atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcacatgcc 360
 gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420
 gacgagcgcc tgatcacccc cgacggctcc atgctgttcc gagtaaccat caacagccat 480
 catcaccatc accactaa 498

<210> 429
 <211> 165
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 429

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Lys Gln Thr Ala
 1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

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

His His His His His
165

<210> 430
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 430
atggtcttca cactcgaaga tttcgttggg gactggaagc agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120

actccgatcc aaaggatggt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tggcctatgg cacactggta 300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcatcgcc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacgacgt caaaattatc 420
gacgagcgcc tgatcacccc cgacggctcc atgctgttcc gagtaaccat caacagccat 480
catcaccatc accactaa 498

<210> 431
<211> 165
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 431

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Lys Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Asp Val Lys Ile Ile Asp Glu Arg Leu
130 135 140

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

His His His His His
165

<210> 432
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 432
atggtcttca cactcgaaga tttcgttggg gactggaagc agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaattctgc cgtgtccgta 120
actccgatcc aaaggatggg ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaagggtc gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcacgcgc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacgacgt caaaattatc 420
gacgagcgcc tgatcacccc cgacggctcc atgtccttcc gagtaaccat caacagccat 480
catcaccatc accactaa 498

<210> 433
<211> 165
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 433

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Lys Gln Thr Ala
 1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Asp Val Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Thr Pro Asp Gly Ser Met Ser Phe Arg Val Thr Ile Asn Ser His
 145 150 155 160

His His His His His
 165

<210> 434
 <211> 498
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 434
atggtcttca cactcgaaga tttcgttggg gactggaagc agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatcc aaaggatggt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggtct gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcatcgcc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcacccc cgacggctcc atgtccttcc gagtaaccat caacagccat 480
catcaccatc accactaa 498

<210> 435
<211> 165
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 435

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Lys Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp Gly Ser Met Ser Phe Arg Val Thr Ile Asn Ser His
145 150 155 160

His His His His His
165

<210> 436
<211> 498
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 436
atggtcttca cactcgaaga tttcgttggg gactggaagc agacagccgc ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgctgc agaatctcgc cgtgtccgta 120
actccgatcc aaaggatggt ccggagcggg gaaaatgccc tgaagatcga catccatgtc 180
atcatcccgt atgaaggctt gagcgccgac caaatggccc agatcgaaga ggtgtttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgccctatgg cacactggta 300
atcgacgggg ttacgccgaa catgctgaac tatttcggac ggccgtatga aggcacgcgc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcgt caaaattatc 420
gacgagcgcc tgatcacccc cgacggctcc atgtccttcc gagtaaccat caacagccat 480
catcaccatc accactaa 498

<210> 437
<211> 165
<212> PRT
<213> Artificial sequence

<220>

<223> synthetic

<400> 437

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Lys Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Val Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp Gly Ser Met Ser Phe Arg Val Thr Ile Asn Ser His
145 150 155 160

His His His His His
165

<210> 438

<211> 468

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 438

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atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa      60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg     120
cagaatctcg ccgtgtccgt aactccgata atgaggattg tccggagcgg tgaaaatgcc     180
ctgaagatcg acatccatgt catcatcccc tatgaaggta tgagcgccga ccaaattggc     240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgata     300
ctgccctatg gcacactggt aatcgacggg gttacgccga acaagctgaa ctatttcgga     360
caccctgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg     420
tggaacggca acaaaattat cgacgagcgc ctgatcacc ccgactaa                   468
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<210> 439

<211> 155

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 439

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Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
1           5           10          15
```

```
Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
          20          25          30
```

```
Gln Gly Gly Val Ser Ser Leu Leu Gln Asn Leu Ala Val Ser Val Thr
          35          40          45
```

```
Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
          50          55          60
```

```
Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65          70          75          80
```


Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly His Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
145 150 155

<210> 440
<211> 468
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 440
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaatggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
cggccgtatg aaggcatcgc cgtgttcgac ggcgagaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcacc ccgactaa 468

<210> 441
<211> 155
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 441

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Glu Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
145 150 155

<210> 442

<211> 468

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 442

atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa

60

cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg	120
cagaatctcg ccgtgtccgt aactccgata atgaggattg tccggagcgg tgaaaatgcc	180
ctgaagatcg acatccatgt catcatcccg tatgaaggta tgagcgccga ccaaattggcc	240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc	300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga	360
cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg	420
cctaacggca acaaaattat cgacgagcgc ctgatcacc ccgactaa	468

<210> 443
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 443

Met	Lys	His	His	His	His	His	His	Val	Phe	Thr	Leu	Asp	Asp	Phe	Val
1				5					10					15	

Gly	Asp	Trp	Glu	Gln	Thr	Ala	Ala	Tyr	Asn	Leu	Asp	Gln	Val	Leu	Glu
			20					25					30		

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

Pro	Ile	Met	Arg	Ile	Val	Arg	Ser	Gly	Glu	Asn	Ala	Leu	Lys	Ile	Asp
		50				55					60				

Ile	His	Val	Ile	Ile	Pro	Tyr	Glu	Gly	Leu	Ser	Ala	Asp	Gln	Met	Ala
65					70				75					80	

Gln	Ile	Glu	Glu	Val	Phe	Lys	Val	Val	Tyr	Pro	Val	Asp	Asp	His	His
				85					90					95	

Phe	Lys	Val	Ile	Leu	Pro	Tyr	Gly	Thr	Leu	Val	Ile	Asp	Gly	Val	Thr
				100				105					110		

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Pro Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
 145 150 155

<210> 444
 <211> 468
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 444
 atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggt aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcgatc ccgactaa 468

<210> 445
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 445

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Asp Pro Asp
145 150 155

<210> 446
<211> 468
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 446
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgacg atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaatggcc 240

cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tcactaccac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatacccg atgactaa 468

<210> 447
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 447

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
 50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Asp Asp
 145 150 155

<210> 448
 <211> 468
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 448
 atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgacg atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 caccgcatg aaggcatcgc cgtgttcgac ggcgagaaga tcactaccac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcacc ccgactaa 468

<210> 449
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 449

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly His Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Glu Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
145 150 155

<210> 450
<211> 468
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 450
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgac atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggctc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
caccctgatg aaggcatcgc cgtgttcgac ggcgagaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcgatc ccgactaa 468

<210> 451
<211> 155
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 451

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly His Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Glu Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Asp Pro Asp
145 150 155

<210> 452

<211> 468
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 452
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgacg atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccctatg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
caccctgatg aaggcatcgc cgtgttcgac ggcgagaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcgatg atgactaa 468

<210> 453
<211> 155
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 453

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly His Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Glu Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Asp Asp Asp
145 150 155

<210> 454
<211> 468
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 454
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cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgacg atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggatgatc 300
ctgccccatcg gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
caccgatg aaggcatcgc cgtgttcgac ggcgagaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcgatc ccgactaa 468

<210> 455
<211> 155
<212> PRT
<213> Artificial sequence

<220>

<223> synthetic

<400> 455

Met Lys His His His His His His Asp Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Ile Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly His Pro Tyr Glu Gly Ile Ala Val
115 120 125

Phe Asp Gly Glu Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Asp Pro Asp
145 150 155

<210> 456

<211> 468

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic

<400> 456
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cagaatctcg ccgtgtccgt aactccgacg atgaggattg tccggagcgg tgaaaatgcc 180
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgccccatcg gcacactggg aatcgacggg gagacgccga acaagctgaa ctatttcgga 360
caccgcatg aaggcatcgc cgtgttcgac ggcgagaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcgatc ccgactaa 468

<210> 457
<211> 155
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 457

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Ile Gly Thr Leu Val Ile Asp Gly Glu Thr

100

105

110

Pro Asn Lys Leu Asn Tyr Phe Gly His Pro Tyr Glu Gly Ile Ala Val
 115 120 125

Phe Asp Gly Glu Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Asp Pro Asp
 145 150 155

<210> 458
 <211> 468
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 458
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 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgacg atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggctc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtgggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgcccacatc gcacactggg aatcgacggg gttacgccga acaagctgaa ctatttcgga 360
 caccctgatg aaggcatcgc cgatttcgac ggcgagaaga tcactaccac agggaccctg 420
 tggaacggca acaaaattat cgacgagcgc ctgatcgatc ccgactaa 468

<210> 459
 <211> 155
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 459

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Ile Gly Thr Leu Val Ile Asp Gly Val Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly His Pro Tyr Glu Gly Ile Ala Asp
115 120 125

Phe Asp Gly Glu Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Asp Pro Asp
145 150 155

<210> 460
<211> 468
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 460
atgaaacatc accatcacca tcatgtcttc acactcgacg atttcgttgg ggactgggaa 60
cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
cagaatctcg ccgtgtccgt aactccgatc atgaggattg tccggagcgg tgaaaatgcc 180

ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
ctgcccacatcg gcacactggg aatcgacggg gagacgccga acaagctgaa ctatttcgga 360
caccctgatg aaggcatcgc cgatttcgac ggcgagaaga tcactaccac agggaccctg 420
tggaacggca acaaaattat cgacgagcgc ctgatcgatc ccgactaa 468

<210> 461
<211> 155
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 461

Met Lys His His His His His Val Phe Thr Leu Asp Asp Phe Val
1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp
50 55 60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
85 90 95

Phe Lys Val Ile Leu Pro Ile Gly Thr Leu Val Ile Asp Gly Glu Thr
100 105 110

Pro Asn Lys Leu Asn Tyr Phe Gly His Pro Tyr Glu Gly Ile Ala Asp
115 120 125

Phe Asp Gly Glu Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn
 130 135 140

Lys Ile Ile Asp Glu Arg Leu Ile Asp Pro Asp
 145 150 155

<210> 462
 <211> 327
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 462
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 cagacagccg cctacaacct ggaccaagtc cttgaacagg gaggtgtgtc cagtttgctg 120
 cagaatctcg ccgtgtccgt aactccgac atgaggattg tccggagcgg tgaaaatgcc 180
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcgccga ccaaattggcc 240
 cagatcgaag aggtgtttta ggtggtgtac cctgtggatg atcatcactt taaggtgatc 300
 ctgccctatg gcacactggt aatcgac 327

<210> 463
 <211> 109
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 463

Met Lys His His His His His His Val Phe Thr Leu Asp Asp Phe Val
 1 5 10 15

Gly Asp Trp Glu Gln Thr Ala Ala Tyr Asn Leu Asp Gln Val Leu Glu
 20 25 30

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

Pro Ile Met Arg Ile Val Arg Ser Gly Glu Asn Ala Leu Lys Ile Asp

50

55

60

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Ala Asp Gln Met Ala
 65 70 75 80

Gln Ile Glu Glu Val Phe Lys Val Val Tyr Pro Val Asp Asp His His
 85 90 95

Phe Lys Val Ile Leu Pro Tyr Gly Thr Leu Val Ile Asp
 100 105

<210> 464
 <211> 11
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 464

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
 1 5 10

<210> 465
 <211> 10
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 465

Val Ser Gly Trp Arg Leu Phe Lys Lys Ile
 1 5 10

<210> 466
 <211> 15
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 466

Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
1 5 10 15

<210> 467
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 467

Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Arg
1 5 10

<210> 468
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 468

Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys
1 5 10

<210> 469
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 469

Gly Lys Met Leu Phe Arg Val Thr Ile Trp Lys Val Ser Val Ser Gly
1 5 10 15

Trp Arg Leu Phe Lys Lys Ile Ser
20

<210> 470
<211> 22
<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 470

Gly	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Lys	Val	Ser	Gly	Trp	Arg
1				5					10					15	

Leu	Phe	Lys	Lys	Ile	Ser
			20		

<210> 471

<211> 26

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 471

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys	Val	Ser	Val
1				5					10					15	

Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser
			20					25	

<210> 472

<211> 24

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 472

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys	Val	Ser	Gly
1				5					10					15	

Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser
			20				

<210> 473

<211> 26

<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 473

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys	Asn	Val	Thr
1				5					10					15	

Gly	Tyr	Arg	Leu	Phe	Lys	Lys	Ile	Ser	Asn
			20					25	

<210> 474
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 474

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys	Val	Thr	Gly
1				5					10					15	

Tyr	Arg	Leu	Phe	Glu	Lys	Ile	Ser
			20				

<210> 475
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 475

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Trp	Lys	Val	Ser	Val	Ser	Gly
1				5					10					15	

Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser
			20				

<210> 476

<210> 479
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 479

Gly	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Lys	Val	Ser	Val	Ser	Gly
1			5					10					15		

Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser
				20			

<210> 480
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 480

Gly	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Trp	Lys	Val	Ser	Gly	Trp	Arg
1			5					10					15		

Leu	Phe	Lys	Lys	Ile	Ser
				20	

<210> 481
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 481

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

Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser
				20			

<210> 482
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 482

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

Leu Phe Lys Lys Ile Ser
20

<210> 483
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 483

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

Leu Phe Lys Lys Ile Ser
20

<210> 484
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 484

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

Leu Phe Lys Lys Ile Ser
20

<210> 485
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 485

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

Leu Phe Lys Lys Ile Ser
20

<210> 486
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 486

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
1 5 10 15

Thr Thr Gly Thr Leu
20

<210> 487
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 487

Gly Ser Met Lys Phe Arg Val Thr Ile Asn Ser Trp Lys Val Thr Gly
1 5 10 15

Tyr Arg Leu Phe Glu Lys Glu Ser

20

<210> 488
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 488

Gly Ser Met Lys Phe Arg Val Thr Ile Asn Ser Trp Lys Val Glu Gly
1 5 10 15

Tyr Arg Leu Phe Glu Lys Ile Ser
20

<210> 489
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 489

Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
1 5 10 15

Asp Glu Arg Leu Ile Thr Pro Asp
20

<210> 490
<211> 26
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 490

Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly
1 5 10 15

Ser Met Leu Phe Arg Val Thr Ile Asn Ser
20 25

<210> 491
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 491

Gly Lys Met Leu Phe Arg Val Thr Ile Gln Lys Trp Lys
1 5 10

<210> 492
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 492

Gly Lys Met Leu Phe Arg Val Thr Ile Gly Lys Trp Lys
1 5 10

<210> 493
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 493

Gly Lys Met Leu Phe Arg Val Thr Ile Gly Arg Trp Lys
1 5 10

<210> 494
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 494

Gly Lys Met Leu Phe Arg Val Thr Ile Gly Asn Trp Lys
1 5 10

<210> 495

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 495

Gly Lys Met Leu Phe Arg Val Thr Ile Gln Asn Trp Lys
1 5 10

<210> 496

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 496

Gly Lys Met Leu Phe Arg Val Thr Ile Asp Lys Trp Lys
1 5 10

<210> 497

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 497

Gly Lys Met Leu Phe Arg Val Thr Ile Glu Lys Trp Lys
1 5 10

<210> 498

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 498

Glu Lys Met Leu Phe Arg Val Thr Ile Glu Ser Trp Lys
1 5 10

<210> 499

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 499

Glu Lys Leu Leu Phe Arg Val Thr Ile Glu Ser Trp Lys
1 5 10

<210> 500

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 500

Glu Lys Leu Leu Phe Arg Val Thr Ile Glu Ser Tyr Lys
1 5 10

<210> 501

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 501

Gly Lys Met Leu Phe Arg Val Thr Ile Glu Arg Trp Lys
1 5 10

<210> 502

<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 502

Gly	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asp	Arg	Trp	Lys
1				5					10			

<210> 503
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 503

Asp	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Gln	Lys	Trp	Lys
1				5					10			

<210> 504
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 504

Asp	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Gly	Lys	Trp	Lys
1				5					10			

<210> 505
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 505

Asp	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Gly	Arg	Trp	Lys
1				5					10			

<210> 506
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 506

Asp Lys Met Leu Phe Arg Val Thr Ile Gly Asn Trp Lys
1 5 10

<210> 507
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 507

Asp Lys Met Leu Phe Arg Val Thr Ile Gln Asn Trp Lys
1 5 10

<210> 508
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 508

Asp Lys Met Leu Phe Arg Val Thr Ile Asp Lys Trp Lys
1 5 10

<210> 509
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 509

Asp Lys Met Leu Phe Arg Val Thr Ile Glu Lys Trp Lys
1 5 10

<210> 510
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 510

Asp Lys Met Leu Phe Arg Val Thr Ile Glu Arg Trp Lys
1 5 10

<210> 511
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 511

Asp Lys Met Leu Phe Arg Val Thr Ile Asp Arg Trp Lys
1 5 10

<210> 512
<211> 35
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<400> 512

Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val
1 5 10 15

Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile
20 25 30

Thr Pro Asp
35

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<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 513

Glu Lys Met Leu Phe Arg Val Thr Ile Gln Lys Trp Lys
1 5 10

<210> 514
<211> 13
<212> PRT
<213> Artificial sequence

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<400> 514

Glu Lys Met Leu Phe Arg Val Thr Ile Gly Lys Trp Lys
1 5 10

<210> 515
<211> 13
<212> PRT
<213> Artificial sequence

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<400> 515

Glu Lys Met Leu Phe Arg Val Thr Ile Gly Arg Trp Lys
1 5 10

<210> 516
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<213> Artificial sequence

<220>
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<400> 516

Asp Lys Met Leu Phe Thr Val Thr Ile Gln Lys Val Ser Gly Trp Arg
1 5 10 15

Leu Phe Lys Lys Ile Ser
20

<210> 517
<211> 22
<212> PRT
<213> Artificial sequence

<220>
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<400> 517

Asp Lys Leu Leu Phe Thr Val Thr Ile Glu Lys Val Ser Gly Trp Arg
1 5 10 15

Leu Phe Lys Lys Ile Ser
20

<210> 518
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<220>
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<400> 518

Asp Lys Leu Leu Phe Thr Val Thr Ile Glu Lys Trp Lys Val Ser Gly
1 5 10 15

Trp Arg Leu Phe Lys Lys Ile Ser
20

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<400> 519

Asp Lys Leu Leu Phe Thr Val Thr Ile Glu Lys Tyr Lys Val Ser Gly
1 5 10 15

Trp Arg Leu Phe Lys Lys Ile Ser
20

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<213> Artificial sequence

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<400> 520

Asp Lys Leu Leu Phe Thr Val Thr Ile Glu Lys Tyr Lys Val Ser Val
1 5 10 15

Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
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<400> 521

Lys Lys Met Leu Phe Arg Val Thr Ile Gln Lys Val Ser Gly Trp Arg
1 5 10 15

Leu Phe Lys Lys Ile Ser
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<400> 522

Lys Lys Met Leu Phe Arg Val Thr Ile Gln Lys Trp Lys Val Ser Val
1 5 10 15

Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
20 25

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<220>

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<400> 523

Lys Lys Met Leu Phe Arg Val Thr Ile Gln Lys Trp Lys Val Ser Gly
1 5 10 15

Trp Arg Leu Phe Lys Lys Ile Ser
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<400> 524

Asp Lys Leu Leu Phe Thr Val Thr Ile Gly Lys Val Ser Gly Trp Arg
1 5 10 15

Leu Phe Lys Lys Ile Ser
20

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<400> 525

Asp Lys Leu Leu Phe Thr Val Thr Ile Gly Lys Tyr Lys Val Ser Gly
1 5 10 15

Trp Arg Leu Phe Lys Lys Ile Ser
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<400> 526

Asp Lys Leu Leu Phe Thr Val Thr Ile Gly Lys Tyr Lys Val Ser Val
1 5 10 15

Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
20 25

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<400> 527

Asp Lys Leu Leu Phe Thr Val Thr Ile Gly Lys Trp Lys Val Ser Val
1 5 10 15

Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
20 25

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<400> 528

Asp	Lys	Leu	Leu	Phe	Thr	Val	Thr	Ile	Gln	Lys	Val	Ser	Gly	Trp	Arg
1				5					10					15	

Leu	Phe	Lys	Lys	Ile	Ser
				20	

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<400> 529

Lys	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Gln	Lys	Val	Ser	Gly	Trp	Arg
1				5					10					15	

Leu	Phe	Lys	Lys	Ile	Ser
				20	

<210> 530

<211> 22

<212> PRT

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<400> 530

Lys	Lys	Leu	Leu	Phe	Arg	Val	Thr	Ile	Gln	Lys	Val	Ser	Gly	Trp	Arg
1				5					10					15	

Leu	Phe	Lys	Lys	Ile	Ser
				20	

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<400> 531

Asp Lys Leu Leu Phe Thr Val Thr Ile Glu Lys Val Ser Gly Trp Arg
1 5 10 15

Leu Phe Lys Lys Ile
20

<210> 532

<211> 25

<212> PRT

<213> Artificial sequence

<220>

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<400> 532

Asp Lys Leu Leu Phe Thr Val Thr Ile Glu Lys Tyr Lys Val Ser Val
1 5 10 15

Ser Gly Trp Arg Leu Phe Lys Lys Ile
20 25

<210> 533

<211> 22

<212> PRT

<213> Artificial sequence

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<400> 533

Asp Arg Leu Leu Phe Thr Val Thr Ile Glu Arg Val Ser Gly Trp Arg
1 5 10 15

Leu Phe Lys Lys Ile Ser
20

<210> 534

<211> 22

<212> PRT

<213> Artificial sequence

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<400> 534

Glu	Lys	Leu	Leu	Phe	Thr	Val	Thr	Ile	Glu	Lys	Val	Ser	Gly	Trp	Arg
1				5					10					15	

Leu	Phe	Lys	Lys	Ile	Ser
			20		

<210> 535

<211> 22

<212> PRT

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<400> 535

Lys	Lys	Leu	Leu	Phe	Thr	Val	Thr	Ile	Gly	Lys	Val	Ser	Gly	Trp	Arg
1				5					10					15	

Leu	Phe	Lys	Lys	Ile	Ser
			20		

<210> 536

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<400> 536

Gly	Ser	Met	Arg	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Arg	Val	Thr	Gly
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Tyr	Arg	Leu	Phe	Glu	Arg	Glu	Ser
			20				

<210> 537

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<212> PRT
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<400> 537

Gly	Ser	Met	Lys	Phe	Arg	Val	Thr	Ile	Asn	Ser	Val	Thr	Gly	Tyr	Arg
1				5					10					15	

Leu	Phe	Glu	Lys	Glu	Ser
				20	

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<400> 538

Lys	Lys	Ile	Thr	Thr	Thr	Gly	Thr	Leu	Trp	Asn	Gly	Asn	Lys	Ile	Ile
1				5					10					15	

Asp

<210> 539
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<220>
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<400> 539

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

Asn	Ser	Val	Ser	Gly	Trp	Arg	Leu	Phe	Lys	Lys	Ile	Ser
			20					25				

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<220>
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<400> 540

Gly Arg Pro Tyr Glu Gly Ile Ala Val Asp Phe Gly Lys Lys Ile Thr
1 5 10 15

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
20 25 30

Ile Thr Pro Asp Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Val
35 40 45

Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
50 55

<210> 541
<211> 68
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<220>
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<400> 541

Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly
1 5 10 15

Ile Ala Val Asp Phe Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp
20 25 30

Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser
35 40 45

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

Lys Lys Ile Ser
65

<210> 542
<211> 13
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<220>
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<400> 542

Glu Lys Met Leu Phe Arg Val Thr Ile Gly Asn Trp Lys
1 5 10

<210> 543
<211> 13
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<400> 543

Glu Lys Met Leu Phe Arg Val Thr Ile Gln Asn Trp Lys
1 5 10

<210> 544
<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 544

Glu Lys Met Leu Phe Arg Val Thr Ile Asp Lys Trp Lys
1 5 10

<210> 545
<211> 13
<212> PRT
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<220>
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<400> 545

Glu Lys Met Leu Phe Arg Val Thr Ile Glu Lys Trp Lys
1 5 10

<210> 546
<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 546

Glu Lys Met Leu Phe Arg Val Thr Ile Glu Arg Trp Lys
1 5 10

<210> 547
<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 547

Glu Lys Met Leu Phe Arg Val Thr Ile Asp Arg Trp Lys
1 5 10

<210> 548
<211> 13
<212> PRT
<213> Artificial sequence

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<400> 548

Lys Lys Met Leu Phe Arg Val Thr Ile Gly Lys Trp Lys
1 5 10

<210> 549
<211> 13
<212> PRT
<213> Artificial sequence

<220>

<223> synthetic

<400> 549

Lys Lys Met Leu Phe Arg Val Thr Ile Gly Arg Trp Lys
1 5 10

<210> 550

<211> 13

<212> PRT

<213> Artificial sequence

<220>

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<400> 550

Lys Lys Met Leu Phe Arg Val Thr Ile Gly Asn Trp Lys
1 5 10

<210> 551

<211> 13

<212> PRT

<213> Artificial sequence

<220>

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<400> 551

Lys Lys Met Leu Phe Arg Val Thr Ile Gln Asn Trp Lys
1 5 10

<210> 552

<211> 13

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<400> 552

Lys Lys Met Leu Phe Arg Val Thr Ile Asp Lys Trp Lys
1 5 10

<210> 553

<211> 13

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<213> Artificial sequence

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<223> synthetic

<400> 553

Lys	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Glu	Lys	Trp	Lys
1				5					10			

<210> 554

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<400> 554

Lys	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Glu	Arg	Trp	Lys
1				5					10			

<210> 555

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<400> 555

Lys	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asp	Arg	Trp	Lys
1				5					10			

<210> 556

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<213> Artificial sequence

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<400> 556

Arg	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Gln	Lys	Trp	Lys
1				5					10			

<210> 557
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<213> Artificial sequence

<220>
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<400> 557

Arg Lys Met Leu Phe Arg Val Thr Ile Gly Lys Trp Lys
1 5 10

<210> 558
<211> 13
<212> PRT
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<220>
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<400> 558

Arg Lys Met Leu Phe Arg Val Thr Ile Gly Arg Trp Lys
1 5 10

<210> 559
<211> 13
<212> PRT
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<220>
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<400> 559

Arg Lys Met Leu Phe Arg Val Thr Ile Gly Asn Trp Lys
1 5 10

<210> 560
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<220>
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<400> 560

Arg Lys Met Leu Phe Arg Val Thr Ile Gln Asn Trp Lys

1 5 10

<210> 561
<211> 13
<212> PRT
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<220>
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<400> 561

Arg Lys Met Leu Phe Arg Val Thr Ile Asp Lys Trp Lys
1 5 10

<210> 562
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<220>
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<400> 562

Arg Lys Met Leu Phe Arg Val Thr Ile Glu Lys Trp Lys
1 5 10

<210> 563
<211> 13
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<400> 563

Arg Lys Met Leu Phe Arg Val Thr Ile Glu Arg Trp Lys
1 5 10

<210> 564
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<400> 564

Arg Lys Met Leu Phe Arg Val Thr Ile Asp Arg Trp Lys
1 5 10

<210> 565

<211> 13

<212> PRT

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<220>

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<400> 565

Glu Gln Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 566

<211> 13

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<220>

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<400> 566

Ser Arg Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 567

<211> 13

<212> PRT

<213> Artificial sequence

<220>

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<400> 567

Gly Glu Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 568

<211> 13

<212> PRT

<213> Artificial sequence

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<223> synthetic

<400> 568

Gly Lys Met Lys Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 569

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic

<400> 569

Gly Lys Met Leu Phe Arg Val Lys Ile Asn Ser Trp Lys
1 5 10

<210> 570

<211> 13

<212> PRT

<213> Artificial sequence

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<223> synthetic

<400> 570

Gly Lys Met Leu Phe Arg Val Arg Ile Asn Ser Trp Lys
1 5 10

<210> 571

<211> 13

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<400> 571

Gly Lys Met Leu Phe Arg Val Asp Ile Asn Ser Trp Lys
1 5 10

<210> 572

<211> 13

<212> PRT
<213> Artificial sequence

<220>
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<400> 572

Gly	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asp	Ser	Trp	Lys
1				5					10			

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<400> 573

Glu	Lys	Met	Leu	Phe	Lys	Val	Thr	Ile	Gln	Lys	Trp	Lys
1				5					10			

<210> 574
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<400> 574

Glu	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Gln	Lys	Trp	Lys
1				5					10			

<210> 575
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<400> 575

Glu	Lys	Met	Leu	Phe	Lys	Val	Thr	Ile	Asp	Lys	Trp	Lys
1				5					10			

<210> 576
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<400> 576

Glu	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Asp	Lys	Trp	Lys
1				5					10			

<210> 577
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<400> 577

Glu	Lys	Met	Leu	Phe	Lys	Val	Thr	Ile	Gly	Arg	Trp	Lys
1				5					10			

<210> 578
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<400> 578

Asp	Lys	Met	Leu	Phe	Lys	Val	Thr	Ile	Gln	Lys	Trp	Lys
1				5					10			

<210> 579
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<400> 579

Asp Lys Met Leu Phe Thr Val Thr Ile Gln Lys Trp Lys
1 5 10

<210> 580
<211> 13
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<220>
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<400> 580

Asp Lys Met Leu Phe Lys Val Thr Ile Asp Lys Trp Lys
1 5 10

<210> 581
<211> 13
<212> PRT
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<220>
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<400> 581

Asp Lys Met Leu Phe Thr Val Thr Ile Asp Lys Trp Lys
1 5 10

<210> 582
<211> 13
<212> PRT
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<220>
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<400> 582

Gly Lys Met Leu Phe Lys Val Thr Ile Glu Lys Trp Lys
1 5 10

<210> 583
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<400> 583

Gly Lys Met Leu Phe Thr Val Thr Ile Glu Lys Trp Lys
1 5 10

<210> 584

<211> 13

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<400> 584

Asp Lys Met Leu Phe Lys Val Thr Ile Gly Lys Trp Lys
1 5 10

<210> 585

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<400> 585

Asp Lys Met Leu Phe Thr Val Thr Ile Gly Lys Trp Lys
1 5 10

<210> 586

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<400> 586

Asp Lys Met Leu Phe Lys Val Thr Ile Gly Asn Trp Lys
1 5 10

<210> 587

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<400> 587

Asp Lys Met Leu Phe Lys Val Thr Ile Gln Asn Trp Lys
1 5 10

<210> 588

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<400> 588

Gly Lys Met Leu Phe Lys Val Thr Ile Asn Lys Trp Lys
1 5 10

<210> 589

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<400> 589

Gly Lys Met Leu Phe Thr Val Thr Ile Asn Lys Trp Lys
1 5 10

<210> 590

<211> 13

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<400> 590

Asp Lys Met Leu Phe Lys Val Thr Ile Glu Lys Trp Lys
1 5 10

<210> 591

<211> 13
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<220>
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<400> 591

Asp	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Glu	Lys	Trp	Lys
1				5					10			

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<400> 592

Asp	Lys	Leu	Leu	Phe	Lys	Val	Thr	Ile	Gly	Lys	Trp	Lys
1				5					10			

<210> 593
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<400> 593

Asp	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Asn	Lys	Trp	Lys
1				5					10			

<210> 594
<211> 13
<212> PRT
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<400> 594

Asp	Lys	Leu	Leu	Phe	Thr	Val	Thr	Ile	Gln	Lys	Trp	Lys
1				5					10			

<210> 595
<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 595

Asp Lys Leu Leu Phe Thr Val Thr Ile Gln Lys Tyr Lys
1 5 10

<210> 596
<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 596

Asp Lys Leu Leu Phe Thr Val Thr Ile Glu Lys Trp Lys
1 5 10

<210> 597
<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 597

Asp Lys Leu Leu Phe Thr Val Thr Ile Gly Lys Trp Lys
1 5 10

<210> 598
<211> 13
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<213> Artificial sequence

<220>
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<400> 598

Asp Lys Leu Leu Phe Thr Val Thr Ile Gly Lys Tyr Lys
1 5 10

<210> 599
<211> 13
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<213> Artificial sequence

<220>
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<400> 599

Asp Lys Leu Leu Phe Thr Val Thr Ile Asn Lys Trp Lys
1 5 10

<210> 600
<211> 13
<212> PRT
<213> Artificial sequence

<220>
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<400> 600

Asp Lys Leu Leu Phe Thr Val Thr Ile Asn Lys Tyr Lys
1 5 10

<210> 601
<211> 11
<212> PRT
<213> Artificial sequence

<220>
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<400> 601

Gly Lys Met Leu Phe Arg Val Thr Ile Asn Ser
1 5 10

<210> 602
<211> 11
<212> PRT
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<220>

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<400> 602

Asp	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Gln	Lys
1				5					10	

<210> 603

<211> 11

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<400> 603

Asp	Lys	Met	Leu	Phe	Lys	Val	Thr	Ile	Gln	Lys
1				5					10	

<210> 604

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Asp	Lys	Leu	Leu	Phe	Thr	Val	Thr	Ile	Gly	Lys
1				5					10	

<210> 605

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Asp	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Gly	Lys
1				5					10	

<210> 606

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Asp	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Glu	Lys
1				5					10	

<210> 607

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Asp	Lys	Leu	Leu	Phe	Thr	Val	Thr	Ile	Glu	Lys
1				5					10	

<210> 608

<211> 13

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<400> 608

Asp	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 609

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Glu	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
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<400> 610

Arg Lys Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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<400> 611

Lys Lys Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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<400> 612

His Lys Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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<400> 613

Gly Leu Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys

1 5 10

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<400> 614

Gly Gln Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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Gly Thr Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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Gly Lys Leu Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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<400> 617

Gly Lys Met Leu Phe Lys Val Thr Ile Asn Ser Trp Lys
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<400> 618

Gly Lys Met Leu Phe Arg Val Thr Ile Gln Ser Trp Lys
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Gly Lys Met Leu Phe Arg Val Thr Ile Asp Ser Trp Lys
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Gly Lys Met Leu Phe Arg Val Thr Ile Gly Ser Trp Lys
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Gly Lys Met Leu Phe Arg Val Thr Ile Asn Thr Trp Lys
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Gly Lys Met Leu Phe Arg Val Thr Ile Asn Gln Trp Lys
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<400> 624

Gly Lys Met Leu Phe Arg Val Thr Ile Asn Pro Trp Lys
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Gly	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Lys	Trp	Lys
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Gly	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Asn
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Gly	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Thr
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Gly Lys Met Lys Phe Arg Val Thr Ile Asp Ser Trp Lys
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<400> 633

Gly Lys Met Leu Phe Arg Val Glu Ile Asn Ser Trp Lys
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Gly Lys Met Leu Phe Arg Val Gln Ile Asn Ser Trp Lys
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Gly Lys Met Lys Phe Arg Val Lys Ile Asn Ser Trp Lys
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Gly Lys Met Lys Phe Arg Val Arg Ile Asn Ser Trp Lys
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<400> 637

Gly Lys Met Lys Phe Arg Val Glu Ile Asn Ser Trp Lys
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<210> 638

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<400> 638

Gly Lys Met Lys Phe Arg Val Asp Ile Asn Ser Trp Lys
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Gly	Lys	Met	Lys	Phe	Arg	Val	Asn	Ile	Asn	Ser	Trp	Lys
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Gly	Lys	Met	Lys	Phe	Arg	Val	Ser	Ile	Asn	Ser	Trp	Lys
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Gly	Lys	Met	Leu	Phe	Arg	Val	Asn	Ile	Asn	Ser	Trp	Lys
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Gly	Lys	Met	Leu	Phe	Arg	Val	Ser	Ile	Asn	Ser	Trp	Lys
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Gly	Lys	Met	Leu	Phe	Arg	Val	Trp	Ile	Asn	Ser	Trp	Lys
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Gly	Lys	Met	Ser	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
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Gly	Lys	Met	Trp	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

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Gly	Lys	Met	Asn	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
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<210> 648
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<400> 648

Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Tyr Lys
1 5 10

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<400> 649

Gly Lys Met Leu Phe Arg Val Thr Ile Asn Ser Tyr Lys
1 5 10

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<400> 650

Gly Lys Met Leu Phe Arg Val Thr Ile Lys Ser Trp Lys
1 5 10

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<400> 651

Gly Lys Met Leu Phe Arg Val Thr Ile Glu Ser Trp Lys
1 5 10

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<400> 652

Gly Lys Met Lys Phe Arg Val Thr Ile Gln Ser Trp Lys
1 5 10

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<400> 653

Gly Lys Met Lys Phe Arg Val Thr Ile Glu Ser Trp Lys
1 5 10

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<400> 654

Gly Lys Met Lys Phe Arg Val Thr Ile Lys Ser Trp Lys
1 5 10

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Gly	Lys	Met	Lys	Phe	Arg	Val	Thr	Ile	Arg	Ser	Trp	Lys
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Arg	Leu	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 657

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Arg	Gln	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 658

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<400> 658

Lys	Leu	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 659

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Lys	Gln	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 660

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<400> 660

Glu	Leu	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 661

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<400> 661

Asp	Leu	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
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<210> 662

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Asp	Gln	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Lys
1				5					10			

<210> 663
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<400> 663

Asp Lys Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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<400> 664

Glu Lys Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

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Arg Lys Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys
1 5 10

<210> 666
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<400> 666

Lys Lys Met Leu Phe Arg Val Thr Ile Asn Ser Trp Lys

1 5 10

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<400> 667

Gly Lys Met Leu Phe Arg Val Thr Ile Gly Ser Trp Lys
1 5 10

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<400> 668

Gly Lys Met Leu Phe Arg Val Thr Ile Asn Lys Trp Lys
1 5 10

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<400> 669

Gly Lys Met Leu Phe Arg Val Thr Ile Ser Lys Trp Lys
1 5 10

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<400> 670

Gly Lys Met Leu Phe Arg Val Thr Ile Gln Lys Trp Lys
1 5 10

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<400> 671

Gly Lys Met Leu Phe Arg Val Thr Ile Thr Lys Trp Lys
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<400> 672

Gly Lys Met Leu Phe Arg Val Thr Ile Lys Lys Trp Lys
1 5 10

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Gly Lys Met Leu Phe Lys Val Thr Ile Asn Ser Trp Lys
1 5 10

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Arg	Leu	Met	Leu	Phe	Arg	Val	Thr	Ile	Gly	Lys	Trp	Lys
1				5					10			

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Gly	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Arg	Trp	Lys
1				5					10			

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<400> 676

Glu	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Gly	Lys	Trp	Lys
1				5					10			

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

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Glu	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Gly	Arg	Trp	Lys
1				5					10			

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Glu	Lys	Met	Leu	Phe	Thr	Val	Thr	Ile	Glu	Lys	Trp	Lys
1				5					10			

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<400> 680

Asp	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Glu	Ser	Trp	Lys
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<400> 681

Glu	Lys	Leu	Leu	Phe	Arg	Val	Thr	Ile	Gly	Lys	Tyr	Lys
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Asp Lys Leu Leu Phe Lys Val Thr Ile Gln Lys Trp Lys
1 5 10

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<400> 683

Asp Lys Leu Leu Phe Lys Val Thr Ile Gln Lys Tyr Lys
1 5 10

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Asp Lys Leu Leu Phe Lys Val Thr Ile Gly Lys Tyr Lys
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Asp Lys Leu Leu Phe Lys Val Thr Ile Glu Lys Trp Lys
1 5 10

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Asp Lys Leu Leu Phe Lys Val Thr Ile Glu Lys Tyr Lys
1 5 10

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Lys Lys Leu Leu Phe Arg Val Thr Ile Gln Lys Trp Lys
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Asp Arg Met Leu Phe Arg Val Thr Ile Gln Arg Trp Arg
1 5 10

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<400> 689

Glu Arg Met Leu Phe Arg Val Thr Ile Gly Arg Trp Arg
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<400> 690

Gly Arg Met Leu Phe Arg Val Thr Ile Asn Arg Trp Arg
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<400> 691

Asp Arg Met Leu Phe Arg Val Thr Ile Glu Arg Trp Arg
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<400> 692

Asp Lys Met Leu Phe Lys Val Thr Ile Gln Lys Tyr Lys
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Asp	Lys	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Lys	Trp	Lys
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Asp	Lys	Met	Leu	Phe	Lys	Val	Thr	Ile	Glu	Lys	Tyr	Lys
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<210> 695

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Asp	Lys	Met	Leu	Phe	Lys	Val	Thr	Ile	Asn	Lys	Trp	Lys
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Gly	Arg	Met	Leu	Phe	Arg	Val	Thr	Ile	Asn	Ser	Trp	Arg
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<210> 697

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<400> 697

Gly Arg Leu Leu Phe Val Val Val Ile Glu Arg Tyr Arg
1 5 10

<210> 698
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<400> 698

Val Ser Gly Trp Arg Leu Phe Arg Arg Ile Ser Cys
1 5 10

<210> 699
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<400> 699

Gly Arg Met Leu Phe Arg Val Thr Ile Asn Ser Trp Arg Cys
1 5 10

<210> 700
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<400> 700

Gly Arg Leu Leu Phe Thr Val Thr Ile Glu Arg Tyr Arg Cys
1 5 10

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<400> 701

Gly Lys Leu Leu Phe Val Val Val Ile Glu Lys Tyr Lys
1 5 10

<210> 702
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<400> 702

Gly Lys Leu Leu Phe Val Thr Ile Glu Lys Val Ser Gly Trp Arg Leu
1 5 10 15

Phe Lys Lys Ile Ser
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<210> 703
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<400> 703

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Leu Gln Asn Leu Ala Val Ser Val Thr Pro Ile Met Arg Ile Val Arg

35

40

45

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Thr Pro Asp Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Val
 145 150 155 160

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

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp Gly Ser Met Leu Phe Arg Val Thr Ile Asn Ser Val
145 150 155 160

Thr Gly Tyr Arg Leu Phe Glu Glu Ile Leu
165 170

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Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp
100

<210> 706
<211> 124
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 706

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly
115 120

<210> 707
<211> 133
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 707

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Thr Thr Gly Thr Leu

130

<210> 708
<211> 148
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 708

Met Val Phe Thr Leu Asp Asp Phe Val Gly Asp Trp Glu Gln Thr Ala
1 5 10 15

Ala Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

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

Ser Gly Glu Asn Ala Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Ala Asp Gln Met Ala Gln Ile Glu Glu Val Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu Pro Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Thr Pro Asp
145

<210> 709
<211> 68
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 709

Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly
1 5 10 15

Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp
20 25 30

Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser
35 40 45

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

Lys Lys Ile Ser
65

<210> 710
<211> 46
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 710

Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
1 5 10 15

Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met Leu Phe Arg Val Thr
20 25 30

Ile Asn Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile Ser
35 40 45

<210> 711

<211> 37
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 711

Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly
1 5 10 15

Ser Met Leu Phe Arg Val Thr Ile Asn Ser Val Ser Gly Trp Arg Leu
20 25 30

Phe Lys Lys Ile Ser
35

<210> 712
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 712

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

Leu Phe Lys Lys Ile Ser
20

<210> 713
<211> 68
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 713

Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly
1 5 10 15

Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp
20 25 30

Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser
35 40 45

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

Glu Glu Ile Leu
65

<210> 714
<211> 46
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 714

Lys Lys Ile Thr Thr Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
1 5 10 15

Asp Glu Arg Leu Ile Thr Pro Asp Gly Ser Met Leu Phe Arg Val Thr
20 25 30

Ile Asn Ser Val Thr Gly Tyr Arg Leu Phe Glu Glu Ile Leu
35 40 45

<210> 715
<211> 37
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 715

Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp Gly
1 5 10 15

Ser Met Leu Phe Arg Val Thr Ile Asn Ser Val Thr Gly Tyr Arg Leu

20

25

30

Phe Glu Glu Ile Leu
35

<210> 716
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 716

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

Leu Phe Glu Glu Ile Leu
20

<210> 717
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 717

Gly Val Thr Pro Asn Lys Leu Asn Tyr Phe Gly Arg Pro Tyr Glu Gly
1 5 10 15

Ile Ala Val Phe Asp Gly
20

<210> 718
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 718

Lys Lys Ile Thr Thr Thr Gly Thr Leu
1 5

<210> 719
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 719

Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Thr Pro Asp
1 5 10 15

<210> 720
<211> 297
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 720

Met Ala Glu Ile Gly Thr Gly Phe Pro Phe Asp Pro His Tyr Val Glu
1 5 10 15

Val Leu Gly Glu Arg Met His Tyr Val Asp Val Gly Pro Arg Asp Gly
20 25 30

Thr Pro Val Leu Phe Leu His Gly Asn Pro Thr Ser Ser Tyr Val Trp
35 40 45

Arg Asn Ile Ile Pro His Val Ala Pro Thr His Arg Cys Ile Ala Pro
50 55 60

Asp Leu Ile Gly Met Gly Lys Ser Asp Lys Pro Asp Leu Gly Tyr Phe
65 70 75 80

Phe Asp Asp His Val Arg Phe Met Asp Ala Phe Ile Glu Ala Leu Gly
85 90 95

Leu Glu Glu Val Val Leu Val Ile His Asp Trp Gly Ser Ala Leu Gly

100

105

110

Phe His Trp Ala Lys Arg Asn Pro Glu Arg Val Lys Gly Ile Ala Phe
 115 120 125

Met Glu Phe Ile Arg Pro Ile Pro Thr Trp Asp Glu Trp Pro Glu Phe
 130 135 140

Ala Arg Glu Thr Phe Gln Ala Phe Arg Thr Thr Asp Val Gly Arg Lys
 145 150 155 160

Leu Ile Ile Asp Gln Asn Val Phe Ile Glu Gly Thr Leu Pro Met Gly
 165 170 175

Val Val Arg Pro Leu Thr Glu Val Glu Met Asp His Tyr Arg Glu Pro
 180 185 190

Phe Leu Asn Pro Val Asp Arg Glu Pro Leu Trp Arg Phe Pro Asn Glu
 195 200 205

Leu Pro Ile Ala Gly Glu Pro Ala Asn Ile Val Ala Leu Val Glu Glu
 210 215 220

Tyr Met Asp Trp Leu His Gln Ser Pro Val Pro Lys Leu Leu Phe Trp
 225 230 235 240

Gly Thr Pro Gly Val Leu Ile Pro Pro Ala Glu Ala Ala Arg Leu Ala
 245 250 255

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

Leu Leu Gln Glu Asp Asn Pro Asp Leu Ile Gly Ser Glu Ile Ala Arg
 275 280 285

Trp Leu Ser Thr Leu Glu Ile Ser Gly
 290 295

<210> 721

<211> 582

<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 721
atgaaacatc accatcacca tcatgtcaga tcatcttctc gaaccccgag tgacaagcct 60
gtagcccatg ttgtagcaaa ccctcaagct gaggggcagc tccagtggct gaaccgccgg 120
gccaatgccc tcctggccaa tggcgtggag ctgagagata accagctggt ggtgccatca 180
gagggcctgt acctcatcta ctcccaggtc ctcttcaagg gccaaggctg cccctccacc 240
catgtgctcc tcacccacac catcagccgc atcgccgtct cctaccagac caaggtcaac 300
ctcctctctg ccatcaagag cccctgccag agggagaccc cagagggggc tgaggccaag 360
ccctggatatg agcccatcta tctgggaggg gtcttccagc tggagaaggg tgaccgactc 420
agcgctgaga tcaatcggcc cgactatctc gactttgccg agtctgggca ggtctacttt 480
gggatcattg ccctgtcgag ttcaggtggt ggcgggagcg gtggaggag cagcggtgga 540
gtttccgtga gcggctggcg gctgttcaag aagattagct aa 582

<210> 722
<211> 193
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 722

Met Lys His His His His His Val Arg Ser Ser Ser Arg Thr Pro
1 5 10 15

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

Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu Leu Ala Asn Gly
35 40 45

Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser Glu Gly Leu Tyr
50 55 60

Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly Cys Pro Ser Thr
65 70 75 80

His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala Val Ser Tyr Gln
85 90 95

Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro Cys Gln Arg Glu
100 105 110

Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu Pro Ile Tyr Leu
115 120 125

Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu Ser Ala Glu Ile
130 135 140

Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly Gln Val Tyr Phe
145 150 155 160

Gly Ile Ile Ala Leu Ser Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
165 170 175

Ser Ser Gly Gly Val Ser Val Ser Gly Trp Arg Leu Phe Lys Lys Ile
180 185 190

Ser

<210> 723
<211> 696
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 723
atgggcaaga tgctgttccg agtaaccatc aacagctgga aggggagctc cgggtggtggc 60
gggagcggag gtggaggctc gagcggatatg acgtataagt taatccttaa tggtaaaaca 120
ttgaaaggcg agacaactac tgaagctggt gatgctgcta ctgcagaaaa agtcttcaaa 180
caatacgcta acgacaacgg tgttgacggt gaatggactt acgacgatgc gacgaaaacc 240

ttacggtca ccgaaaaacc agaagtgatc gatgcgtctg aattaacacc agccgtgaca 300
 acttacaac ttgttattaa tggtaaaaca ttgaaaggcg aaacaactac tgaggctggt 360
 gatgctgcta ctgcagagaa ggtgttcaaa caatatgcga atgacaacgg tgttgacggt 420
 gagggtgactt acgacgatgc gactaagacc ttacagtta ctgaaaaacc agaagtgatc 480
 gatgcgtctg agttaacacc agccgtgaca acttacaac ttgttattaa tggtaaaaca 540
 ttgaaaggcg aaacaactac taaagcagta gacgcagaaa ctgcggagaa ggccttcaaa 600
 caatacgtta acgacaacgg tgttgatggt gtttgactt atgatgatgc caaaaaacc 660
 ttacggtaa ctgagcatca tcaccatcac cactaa 696

<210> 724
 <211> 231
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 724

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

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Gly Met Thr Tyr
 20 25 30

Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr Thr Glu
 35 40 45

Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys Gln Tyr Ala Asn
 50 55 60

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

Phe Thr Val Thr Glu Lys Pro Glu Val Ile Asp Ala Ser Glu Leu Thr
 85 90 95

Pro Ala Val Thr Thr Tyr Lys Leu Val Ile Asn Gly Lys Thr Leu Lys

100

105

110

Gly Glu Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val
 115 120 125

Phe Lys Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr
 130 135 140

Asp Asp Ala Thr Lys Thr Phe Thr Val Thr Glu Lys Pro Glu Val Ile
 145 150 155 160

Asp Ala Ser Glu Leu Thr Pro Ala Val Thr Thr Tyr Lys Leu Val Ile
 165 170 175

Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr Thr Lys Ala Val Asp Ala
 180 185 190

Glu Thr Ala Glu Lys Ala Phe Lys Gln Tyr Ala Asn Asp Asn Gly Val
 195 200 205

Asp Gly Val Trp Thr Tyr Asp Asp Ala Thr Lys Thr Phe Thr Val Thr
 210 215 220

Glu His His His His His His
 225 230

<210> 725
 <211> 693
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 725
 atggacaaga tgctgttccg agtaaccatc aacaagtgga aggggagctc cggtggtggc 60
 gggagcggag gtggaggctc gagcggatg acgtataagt taatccttaa tggtaaaaca 120
 ttgaaaggcg agacaactac tgaagctgtt gatgctgcta ctgcagaaaa agtcttcaaa 180
 caatacgcta acgacaacgg tgttgacggg gaatggactt acgacgatgc gacgaaaacc 240
 ttacggtca ccgaaaaacc agaagtgatc gatgcgtctg aattaacacc agccgtgaca 300

acttacaaac ttgttattaa tggtaaaaca ttgaaaggcg aaacaactac tgaggctggt 360
 gatgctgcta ctgcagagaa ggtgttcaaa caatatgcga atgacaacgg tgttgacggt 420
 gaggggactt acgacgatgc gactaagacc ttacagtta ctgaaaaacc agaagtgatc 480
 gatgcgtctg agttaacacc agccgtgaca acttacaaac ttgttattaa tggtaaaaca 540
 ttgaaaggcg aaacaactac taaagcagta gacgcagaaa ctgcggagaa ggccttcaaa 600
 caatacgcta acgacaacgg tgttgatggt gtttggactt atgatgatgc cacaaaaacc 660
 ttacggtaa ctgagcatca tcaccatcac cac 693

<210> 726
 <211> 231
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 726

Met Asp Lys Met Leu Phe Arg Val Thr Ile Asn Lys Trp Lys Gly Ser
 1 5 10 15

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Gly Met Thr Tyr
 20 25 30

Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr Thr Glu
 35 40 45

Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys Gln Tyr Ala Asn
 50 55 60

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

Phe Thr Val Thr Glu Lys Pro Glu Val Ile Asp Ala Ser Glu Leu Thr
 85 90 95

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

Gly Glu Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val
115 120 125

Phe Lys Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr
130 135 140

Asp Asp Ala Thr Lys Thr Phe Thr Val Thr Glu Lys Pro Glu Val Ile
145 150 155 160

Asp Ala Ser Glu Leu Thr Pro Ala Val Thr Thr Tyr Lys Leu Val Ile
165 170 175

Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr Thr Lys Ala Val Asp Ala
180 185 190

Glu Thr Ala Glu Lys Ala Phe Lys Gln Tyr Ala Asn Asp Asn Gly Val
195 200 205

Asp Gly Val Trp Thr Tyr Asp Asp Ala Thr Lys Thr Phe Thr Val Thr
210 215 220

Glu His His His His His His
225 230

<210> 727
<211> 693
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic

<400> 727
atggacaagc tcctgttcac ggtaaccatc gagaagtata aggggagctc cggtggtggc 60
gggagcggag gtggaggctc gacggtatg acgtataagt taatccttaa tggtaaaaca 120
ttgaaaggcg agacaactac tgaagctgtt gatgctgcta ctgcagaaaa agtcttcaaa 180
caatacgcta acgacaacgg tgttgacggg gaatggactt acgacgatgc gacgaaaacc 240
tttacggtca ccgaaaaacc agaagtgatc gatgcgtctg aattaacacc agccgtgaca 300
acttacaac ttgttattaa tggtaaaaca ttgaaaggcg aaacaactac tgaggctgtt 360

gatgctgcta ctgcagagaa ggtgttcaaa caatatgcga atgacaacgg tgttgacggt 420
gagtggactt acgacgatgc gactaagacc ttacagtta ctgaaaaacc agaagtgatc 480
gatgcgtctg agttaacacc agccgtgaca acttacaac ttgttattaa tggtaaaaca 540
ttgaaaggcg aaacaactac taaagcagta gacgcagaaa ctgcggagaa ggccttcaaa 600
caatacgcta acgacaacgg tgttgatggg gtttggactt atgatgatgc caaaaaacc 660
tttacggtaa ctgagcatca tcaccatcac cac 693

<210> 728
<211> 231
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic

<400> 728

Met Asp Lys Leu Leu Phe Thr Val Thr Ile Glu Lys Tyr Lys Gly Ser
1 5 10 15

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Gly Met Thr Tyr
20 25 30

Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr Thr Glu
35 40 45

Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys Gln Tyr Ala Asn
50 55 60

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

Phe Thr Val Thr Glu Lys Pro Glu Val Ile Asp Ala Ser Glu Leu Thr
85 90 95

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

Gly Glu Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val

115

120

125

Phe Lys Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr
 130 135 140

Asp Asp Ala Thr Lys Thr Phe Thr Val Thr Glu Lys Pro Glu Val Ile
 145 150 155 160

Asp Ala Ser Glu Leu Thr Pro Ala Val Thr Thr Tyr Lys Leu Val Ile
 165 170 175

Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr Thr Lys Ala Val Asp Ala
 180 185 190

Glu Thr Ala Glu Lys Ala Phe Lys Gln Tyr Ala Asn Asp Asn Gly Val
 195 200 205

Asp Gly Val Trp Thr Tyr Asp Asp Ala Thr Lys Thr Phe Thr Val Thr
 210 215 220

Glu His His His His His His
 225 230

<210> 729
 <211> 693
 <212> DNA
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 729
 atgaagaaga tgctgttccg agtaaccatc cagaagtgga aggggagctc cgggtggtggc 60
 gggagcggag gtggaggctc gagcggatg acgtataagt taatccttaa tggtaaaaca 120
 ttgaaaggcg agacaactac tgaagctgtt gatgctgcta ctgcagaaaa agtcttcaaa 180
 caatacgcta acgacaacgg tgttgacggt gaatggactt acgacgatgc gacgaaaacc 240
 ttacgggtca ccgaaaaacc agaagtgatc gatgcgtctg aattaacacc agccgtgaca 300
 acttacaac ttgttattaa tggtaaaaca ttgaaaggcg aaacaactac tgaggctgtt 360
 gatgctgcta ctgcagagaa ggtgttcaaa caatatgcga atgacaacgg tgttgacggt 420

gagtggactt acgacgatgc gactaagacc tttacagtta ctgaaaaacc agaagtgatc 480
 gatgcgtctg agttaacacc agccgtgaca acttacaac ttgttattaa tggtaaaaca 540
 ttgaaaggcg aaacaactac taaagcagta gacgcagaaa ctgcggagaa ggccttcaaa 600
 caatacgcta acgacaacgg tgttgatggg gtttggactt atgatgatgc cacaaaaacc 660
 tttacggtaa ctgagcatca tcaccatcac cac 693

<210> 730
 <211> 231
 <212> PRT
 <213> Artificial sequence

<220>
 <223> synthetic

<400> 730

Met Lys Lys Met Leu Phe Arg Val Thr Ile Gln Lys Trp Lys Gly Ser
 1 5 10 15

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser Gly Met Thr Tyr
 20 25 30

Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr Thr Glu
 35 40 45

Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys Gln Tyr Ala Asn
 50 55 60

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

Phe Thr Val Thr Glu Lys Pro Glu Val Ile Asp Ala Ser Glu Leu Thr
 85 90 95

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

Gly Glu Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val
 115 120 125

Phe Lys Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr
130 135 140

Asp Asp Ala Thr Lys Thr Phe Thr Val Thr Glu Lys Pro Glu Val Ile
145 150 155 160

Asp Ala Ser Glu Leu Thr Pro Ala Val Thr Thr Tyr Lys Leu Val Ile
165 170 175

Asn Gly Lys Thr Leu Lys Gly Glu Thr Thr Thr Lys Ala Val Asp Ala
180 185 190

Glu Thr Ala Glu Lys Ala Phe Lys Gln Tyr Ala Asn Asp Asn Gly Val
195 200 205

Asp Gly Val Trp Thr Tyr Asp Asp Ala Thr Lys Thr Phe Thr Val Thr
210 215 220

Glu His His His His His His
225 230