

SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> Human Antibodies to Human GDF8

<130> 6073A-WO

<140> To be assigned

<141> Filed herewith

<150> 61/348,559

<151> 2010-05-26

<150> 61/372,882

<151> 2010-08-12

<160> 391

<170> FastSEQ for Windows Version 4.0

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tcctgtgcag cctctggatt cacttttaac acctatgcc aagctgggt cggccaggct 120
ccagggaagg ggtctgaatg ggtctcaact attactggta gtggttataa cacatactac 180
gcagactccg tgaaggggccg gttcaccatc tccagagaca attccaagaa cacactgtat 240
ctacagatga gcagcctgag agccgaggac acggccgtat tttactgtgc gaaagactct 300
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tcctca 366
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<400> 2

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asn Thr Tyr
20          25          30
Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35          40          45
Ser Thr Ile Thr Gly Ser Gly Tyr Asn Thr Tyr Tyr Ala Asp Ser Val
50          55          60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65          70          75          80
Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Phe Tyr Cys
85          90          95
Ala Lys Asp Ser Arg Tyr Asn Trp Asn Tyr Gly Ile Phe Asp Tyr Trp
100         105         110
Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115         120
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<210> 3
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ggattcacct ttaacaccta tgcc

24

<210> 4
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<400> 4
Gly Phe Thr Phe Asn Thr Tyr Ala
1 5

<210> 5
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<400> 5
attactggta gtggttataa caca

24

<210> 6
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<220>
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<400> 6
Ile Thr Gly Ser Gly Tyr Asn Thr
1 5

<210> 7
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<400> 7
gcgaaagact ctcggtataa ctggaattac ggaatttttg actac

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<210> 8
<211> 15
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Ala Lys Asp Ser Arg Tyr Asn Trp Asn Tyr Gly Ile Phe Asp Tyr
1 5 10 15

<210> 9

<211> 324

<212> DNA

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<400> 9

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ggccaggctc ccaggctcct catctatggt gtatccacca gggccactgg tatcccagcc 180
aggttcagtg gcaatgggtc tgggacagag ttcactctca ccacagcag cctgcagctc 240
gaagattttg cagtttatta ctgtcagcag cataataact ggcgcgtcac ttccggcgga 300
gggaccaagg tggagatcaa acga 324

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<400> 10

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

<210> 11

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<400> 11

cagagtgtta gcagcaac

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<210> 12

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<400> 12
Gln Ser Val Ser Ser Asn
1 5

<210> 13
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<400> 13
ggtgtatcc

9

<210> 14
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<400> 14
Gly Val Ser
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<210> 15
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<400> 15
cagcagcata ataactggcc gctcact

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<210> 16
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<400> 16
Gln Gln His Asn Asn Trp Pro Leu Thr
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<220>

<223> Synthetic

<400> 17

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cagccccccag ggaaggggct ggagtggatt gggactacct attatagtgg gaccacctac 180
tacaaccogt cctcaagag togagtcacc atatccgtag acacgtccaa gaaccagttc 240
tcctgaagc tgagctctgt gaccgcccga gacacggctg tgtattactg tgcgagagat 300
tattatgata gtagtggtta ttattacaac tggttcgatc cctggggcca ggaaccacg 360
gtcacctct cctca 375
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<210> 18

<211> 125

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 18

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Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Asn Ser
 20             25             30
Asn Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
 35             40             45
Trp Ile Gly Thr Thr Tyr Tyr Ser Gly Thr Thr Tyr Tyr Asn Pro Ser
 50             55             60
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
 65             70             75             80
Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
 85             90             95
Cys Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe
100            105            110
Asp Pro Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115            120            125
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<210> 19

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 19

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gggtggctcca tcagcaatag taattactac 30
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<210> 20

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 20

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Gly Gly Ser Ile Ser Asn Ser Asn Tyr Tyr
 1             5             10
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<210> 21

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

<220>
 <223> Synthetic

<400> 21
 acctattata gtgggaccac c 21

<210> 22
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 22
 Thr Tyr Tyr Ser Gly Thr Thr
 1 5

<210> 23
 <211> 51
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 23
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<210> 24
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 <213> Artificial Sequence

<220>
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<400> 24
 Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe Asp
 1 5 10 15
 Pro

<210> 25
 <211> 324
 <212> DNA
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<220>
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<400> 25
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 atcacttgcc gggcaagtca ggacattaga aatgatttag gctgggtatca gcagaaacca 120
 gggaaagccc ctaagcgccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
 aggttcagcg gcagtggtatc tgggacagaa ttcagttctca cactcagcag cctgcagcct 240
 gaagattttg caacttatct ctgtctacag catcatatct acccgtggac gttcggccaa 300
 gggaccaagc tggagatcaa acga 324

<210> 26
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<400> 26
 Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
 20 25 30
 Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
 35 40 45
 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Glu Phe Ser Leu Thr Leu Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His His Ile Tyr Pro Trp
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
 100 105

<210> 27
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 27
 caggacatta gaaatgat

18

<210> 28
 <211> 6
 <212> PRT
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<220>
 <223> Synthetic

<400> 28
 Gln Asp Ile Arg Asn Asp
 1 5

<210> 29
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 29
 gctgcatcc

9

<210> 30
 <211> 3
 <212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 30

Ala Ala Ser

1

<210> 31

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 31

ctacagcatc atattttaccc gtggacg

27

<210> 32

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 32

Leu Gln His His Ile Tyr Pro Trp Thr

1

5

<210> 33

<211> 375

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 33

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aactgcaactg tctatgggtgg ctccatcagc agtgggtaatt actactgggg ctggatccgc 120
cagccccag ggaagggact ggagtggatt gggactatct attatagtgg aagcgcctac 180
tacaaccogt cctcaagag tcgagtcacc atgtccgtag acacgtccaa gaaccagttc 240
tccctgaaac tgagctctgt gaccgcccga gacaaggctg tttattactg tgtgagagat 300
tactatgata gtagtgggtca ttattacaac tgggttcgacc cctggggcca ggaaccacg 360
gtcaccgtct cctca 375

<210> 34

<211> 125

<212> PRT

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<223> Synthetic

<400> 34

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

1

5

10

15

Thr Leu Ser Leu Thr Cys Thr Val Tyr Gly Gly Ser Ile Ser Ser Gly

20

25

30

Asn Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
 35 40 45
 Trp Ile Gly Thr Ile Tyr Tyr Ser Gly Ser Ala Tyr Tyr Asn Pro Ser
 50 55 60
 Leu Lys Ser Arg Val Thr Met Ser Val Asp Thr Ser Lys Asn Gln Phe
 65 70 75 80
 Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
 85 90 95
 Cys Val Arg Asp Tyr Tyr Asp Ser Ser Gly His Tyr Tyr Asn Trp Phe
 100 105 110
 Asp Pro Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 35
 <211> 30
 <212> DNA
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<220>
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<400> 35
 ggtggctcca tcagcagtggtg taattactac 30

<210> 36
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 36
 Gly Gly Ser Ile Ser Ser Gly Asn Tyr Tyr
 1 5 10

<210> 37
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 37
 atctattata gtggaagcgc c 21

<210> 38
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 38
 Ile Tyr Tyr Ser Gly Ser Ala
 1 5

<210> 39
 <211> 51

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 39
gtgagagatt actatgatag tagtgggtcat tattacaact gggtcgaccc c 51

<210> 40
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 40
Val Arg Asp Tyr Tyr Asp Ser Ser Gly His Tyr Tyr Asn Trp Phe Asp
1 5 10 15
Pro

<210> 41
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 41
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atcacttgcc gggcaagtca ggacattaga catgatttag gctgggtatca gcagaaacca 120
gggaaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggtac tgggacagaa ttcaactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatactt acccgtggac gttcggccaa 300
gggaccaaggt tggagatcaa acga 324

<210> 42
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<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 42
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg His Asp
20 25 30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Thr Tyr Pro Trp
85 90 95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105

<210> 43
<211> 18
<212> DNA
<213> Artificial Sequence

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<223> Synthetic

<400> 43
caggacatta gacatgat

18

<210> 44
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 44
Gln Asp Ile Arg His Asp
1 5

<210> 45
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 45
gctgcatcc

9

<210> 46
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 46
Ala Ala Ser
1

<210> 47
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 47
ctacagcata ataactaccc gtggacg

27

<210> 48
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 48
Leu Gln His Asn Thr Tyr Pro Trp Thr
1 5

<210> 49
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 49
caggtgcagc tgggtgcagtc tggggggagggc ctgggtcaagc ctggggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agctatagca tgaactgggt ccgccaggct 120
ccaggggaagg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaataga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgt 300
ggatacacct ttgggggttga ctactggggc caggggaacca cggtcaccgt ctctca 357

<210> 50
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 50
Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ser Ile Ser Ser Ser Ser Tyr Ile Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Asp Arg Gly Tyr Thr Phe Gly Val Asp Tyr Trp Gly Gln Gly
100 105 110
Thr Thr Val Thr Val Ser Ser
115

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 51
ggattcacct tcagtagcta tagc

24

<210> 52

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

 <220>
 <223> Synthetic

 <400> 52
 Gly Phe Thr Phe Ser Ser Tyr Ser
 1 5

<210> 53
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 53
 attagtagta gtagtagtta cata

24

<210> 54
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 54
 Ile Ser Ser Ser Ser Ser Tyr Ile
 1 5

<210> 55
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 55
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36

<210> 56
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<220>
 <223> Synthetic

<400> 56
 Ala Arg Asp Arg Gly Tyr Thr Phe Gly Val Asp Tyr
 1 5 10

<210> 57
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic

<400> 57
gccatccaga tgacccagtc tocatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
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gggaaagccc ctaagcgccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggtac tgggacagaa ttcaactctca caatcagcag cctgcagcct 240
gaagatittg caacttatta ctgtctacag cataatagtt acccgtacac ttttggccag 300
gggaccaagg tggagatcaa acga 324

<210> 58
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 58
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Tyr
85 90 95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105

<210> 59
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 59
cagggcatta gaaatgat 18

<210> 60
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 60
Gln Gly Ile Arg Asn Asp
1 5

<210> 61
<211> 9
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 61
gctgcatcc

9

<210> 62

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 62
Ala Ala Ser
1

<210> 63

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 63
ctacagcata atagttaccc gtacact

27

<210> 64

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 64
Leu Gln His Asn Ser Tyr Pro Tyr Thr
1 5

<210> 65

<211> 375

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 65
caggtgcagc tgggtgcagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctgggtgg ctccatcatc acttatagtt actactgggg ctggatccgc 120
cagcccccag ggaaggggct ggagtggatt gggactatcc atcatagtgg gagcacctac 180
tacaaccctg cctcaagag tctagtcacc atatccgtag acacgtccaa gaaccagttc 240
tccctgacac tgagttctgt gaccgcgcga gacacggctg tgtattactg tgcgagagac 300
tactatgata gtagtgggta ttattataac tgggttcgacc cctggggcca gggaaccatg 360
gtcaccgtct cctca 375

<210> 66

<211> 125

<212> PRT
 <213> Artificial Sequence

<220>
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<400> 66
 Gln Val Gln Leu Val Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1 5 10 15
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ile Thr Tyr
 20 25 30
 Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
 35 40 45
 Trp Ile Gly Thr Ile His His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
 50 55 60
 Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
 65 70 75 80
 Ser Leu Thr Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
 85 90 95
 Cys Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe
 100 105 110
 Asp Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
 115 120 125

<210> 67
 <211> 30
 <212> DNA
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<220>
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<400> 67
 ggtggctcca tcattcactta tagttactac 30

<210> 68
 <211> 10
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<220>
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<400> 68
 Gly Gly Ser Ile Ile Thr Tyr Ser Tyr Tyr
 1 5 10

<210> 69
 <211> 21
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<220>
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<400> 69
 atccatcata gtgggagcac c 21

<210> 70
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<220>

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<400> 70

Ile His His Ser Gly Ser Thr
1 5

<210> 71

<211> 51

<212> DNA

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<400> 71

gcgagagact actatgatag tagtggttat tattataact ggttcgaccc c 51

<210> 72

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<220>

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<400> 72

Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe Asp
1 5 10 15
Pro

<210> 73

<211> 324

<212> DNA

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<220>

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<400> 73

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atcacttgcc gggcaagtca gggcattaga aatgatttag gctgggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatagtt ccccgtaggac gttcgggcaa 300
gggaccaagg tggagatcaa acga 324

<210> 74

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 74

Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
 35 40 45
 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Ser Pro Trp
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105

<210> 75
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 75
 cagggcatta gaaatgat 18

<210> 76
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 76
 Gln Gly Ile Arg Asn Asp
 1 5

<210> 77
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 77
 gctgcatcc 9

<210> 78
 <211> 3
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 78
 Ala Ala Ser
 1

<210> 79
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetic

<400> 79

ctacagcata atagttcccc gtggacg

27

<210> 80

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 80

Leu Gln His Asn Ser Ser Pro Trp Thr

1

5

<210> 81

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 81

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acctgcacct tctctgggtt ctcactcagc actagtggag tgggtgtggg ctggatccgt 120
cagccccag gaaaggccct ggagtggctt gcactcattt attggaatga tgataagcgc 180
tacagcccat ctctgaagag cagggtcacc atcaccgaag acacctcaa aaaccagggtg 240
gtccttacaa tgaccaacat ggacctgtg gacacagcca catattactg tacacacacc 300
tcccggtata actggcacta cggcttcctt gactactggg gccagggaac caccggtcacc 360
gtctcctca 369

<210> 82

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 82

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

<210> 83
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 83
gggtttctcac tcagcactag tggagtgggt

30

<210> 84
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 84
Gly Phe Ser Leu Ser Thr Ser Gly Val Gly
1 5 10

<210> 85
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 85
atttattgga atgatgataa g

21

<210> 86
<211> 7
<212> PRT
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<220>
<223> Synthetic

<400> 86
Ile Tyr Trp Asn Asp Asp Lys
1 5

<210> 87
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
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<400> 87
acacacacct ccogttataa ctggcactac ggcttcocttg actac

45

<210> 88
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 88

Thr His Thr Ser Arg Tyr Asn Trp His Tyr Gly Phe Leu Asp Tyr
1 5 10 15

<210> 89

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 89

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gggaaagccc ctaagtccct gatctatgct gcattccagtt tgcataagtg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacaa tataatagtt acccgctcac ttctggcgga 300
gggaccaagg tggaaatcaa acga 324

<210> 90

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 90

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

<210> 91

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 91

cagggcatta gcaattat

18

<210> 92

<211> 6

<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 92
Gln Gly Ile Ser Asn Tyr
1 5

<210> 93
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 93
gctgcatcc

9

<210> 94
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 94
Ala Ala Ser
1

<210> 95
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 95
caacaatata atagttaccc gtcact

27

<210> 96
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<400> 96
Gln Gln Tyr Asn Ser Tyr Pro Leu Thr
1 5

<210> 97
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

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<400> 97
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acctgcactg tctctgggtgg ctccatcagc aatagtaatt actactgggg ctggatccgc 120
cagcccccag ggaagggggt ggagtggatt gggactacct attatagtgg gaccacctac 180
tacaaccctg cctcaagag tgcagtcacc atatccgtag acacgtccaa gaaccagttc 240
tccctgaagc tgagctctgt gaccgcccga gacaaggctg tgtattactg tgcgagagat 300
tattatgata gtagtggtta ttattacaac tggttcgatc cctggggcca gggaaccacg 360
gtcacgtct cctca                                     375

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<210> 98
<211> 125
<212> PRT
<213> Artificial Sequence

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<220>
<223> Synthetic

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<400> 98
Glu Val Gln Leu Val Gln Leu Gly Pro Gly Leu Val Lys Pro Ser Glu
 1             5             10            15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Asn Ser
      20             25             30
Asn Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
      35             40             45
Trp Ile Gly Thr Thr Tyr Tyr Ser Gly Thr Thr Tyr Tyr Asn Pro Ser
      50             55             60
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65             70             75             80
Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
      85             90             95
Cys Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe
      100            105            110
Asp Pro Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
      115            120            125

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<210> 99
<211> 30
<212> DNA
<213> Artificial Sequence

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<220>
<223> Synthetic

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<400> 99
ggtggctcca tcagcaatag taattactac                                     30

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<210> 100
<211> 10
<212> PRT
<213> Artificial Sequence

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<220>
<223> Synthetic

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<400> 100
Gly Gly Ser Ile Ser Asn Ser Asn Tyr Tyr
 1             5             10

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<210> 101
<211> 21
<212> DNA

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<213> Artificial Sequence

<220>

<223> Synthetic

<400> 101

acctattata gtgggaccac c

21

<210> 102

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 102

Thr Tyr Tyr Ser Gly Thr Thr

1

5

<210> 103

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 103

gcgagagatt attatgatag tagtgggttat tattacaact ggctcgatcc c

51

<210> 104

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 104

Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe Asp

1

5

10

15

Pro

<210> 105

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 105

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atcacttgcc gggcaagtca ggacattaga aatgatttag gctgggtatca gcagaaacca 120
gggaaagccc ctaagcgccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggaac tgggacagaa ttcagttctca cactcagcag cctgcagcct 240
gaagattttg caacttattt ctgtctacag catcatattt acccgtggac gttcggccaa 300
gggaccaagg tggagatcaa acga 324

<210> 106

<211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 106
 Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
 20 25 30
 Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
 35 40 45
 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Glu Phe Ser Leu Thr Leu Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His His Ile Tyr Pro Trp
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105

<210> 107
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 107
 caggacatta gaaatgat 18

<210> 108
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 108
 Gln Asp Ile Arg Asn Asp
 1 5

<210> 109
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 109
 gctgcatcc 9

<210> 110
 <211> 3
 <212> PRT
 <213> Artificial Sequence

<220>
<223> Synthetic

<400> 110
Ala Ala Ser
1

<210> 111
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 111
ctacagcattc atattttaccc gtggacg

27

<210> 112
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 112
Leu Gln His His Ile Tyr Pro Trp Thr
1 5

<210> 113
<211> 355
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 113
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tctgtgagcag cctctggatt cactttcagt cgctatggca ttacttgggt ccgccagggt 120
ccaggcaagg ggtctggagtg ggtggctgtt atatcttatg atggaagtga tgaatactat 180
gtagactcog tgaagggccg attcagcatt tcccagagaca attccaagaa cactgtttat 240
ctacaaatga acagtctgag gctgaggac tgggtgtttt attactgtgt gaaaggagat 300
ctggaaacttg gttttgacta ctggggccag ggaaccctgg tcaccgtctc ctcaa 355

<210> 114
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 114
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr
20 25 30
Gly Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Val Ile Ser Tyr Asp Gly Ser Asp Glu Tyr Tyr Val Asp Ser Val

50 55 60
 Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Pro Ala Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Val Lys Gly Asp Leu Glu Leu Gly Phe Asp Tyr Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 115
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 115
 ggattcacct tcagtcgcta tggc 24

<210> 116
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 116
 Gly Phe Thr Phe Ser Arg Tyr Gly
 1 5

<210> 117
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 117
 atatcttatg atggaagtga tgaa 24

<210> 118
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 118
 Ile Ser Tyr Asp Gly Ser Asp Glu
 1 5

<210> 119
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic

<400> 119
gtgaaaggag atctggaact tggttttgac tac

33

<210> 120
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 120
Val Lys Gly Asp Leu Glu Leu Gly Phe Asp Tyr
1 5 10

<210> 121
<211> 337
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 121
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atgtcctgca ggtctagtaa gagtctcctg tacagtaatg gacatactta cgtgtattgg 120
tttgtgcaga ggccaggcca gtctcctcag ctctcgatat atcggaatgc caaccttgcc 180
tcaggagtc cagacagggt cagtggcagt gggtcaggaa ctgctttcac actgagaatc 240
agtagagtgg aggcctgagga tgtgggtgtt tattactgta tgcaaaaatct agaatttccg 300
ctcacgttcg gtgctgggac caagctggag ctgaaac 337

<210> 122
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 122
Asp Ile Val Met Thr Gln Ala Ala Pro Ser Ile Pro Val Ile Pro Gly
1 5 10 15
Glu Ser Val Ser Met Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser
20 25 30
Asn Gly His Thr Tyr Val Tyr Trp Phe Val Gln Arg Pro Gly Gln Ser
35 40 45
Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65 70 75 80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Asn
85 90 95
Leu Glu Phe Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105 110

<210> 123
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
 <223> Synthetic

 <400> 123
 aagagtctcc tgtacagtaa tggacatact tac 33

 <210> 124
 <211> 11
 <212> PRT
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 <220>
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 <400> 124
 Lys Ser Leu Leu Tyr Ser Asn Gly His Thr Tyr
 1 5 10

 <210> 125
 <211> 9
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic

 <400> 125
 cggatgtcc 9

 <210> 126
 <211> 3
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 <400> 126
 Arg Met Ser
 1

 <210> 127
 <211> 27
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 <220>
 <223> Synthetic

 <400> 127
 atgcaaaaatc tagaatttcc gctcacg 27

 <210> 128
 <211> 9
 <212> PRT
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 <220>
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 <400> 128

Met Gln Asn Leu Glu Phe Pro Leu Thr

1

5

<210> 129

<211> 355

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 129

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tctgtgtcag cctctggatt cacttcagc cgctatggca ttcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggctgtt atatcttatg atggaactga tgaatactat 180
gcagactccg tgaagggccg attcaccatc tcccagagaca attccaagaa cagcctttat 240
ctacaaatga acagtctgag acctgcggac tcggctgtat attactgtgc gaaaggagat 300
ctggaacttg gttttgacta ctggggccag ggaaccctgg tcaccgtctc ctcaa 355

<210> 130

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 130

Gln	Val	Gln	Leu	Val	Glu	Ala	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg
1				5				10						15	
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Arg	Tyr
			20					25					30		
Gly	Ile	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35				40						45			
Ala	Val	Ile	Ser	Tyr	Asp	Gly	Thr	Asp	Glu	Tyr	Tyr	Ala	Asp	Ser	Val
	50				55						60				
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr
65				70				75						80	
Leu	Gln	Met	Asn	Ser	Leu	Arg	Pro	Ala	Asp	Ser	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Lys	Gly	Asp	Leu	Glu	Leu	Gly	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Thr
		100					105						110		
Leu	Val	Thr	Val	Ser	Ser										
			115												

<210> 131

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 131

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24

<210> 132

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 132

Gly Phe Thr Phe Ser Arg Tyr Gly

1

5

<210> 133

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 133

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<210> 134

<211> 8

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<220>

<223> Synthetic

<400> 134

Ile Ser Tyr Asp Gly Thr Asp Glu

1

5

<210> 135

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 135

gcgaaaggag atctggaact tggttttgac tac

33

<210> 136

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 136

Ala Lys Gly Asp Leu Glu Leu Gly Phe Asp Tyr

1

5

10

<210> 137

<211> 322

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 137

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 gggaaagccc cttaaactcct gatcaatgtt gcatcccggt tgcaaagtgg ggtcccatca 180
 aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcaacgg tctgcagcct 240
 gaagattttg taacttacta ttgtcaacag gctaacagtt tcccgatcac cttcggccaa 300
 gggacacgac tggcgaccaa ac 322

<210> 138
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 138
 Ala Ile Arg Leu Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ile Trp
 20 25 30
 Leu Ala Trp Tyr Gln Gln Ser Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45
 Asn Val Ala Ser Arg Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Gly Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Val Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Ile
 85 90 95
 Thr Phe Gly Gln Gly Thr Arg Leu Ala Thr Lys
 100 105

<210> 139
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 139
 caggatatta gtatttgg 18

<210> 140
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 140
 Gln Asp Ile Ser Ile Trp
 1 5

<210> 141
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 141

gttgcatcc

9

<210> 142

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 142

Val Ala Ser

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<210> 143

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 143

caacaggcta acagtttccc gatcacc

27

<210> 144

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 144

Gln Gln Ala Asn Ser Phe Pro Ile Thr

1

5

<210> 145

<211> 358

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 145

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tcctgtgcag cctctggatt catcttcaat acctatacca tgaattgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc atcactagtc gtggtactta tatattctac 180
tcagactcac ttaagggccg attcaccatt tccagagaca acgccaataa ctoactgttt 240
ctgcaaatga acagcctgag agtcgaagac acggctgttt attactgttc gagagatcgt 300
ggatacacct ttggtcctga ctactggggc caggggaacc tggtcaccgt ctcttcag 358

<210> 146

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 146
 Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Asn Thr Tyr
 20 25 30
 Thr Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ser Ile Thr Ser Arg Gly Thr Tyr Ile Phe Tyr Ser Asp Ser Leu
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Asn Asn Ser Leu Phe
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ser Arg Asp Arg Gly Tyr Thr Phe Gly Pro Asp Tyr Trp Gly Gln Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser
 115

<210> 147
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 147
 ggattcatct tcaataacctt tacc

24

<210> 148
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 148
 Gly Phe Ile Phe Asn Thr Tyr Thr
 1 5

<210> 149
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 149
 atcactagtc gtggtacttta tata

24

<210> 150
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 150
 Ile Thr Ser Arg Gly Thr Tyr Ile

<210> 151
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 151
 tcgagagatc gtggatacac ctttggctct gactac 36

<210> 152
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 152
 Ser Arg Asp Arg Gly Tyr Thr Phe Gly Pro Asp Tyr
 1 5 10

<210> 153
 <211> 322
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 153
 gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
 atcacttgcc gggcaagtca ggacattaga aatgatttag gctggatatca gcagaaacca 120
 gggaaaagccc ctaagggcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
 aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
 gaagattttg caacttatca ctgtctacat tatgattttc atcctcggac gttcggccaa 300
 gggaccaagg tggaaatcaa gc 322

<210> 154
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 154
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
 20 25 30
 Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Gly Leu Ile
 35 40 45
 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr His Cys Leu His Tyr Asp Phe His Pro Arg
 85 90 95

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

<210> 155
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 155
 caggacatta gaaatgat 18

<210> 156
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 156
 Gln Asp Ile Arg Asn Asp
 1 5

<210> 157
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 157
 gctgcatcc 9

<210> 158
 <211> 3
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 158
 Ala Ala Ser
 1

<210> 159
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 159
 ctacattatg attttcatcc tcggacg 27

<210> 160

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

<220>
 <223> Synthetic

<400> 160
 Leu His Tyr Asp Phe His Pro Arg Thr
 1 5

<210> 161
 <211> 391
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 161
 caggtgcaac tgggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
 tctgtgcag cgtctggatt caccttcagt agctatgcca tgcactgggt ccgccaggct 120
 ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaactaa ttattactat 180
 gcagactccg tgaaggggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatccc 300
 ctatattacg atattttgac tggttattcc cccgactact actacggtat ggacgtctcg 360
 ggccaaggga ccacggtcac cgtctctcca g 391

<210> 162
 <211> 130
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 162
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30
 Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ala Val Ile Trp Tyr Asp Gly Thr Asn Tyr Tyr Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Leu Tyr Tyr Asp Ile Leu Thr Gly Tyr Ser Pro Asp
 100 105 110
 Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
 115 120 125
 Ser Ser
 130

<210> 163
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetic

<400> 163
ggattcacct tcagtagcta tgcc

24

<210> 164
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 164
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 165
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 165
atatggtatg atggaactaa ttat

24

<210> 166
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 166
Ile Trp Tyr Asp Gly Thr Asn Tyr
1 5

<210> 167
<211> 69
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 167
gcgagagatc cccatattta cgatattttg actgggttatt ccccgacta ctactacggt 60
atggacgtc 69

<210> 168
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 168
Ala Arg Asp Pro Leu Tyr Tyr Asp Ile Leu Thr Gly Tyr Ser Pro Asp

1 5
Tyr Tyr Tyr Gly Met Asp Val
20

10

15

<210> 169
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 169
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtcg gacttttagc agcaacttag cctggtagca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccattcagcag cctgcagtc 240
gaagattttg cagtttatta ctgtcagcag tataataagt ggccgctcac ttccggcgga 300
gggaccaagg tggagatcaa ac 322

<210> 170
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 170
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr Phe Ser Ser Asn
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Lys Trp Pro Leu
85 90 95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 171
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 171
cagactttta gcagcaac 18

<210> 172
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 172
Gln Thr Phe Ser Ser Asn
1 5

<210> 173
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 173
ggtgcatcc

9

<210> 174
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 174
Gly Ala Ser
1

<210> 175
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 175
cagcagtata ataagtggcc gctcact

27

<210> 176
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 176
Gln Gln Tyr Asn Lys Trp Pro Leu Thr
1 5

<210> 177
<211> 367
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 177
gaggtgcagc tgttggagtc tgggggaggc ttggtccagc ctggggagtc cctgagactc 60

tctctgtgcag cctctggatt cactcttttagc agctatgccca tgaactgggt cgcgcaggct 120
ccagggaagg ggcctggagt ggtctcaact atcagtggtta gtggtgggta tatatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cagctgtat 240
ctgcaaatac acagcctgag agccgaagac acggccgtat atttctgtgc gaaagattcc 300
aggtataact ggaactacgg caattttgac tactggggcc agggaaacct ggtcaccgtc 360
tctctag 367

<210> 178
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 178
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Glu
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Thr Ile Ser Gly Ser Gly Gly Tyr Ile Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys
85 90 95
Ala Lys Asp Ser Arg Tyr Asn Trp Asn Tyr Gly Asn Phe Asp Tyr Trp
100 105 110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 179
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 179
ggattcacct ttagcagcta tgcc 24

<210> 180
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 180
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 181
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 181

atcagtggta gtggtgggta tata

24

<210> 182

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 182

Ile Ser Gly Ser Gly Gly Tyr Ile

1

5

<210> 183

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 183

ggcgaagatt ccaggtataa ctggaactac ggcaattttg actac

45

<210> 184

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 184

Ala Lys Asp Ser Arg Tyr Asn Trp Asn Tyr Gly Asn Phe Asp Tyr

1

5

10

15

<210> 185

<211> 322

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 185

gaaatagtga tgaagcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtcga gaatggttag agcaacttag cctggaacaa gcagaaacct 120
ggccaggctc ccagactcct catctatgct acatccacca gggccactgg tgtcccagcc 180
aggttcagtg ccagtgggtc tgggacagac ttcgctctca ccacaaacag cctgcagtc 240
gaagattttg cagtttatta ctgtcagcag tataataact ggctctctac tttcggggga 300
gggaccaagg tggagatcaa ac 322

<210> 186

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 186

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Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1             5             10             15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asn Val Ser Ser Asn
 20             25             30
Leu Ala Trp Asn Lys Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
 35             40             45
Tyr Ala Thr Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Ala
 50             55             60
Ser Gly Ser Gly Thr Asp Phe Ala Leu Thr Ile Asn Ser Leu Gln Ser
 65             70             75             80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
 85             90             95
Thr Phe Gly Gly Thr Lys Val Glu Ile Lys
 100             105
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<210> 187

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 187

cagaatgtta gcagcaac

18

<210> 188

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 188

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Gln Asn Val Ser Ser Asn
 1             5
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<210> 189

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 189

gctacatcc

9

<210> 190

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 190

Ala Thr Ser

1

<210> 191
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 191
cagcagtata ataactggcc tctcact

27

<210> 192
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 192
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
1 5

<210> 193
<211> 367
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
gaggtgcaac tgttggaaac tgggggagggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgtag cctctcgatt caccttcagc agcaatgccg tgagttgggt ccgccaggct 120
ccagggacgg ggtcggagtg ggtctcagct attactggta gtggtagtag gacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa caccgtgtat 240
ctgcaaataa acagcctgag aggcgaggac acggccgtat attactgtgc gaaagatcaa 300
gggggtacct ggaactacgg agattttgac tactgggggc aggggaacct ggtcacogtc 360
tcctcag 367

<210> 194
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 194
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Val Ala Ser Arg Phe Thr Phe Ser Ser Asn
20 25 30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Thr Gly Leu Glu Trp Val
35 40 45
Ser Ala Ile Thr Gly Ser Gly Ser Arg Thr Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Gly Glu Asp Thr Ala Val Tyr Tyr Cys

	85		90		95										
Ala	Lys	Asp	Gln	Gly	Gly	Thr	Trp	Asn	Tyr	Gly	Asp	Phe	Asp	Tyr	Trp
		100						105					110		
Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser						
		115					120								

<210> 195
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 195
 cgattcacct tcagcagcaa tgcc 24

<210> 196
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 196
 Arg Phe Thr Phe Ser Ser Asn Ala
 1 5

<210> 197
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 197
 attactggta gtggtagtag gaca 24

<210> 198
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 198
 Ile Thr Gly Ser Gly Ser Arg Thr
 1 5

<210> 199
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 199

gcgaaagatc aagggggtac ctggaactac ggagattttg actac

45

<210> 200
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200
Ala Lys Asp Gln Gly Gly Thr Trp Asn Tyr Gly Asp Phe Asp Tyr
1 5 10 15

<210> 201
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 201
gaaatagtga tgaacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtc gagtggttag agcaacttag cctggtagca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tctcccagcc 180
aggttcagtg gcagtggtgc tgggacagac ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggccctctac tttcggcgga 300
gggaccaagg tggagatcaa gc 322

<210> 202
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 202
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Leu Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
85 90 95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 203
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 203
cagagtgtta gcagcaac

18

<210> 204
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 204
Gln Ser Val Ser Ser Asn
1 5

<210> 205
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 205
ggtgcatcc

9

<210> 206
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 206
Gly Ala Ser
1

<210> 207
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 207
cagcagtata ataactggcc tctcact

27

<210> 208
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 208
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
1 5

<210> 209
 <211> 373
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 209
 caggtgcagc tgggtggagtc tggggggagac gtgggtccagc ctggggaggtc cctgagactc 60
 tctctgtacag cctctgggatt cacccttcagt agttatggca tgcactgggt ccgccaggct 120
 ccaggcaggg ggctggagtg ggtggcagtt atatcatttg atggaaaaaa taaatactat 180
 gcagactccg tgaagggccg attcaccgtc tccagagaca attccaagaa cagctgtttt 240
 ctgcaaataga acagcctgag agctgaggac acggctctat attactgtgc gaaaaggata 300
 gcagcaactg gttactacta cttctacggt ttggacgtct ggggccaagg gaccacggtc 360
 accgtctcct cag 373

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

<220>
 <223> Synthetic

<400> 210
 Gln Val Gln Leu Val Glu Ser Gly Gly Asp Val Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30
 Gly Met His Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val
 35 40 45
 Ala Val Ile Ser Phe Asp Gly Lys Asn Lys Tyr Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Lys Asn Thr Leu Phe
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Ala Lys Arg Ile Ala Ala Thr Gly Tyr Tyr Tyr Phe Tyr Gly Leu Asp
 100 105 110
 Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

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

<220>
 <223> Synthetic

<400> 211
 ggattcacct tcagtagtta tggc 24

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

<220>
 <223> Synthetic

<400> 212

Gly Phe Thr Phe Ser Ser Tyr Gly
1 5

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

<220>
<223> Synthetic

<400> 213
atatcatttg atggaaaaaa taaa 24

<210> 214
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 214
Ile Ser Phe Asp Gly Lys Asn Lys
1 5

<210> 215
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215
gcgaaaagga tagcagcaac tggttactac tacttctacg gtttggacgt c 51

<210> 216
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 216
Ala Lys Arg Ile Ala Ala Thr Gly Tyr Tyr Tyr Phe Tyr Gly Leu Asp
1 5 10 15
Val

<210> 217
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 217
gaaataatga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagaggcacc 60

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ctctcctgca gggccagtc gagtggttag agcaacttag cctgggtacca gcagaaacct 120
ggccaggtct ccaggctcct catctatggt gcattccacca gggccagtgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcaactctca ccgtcagcag cctgcagctt 240
gaagattttg cagtttatta ctgtcagcag tataataact ggccgctcac ttccggcgga 300
gggaccaagg tggagatcaa ac                                     322

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<210> 218
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

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<400> 218
Glu Ile Met Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1             5             10             15
Glu Arg Gly Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
      20             25             30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
      35             40             45
Tyr Gly Ala Ser Thr Arg Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly
      50             55             60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Val Ser Ser Leu Gln Ser
      65             70             75             80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
      85             90             95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
      100             105

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<210> 219
 <211> 18
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<220>
 <223> Synthetic

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<400> 219
cagagtgtta gtagcaac                                     18

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<210> 220
 <211> 6
 <212> PRT
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<220>
 <223> Synthetic

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<400> 220
Gln Ser Val Ser Ser Asn
 1             5

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<210> 221
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 221

ggtgcatcc

9

<210> 222
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 222
Gly Ala Ser
1

<210> 223
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 223
cagcagtata ataactggcc gctcact

27

<210> 224
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 224
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
1 5

<210> 225
<211> 367
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 225
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tcctgtgcag cctctggatt cacctctatc acctatgcca tgagctgggt ccgccaggct 120
ccagggaaagg ggctggagtg ggtctcagct attagtgtta gtggtactaa tacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca agtecaagaa catgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gaaagatctc 300
ctacataact ggaaatacgg gacttttgat atctggggcc aagggacaat ggtcaccgtc 360
tcttcag 367

<210> 226
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 226
 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Ser Ile Thr Tyr
 20 25 30
 Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ala Ile Ser Val Ser Gly Thr Asn Thr Tyr Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Asn Met Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Lys Asp Leu Leu His Asn Trp Lys Tyr Gly Thr Phe Asp Ile Trp
 100 105 110
 Gly Gln Gly Thr Met Val Thr Val Ser Ser
 115 120

<210> 227
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 227
 ggattcacot ctatcaccta tgcc

24

<210> 228
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 228
 Gly Phe Thr Ser Ile Thr Tyr Ala
 1 5

<210> 229
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 229
 attagtgtta gtggtactaa taca

24

<210> 230
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 230
 Ile Ser Val Ser Gly Thr Asn Thr

<210> 231
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 231
 gcgaaagatc tcctacataa ctggaaatac gggacttttg atatac 45

<210> 232
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 232
 Ala Lys Asp Leu Leu His Asn Trp Lys Tyr Gly Thr Phe Asp Ile
 1 5 10 15

<210> 233
 <211> 322
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 233
 gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
 ctctcctgca gggccagtcga gagtgttgac agcaacttag tctggtacca acaaaaaacct 120
 ggccaggttc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
 aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
 gaagattttg cagtttatta ctgtcagcag tataataagt ggcgcgtcac tttcggcgga 300
 gggaccaagg tggagatcaa ac 322

<210> 234
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 234
 Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1 5 10 15
 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asp Ser Asn
 20 25 30
 Leu Val Trp Tyr Gln Gln Lys Pro Gly Gln Val Pro Arg Leu Leu Ile
 35 40 45
 Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
 65 70 75 80
 Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Lys Trp Pro Leu
 85 90 95

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

<210> 235
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 235
cagagtgttg acagcaac 18

<210> 236
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 236
Gln Ser Val Asp Ser Asn
1 5

<210> 237
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 237
ggtgcatcc 9

<210> 238
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 238
Gly Ala Ser
1

<210> 239
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 239
cagcagtata ataagtggcc gtcact 27

<210> 240

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

<220>
 <223> Synthetic

<400> 240
 Gln Gln Tyr Asn Lys Trp Pro Leu Thr
 1 5

<210> 241
 <211> 367
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 241
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 tcctgtgcag cctctggatt cacctctatc acctatgccg tgagctgggt ccgccaggct 120
 ccagggaagg ggctggagtg ggtctcagct attagtgtta gtggtactaa tacatactac 180
 gcagactccg tgaagggccg gtccaccatc tccagagaca agtccaagaa catgctgtat 240
 ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gaaagatctc 300
 ctacataact ggaaatacgg gacttttgat atctggggcc aagggacaat ggtcaccgtc 360
 tcttcag 367

<210> 242
 <211> 122
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 242
 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Ser Ile Thr Tyr
 20 25 30
 Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ala Ile Ser Val Ser Gly Thr Asn Thr Tyr Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Asn Met Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Lys Asp Leu Leu His Asn Trp Lys Tyr Gly Thr Phe Asp Ile Trp
 100 105 110
 Gly Gln Gly Thr Met Val Thr Val Ser Ser
 115 120

<210> 243
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 243
ggattcacct ctatcaccta tgcc

24

<210> 244
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 244
Gly Phe Thr Ser Ile Thr Tyr Ala
1 5

<210> 245
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 245
attagtgtta gtggtactaa taca

24

<210> 246
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 246
Ile Ser Val Ser Gly Thr Asn Thr
1 5

<210> 247
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
gcgaaagatc tcctacataa ctggaaatac gggacttttg atatc

45

<210> 248
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248
Ala Lys Asp Leu Leu His Asn Trp Lys Tyr Gly Thr Phe Asp Ile
1 5 10 15

<210> 249
 <211> 325
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 249
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 ctctcctgca gggccagtca gagggttagc agcaacttag cctggaacca gcagaaacct 120
 ggccaggctc ccaggctcct catctatggt gcacccacca gggccacggg tatcccagcc 180
 aggttcagtg gcagtgggtc tgggacagag ttcaacttca ccacagcag cctgcagtc 240
 gaagattttg cagtttatta ctgtcagcag tataacaact ggcccatgta cacttttggc 300
 caggggacca agctggagat caaac 325

<210> 250
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 250
 Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1 5 10 15
 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
 20 25 30
 Leu Ala Trp Asn Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
 35 40 45
 Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
 65 70 75 80
 Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Met
 85 90 95
 Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 251
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 251
 cagagtgtta gcagcaac 18

<210> 252
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 252
 Gln Ser Val Ser Ser Asn
 1 5

<210> 253
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 253
 ggtgcatcc

9

<210> 254
 <211> 3
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 254
 Gly Ala Ser
 1

<210> 255
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 255
 cagcagtata acaactggcc catgtacact

30

<210> 256
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 256
 Gln Gln Tyr Asn Asn Trp Pro Met Tyr Thr
 1 5 10

<210> 257
 <211> 361
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 257
 caggtgcagc tgggtggagtc tggggggaggc gtggtccagc ctgggaggtc cctgagactc 60
 tectgtgaag cctctggatt cacttccagt agttctggca tgcactgggt ccgccaggct 120
 ccaggcaagg ggcctgcagt ggtggctggt atatcatatg atggaaataa taaattttat 180
 gaagactccg tgaagggccg attgaccatt tccagagaca attccaacaa cactctgtgg 240
 ctgcaaatac acagcctgag agttgaagac acggctggtt attactgtgc gaaatcagga 300
 ggtagagtgg gaggccgctt tgctaatggt ggccaggga ccttggtcac cgtctctca 360

<210> 258
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 258
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe Thr Phe Ser Ser Ser
 20 25 30
 Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Gln Trp Val
 35 40 45
 Ala Val Ile Ser Tyr Asp Gly Asn Asn Lys Phe Tyr Glu Asp Ser Val
 50 55 60
 Lys Gly Arg Leu Thr Ile Ser Arg Asp Asn Ser Asn Asn Thr Leu Trp
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Lys Ser Gly Gly Arg Val Gly Ala Ala Phe Ala Tyr Trp Gly Gln
 100 105 110
 Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 259
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 259
 ggattcacct tcagtagttc tggc

24

<210> 260
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 260
 Gly Phe Thr Phe Ser Ser Ser Gly
 1 5

<210> 261
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 261
 atatcatatg atggaaataa taaa

24

<210> 262
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 262
Ile Ser Tyr Asp Gly Asn Asn Lys
1 5

<210> 263
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263
gcgaaatcag gaggtagagt gggagccgcc ttgacctac 39

<210> 264
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 264
Ala Lys Ser Gly Gly Arg Val Gly Ala Ala Phe Ala Tyr
1 5 10

<210> 265
<211> 337
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 265
gatattgtga acaactcagtc tccactctct ctgcccgctca cccctggaga gcgggacctcc 60
atctctctgca ggtctagtca gagcctcctg tatggtaatg gatacaacta ttgggattgg 120
tacctgcaga agccagggca ctctccacag ctctcgatct atttgggttc taatcggggc 180
tccgggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaagatc 240
agcagagtgg aggtgaaga tggtggcatt tattaatgca tgcaaaactct acaaaactcca 300
ttcactttcg gccctgggac caaaatgtat atcaaac 337

<210> 266
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 266
Asp Ile Val Asn Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

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

<210> 267
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 267
 cagagcctcc tgtatggtaa tggatacaac tat

33

<210> 268
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 268
 Gln Ser Leu Leu Tyr Gly Asn Gly Tyr Asn Tyr
 1 5 10

<210> 269
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 269
 ttgggttct

9

<210> 270
 <211> 3
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 270
 Leu Gly Ser
 1

<210> 271
 <211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 271
atgcaaaactc tacaaactcc attcact

27

<210> 272
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 272
Met Gln Thr Leu Gln Thr Pro Phe Thr
1 5

<210> 273
<211> 376
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273
gaggtgcagc tgttggagtc tggggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tctctgtgcag gctctggaat cacttttagc agctatgccg tgagctgggt ccgccaggct 120
ccaggggaagg ggctggagtg ggtctcagct attagtggta atgggtggtac cacaaactac 180
gcagactcog tgaagggcog gtccaccatc tccagagaca actccaagaa cagctgttat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagaaaga 300
atccttacca gcagctggac gaggtacggt attatggacg tctggggcca agggaccacg 360
gtcacgctct cctcag 376

<210> 274
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 274
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Ile Thr Phe Ser Ser Tyr
20 25 30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ala Ile Ser Gly Asn Gly Gly Thr Thr Asn Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Lys Glu Arg Ile Leu Thr Ser Ser Trp Thr Arg Tyr Gly Ile Met
100 105 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 275
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 275
ggaatcacct ttagcagcta tgcc

24

<210> 276
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 276
Gly Ile Thr Phe Ser Ser Tyr Ala
1 5

<210> 277
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 277
attagtggta atggtggtac caca

24

<210> 278
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 278
Ile Ser Gly Asn Gly Gly Thr Thr
1 5

<210> 279
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 279
gcgaaagaaa gaatccttac cagcagctgg acgaggtacg gtattatgga cgtc

54

<210> 280
<211> 18
<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 280

Ala Lys Glu Arg Ile Leu Thr Ser Ser Trp Thr Arg Tyr Gly Ile Met
1 5 10 15
Asp Val

<210> 281

<211> 322

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 281

gaaatagtga tgaacgcagtc tccagccacc ctgtctatgt ctccagggga aagagccacc 60
ctctcctgca gggccagtc gagtggttag agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcattccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccattcagcag cctgcagctc 240
gaagattttg cagtttatta ctgtcagcag tataataact ggccctctcag ttccggcgga 300
gggaccaagt tagagatcaa ac 322

<210> 282

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 282

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

<210> 283

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 283

cagagtgtta gcagcaac

18

<210> 284
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 284
Gln Ser Val Ser Ser Asn
1 5

<210> 285
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 285
ggtgcatcc

9

<210> 286
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 286
Gly Ala Ser
1

<210> 287
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 287
cagcagtata ataactggcc tctcact

27

<210> 288
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 288
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
1 5

<210> 289
<211> 358
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 289

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caggtgcaac tacagcagtg gggcgagga ctgttgaagc cttcggagac cctgtccctc 60
acctgcgctg tctatgggtg gtccttcagt gggtactact ggagctggat ccgccagccc 120
ccagggaagg ggcctggagt gattggggaa atcaatcata gtggaaacac caactacaac 180
ccgtccctca agagtgcagt caccatatca gtagacaagt ccaagaacca gttctccctg 240
aaactgaact ctgtgaccgc cgcggacacg gctgtgtatt actgtgcgag aagagaggct 300
acagtaactc catactttga ctactggggc cagggaaccc tggtcaccgt ctctcag 358
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<210> 290

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 290

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Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
 1             5             10             15
Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
 20             25             30
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
 35             40             45
Gly Glu Ile Asn His Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys
 50             55             60
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65             70             75             80
Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
 85             90             95
Arg Arg Glu Ala Thr Val Thr Pro Tyr Phe Asp Tyr Trp Gly Gln Gly
100             105             110
Thr Leu Val Thr Val Ser Ser
115
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<210> 291

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 291

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ggtgggtcct tcagtgggta ctac 24
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<210> 292

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 292

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Gly Gly Ser Gly Ser Gly Tyr Tyr
 1             5
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<210> 293
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 293
 atcaatcata gtggaaacac c 21

<210> 294
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 294
 Ile Asn His Ser Gly Asn Thr
 1 5

<210> 295
 <211> 39
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<220>
 <223> Synthetic

<400> 295
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<210> 296
 <211> 13
 <212> PRT
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<400> 296
 Ala Arg Arg Glu Ala Thr Val Thr Pro Tyr Phe Asp Tyr
 1 5 10

<210> 297
 <211> 322
 <212> DNA
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<220>
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<400> 297
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 atcacttgcg gggccagtcg gggcattagc agttatttag cctgggtatca gcaaaaacca 120
 gggaaagccc ctaagctcct gatctatgct gcattccactt tgcaaaagtgg ggtcccatca 180
 aggttcagcg gcagtggatc tgggacagaa ttactctca caatcagcag cctgcagcct 240
 gaagattttg caacttatta ctgtcaacag cttaatagtt atccgctcac ttccggcgga 300
 gggaccaagg tggagatcaa ac 322

<210> 298
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 298
 Asp Ile Gln Leu Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Trp Ala Ser Gln Gly Ile Ser Ser Tyr
 20 25 30
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45
 Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Leu Asn Ser Tyr Pro Leu
 85 90 95
 Thr Phe Gly Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 299
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<400> 299
 cagggcatta gcagttat

18

<210> 300
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<400> 300
 Gln Gly Ile Ser Ser Tyr
 1 5

<210> 301
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<400> 301
 gctgcatcc

9

<210> 302
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<220>
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<400> 302
Ala Ala Ser
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<210> 303
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<220>
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<400> 303
caacagctta atagttatcc gctcact

27

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<400> 304
Gln Gln Leu Asn Ser Tyr Pro Leu Thr
1 5

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ccaggcaagg ggctggaatg ggtggcagtt atatcatatg atggaagaaa taaattttat 180
gtagagtcog tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaataa acagtctgag agttgaggac acggctgtat attactgtgc gaaatcctca 300
attggaggggt tttttgaata ctggggccag ggaaccctgg tcaccgtctc ctcag 355

<210> 306
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<400> 306
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Val Val Ser Gly Phe Asn Phe Ser Arg Asn
20 25 30
Gly Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Val Ile Ser Tyr Asp Gly Arg Asn Lys Phe Tyr Val Glu Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Lys Ser Ser Ile Gly Gly Phe Phe Glu Tyr Trp Gly Gln Gly Thr
100 105 110
Leu Val Thr Val Ser Ser
115

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<400> 307
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24

<210> 308
<211> 8
<212> PRT
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<220>
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<400> 308
Gly Phe Asn Phe Ser Arg Asn Gly
1 5

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atatcatatg atggaagaaa taaa

24

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<400> 310
Ile Ser Tyr Asp Gly Arg Asn Lys
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<210> 311
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<212> DNA
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<400> 311
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33

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<400> 312
Ala Lys Ser Ser Ile Gly Gly Phe Phe Glu Tyr
1 5 10

<210> 313
<211> 337
<212> DNA
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<220>
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atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccaggaca gtctccacaa ctcatgatct atttgggttc tcatcgggcc 180
tccgggggtcc ctgacagggt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggtcgagga tgttggagtc tattactgca ttcaagttca acaaactccg 300
atcaccttcg gccaaaggac acggctggag attaaac 337

<210> 314
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
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<400> 314
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30
Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45
Pro Gln Leu Met Ile Tyr Leu Gly Ser His Arg Ala Ser Gly Val Pro
50 55 60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ile Gln Val
85 90 95
Gln Gln Thr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105 110

<210> 315
<211> 33
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<213> Artificial Sequence

<220>

<223> Synthetic

<400> 315

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33

<210> 316

<211> 11

<212> PRT

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<223> Synthetic

<400> 316

Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr

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5

10

<210> 317

<211> 9

<212> DNA

<213> Artificial Sequence

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<223> Synthetic

<400> 317

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9

<210> 318

<211> 3

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Leu Gly Ser

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<211> 27

<212> DNA

<213> Artificial Sequence

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<223> Synthetic

<400> 319

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27

<210> 320

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 320
 Ile Gln Val Gln Gln Thr Pro Ile Thr
 1 5

<210> 321
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 <212> DNA
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<220>
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<400> 321
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 cttcagcaga ggccaggcca gccccaaga ctctaatctt acaagatttc taaccgggtc 180
 tctgggggtcc cagacagatt cagtggcagt ggggcaggga cagatttcac actgaaaatc 240
 agcagggtgg aagctgagga tgcgggggtt tatttctgca tgcaagctac acaatttcgg 300
 tacacttttg gccaggggac caagctggag atcaaag 337

<210> 322
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<220>
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<400> 322
 Asp Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
 1 5 10 15
 Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
 20 25 30
 Asp Gly Asn Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
 35 40 45
 Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60
 Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80
 Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe Cys Met Gln Ala
 85 90 95
 Thr Gln Phe Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 323
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<400> 323
 caaagcctcg tacacagtga tggaaacacc tac 33

<210> 324
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<400> 324
 Gln Ser Leu Val His Ser Asp Gly Asn Thr Tyr
 1 5 10

<210> 325
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 <212> DNA
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<400> 325
 aagatttct 9

<210> 326
 <211> 3
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<220>
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<400> 326
 Lys Ile Ser
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<210> 327
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 327
 atgcaagcta cacaatttcc gtacact 27

<210> 328
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 328
 Met Gln Ala Thr Gln Phe Pro Tyr Thr
 1 5

<210> 329
 <211> 8
 <212> PRT
 <213> Artificial Sequence

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<223> Xaa = Phe

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<223> Xaa = Ala or Ser

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<223> Xaa = Phe or Tyr

<220>
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<210> 330
<211> 8
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<222> (2)...(2)
<223> Xaa = Gly or Ser

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<220>
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<222> (3)...(3)
<223> Xaa = Tyr or Gly

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<223> Xaa = Ser or Asp

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<223> Xaa = Ala or Glu

<400> 330
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5

<210> 331
<211> 13
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<223> Xaa = Ser or Ala

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<223> Xaa = Thr or Lys

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<222> (3)...(3)
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<223> Xaa = Gly or Ser

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<222> (5)...(5)
<223> Xaa = Ala or His

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<222> (6)...(6)
<223> Xaa = Trp or Tyr

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<222> (7)...(7)
<223> Xaa = Lys or Asp

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<222> (8)...(8)
<223> Xaa = Met or Ile

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<223> Xaa = Ser or Leu

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<223> Xaa = Gly or Ser

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<223> Xaa = Asp or Met

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<222> (13)...(13)
<223> Xaa = Val or Asp

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<400> 331
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10

<210> 332
<211> 6
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<223> Xaa = Asp or Asn

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<223> Xaa = Tyr or Trp

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Xaa Xaa Xaa Xaa Xaa Xaa
1 5

<210> 333
<211> 3
<212> PRT
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<220>
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<223> Xaa = Thr or Ala

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<221> VARIANT
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<223> Xaa = Thr or Ala

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<222> (3)...(3)
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Xaa Xaa Xaa
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<210> 334
<211> 9
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<223> Xaa = Lys or Gln

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<222> (3)...(3)
<223> Xaa = Ala or Tyr

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<223> Xaa = Ser

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<223> Xaa = Pro

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<223> Xaa = Leu

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<221> VARIANT

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<223> Xaa = Thr

<400> 334

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<210> 335

<211> 330

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 335

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20 25 30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65 70 75 80
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115 120 125
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
130 135 140
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145 150 155 160
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
165 170 175
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
180 185 190
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
195 200 205
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
210 215 220
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225 230 235 240
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
275 280 285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
290 295 300
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305 310 315 320
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
325 330

<210> 336
 <211> 327
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 336
 Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
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 20 25 30
 Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
 35 40 45
 Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 50 55 60
 Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
 65 70 75 80
 Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
 85 90 95
 Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
 100 105 110
 Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 115 120 125
 Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 130 135 140
 Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
 145 150 155 160
 Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
 165 170 175
 Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 180 185 190
 Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
 195 200 205
 Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 210 215 220
 Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
 225 230 235 240
 Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 245 250 255
 Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 260 265 270
 Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 275 280 285
 Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
 290 295 300
 Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 305 310 315 320
 Leu Ser Leu Ser Leu Gly Lys
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<210> 337
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<220>
 <223> Synthetic

<400> 337

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Ser	Thr	Ser	Glu	Ser	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr
			20					25					30		
Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser
		35					40					45			
Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser
50					55					60					
Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Lys	Thr
65					70					75				80	
Tyr	Thr	Cys	Asn	Val	Asp	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys
			85					90						95	
Arg	Val	Glu	Ser	Lys	Tyr	Gly	Pro	Pro	Cys	Pro	Pro	Cys	Pro	Ala	Pro
		100						105				110			
Glu	Phe	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys
		115					120					125			
Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val
130						135					140				
Asp	Val	Ser	Gln	Glu	Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	Tyr	Val	Asp
145					150					155				160	
Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Phe
			165					170						175	
Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp
		180						185				190			
Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Gly	Leu
		195					200					205			
Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg
		210				215					220				
Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Gln	Glu	Glu	Met	Thr	Lys
225					230					235				240	
Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp
			245					250						255	
Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys
		260						265				270			
Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser
		275					280					285			
Arg	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Glu	Gly	Asn	Val	Phe	Ser
	290				295						300				
Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser
305				310					315					320	
Leu	Ser	Leu	Ser	Leu	Gly	Lys									
				325											

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 <212> DNA
 <213> Homo sapiens

<400> 338
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 gtggatctaa atgagaacag tgagcaaaaa gaaaatgtgg aaaaagaggg gctgtgtaat 120
 gcatgtactt ggagacaaaa cactaaatct tcaagaatag aagccattaa gatacaaatc 180
 ctacgtaaac ttctgtctgga aacagctcct aacatcagca aagatgttat aagacaactt 240
 ttacccaaag ctctccact cggggaactg attgatcagt atgatgtcca gagggatgac 300
 agcagcgatg gctctttgga agatgacgat tatcacgcta caacggaaac aatcattacc 360
 atgcctacag agtctgattt tctaattgcaa gtggatggaa aacccaaatg ttgctttcttt 420
 aaatttagct ctaaaataca atacaataaa gtagtaaagg cccaactatg gatataattg 480
 agaccctgct agactcctac aacagtgttt gtgcaaatcc tgagactcat caaacctatg 540
 aaagacggta caaggtatac tggaaatccga tctctgaaac ttgacatgaa ccagggcact 600
 ggtatttggc agagcattga tgtgaagaca gtgttgcaaa attggctcaa acaacctgaa 660
 tccaacttag ccattgaaat aaaagcttta gatgagaatg gtcattgatct tgcgtgaacc 720
 ttcccaggac caggagaaga tgggctgaat ccgttttttag aggtcaaggc aacagacaca 780
 ccaaaaagat ccagaaggga ttttggtctt gactgtgatg agcactcaac agaatacaga 840

tgctgtcggtt accctetaac tgtggatttt gaagcttttg gatgggattg gattatogct 900
 cctaaaagat ataaggccaa ttactgctct ggagagtgtg aatttgtatt ttacaaaaa 960
 tatectcata ctcatctggt acaccaagca aaccccagag gttcagcagg ccttgtgtgt 1020
 actccacaaa agatgtctcc aattaatatg ctatatatta atggcaaaga acaaataata 1080
 tatgggaaaa ttccagcgat ggtagtagac cgctgtgggt gctcatga 1128

<210> 339
 <211> 375
 <212> PRT
 <213> Homo sapiens

<400> 339
 Met Gln Lys Leu Gln Leu Cys Val Tyr Ile Tyr Leu Phe Met Leu Ile
 1 5 10 15
 Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys Glu Asn
 20 25 30
 Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr
 35 40 45
 Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
 50 55 60
 Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Val Ile Arg Gln Leu
 65 70 75 80
 Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
 85 90 95
 Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
 100 105 110
 Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu
 115 120 125
 Met Gln Val Asp Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
 130 135 140
 Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
 145 150 155 160
 Arg Pro Val Glu Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
 165 170 175
 Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
 180 185 190
 Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
 195 200 205
 Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
 210 215 220
 Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
 225 230 235 240
 Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Lys
 245 250 255
 Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
 260 265 270
 Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
 275 280 285
 Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
 290 295 300
 Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
 305 310 315 320
 Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
 325 330 335
 Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
 340 345 350
 Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
 355 360 365
 Val Asp Arg Cys Gly Cys Ser
 370 375

<210> 340
 <211> 109

<212> PRT
 <213> Homo sapiens

<400> 340
 Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1 5 10 15
 Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
 20 25 30
 Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
 35 40 45
 Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
 50 55 60
 Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
 65 70 75 80
 Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly
 85 90 95
 Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
 100 105

<210> 341
 <211> 1224
 <212> DNA
 <213> Homo sapiens

<400> 341
 atggtgctcg cggccccgct gctgctgggc ttctgtctcc tcgcccctgga gctgcccggc 60
 cggggggagg cggccgaggg ccccgaggcg gcggcgaggc cggcggcggc ggccggcagg 120
 gcgggggtcg ggggggagcg ctccagccgg ccagccccgt ccgtggcgcc cgagccggac 180
 ggctgccccg tgtgcgtttg gcggcagcac agccgcgagc tgcgcctaga gagcatcaag 240
 tcgcagatct tgagcaaaact gcggctcaag gaggcgccca acatcagccg cgaggtgggtg 300
 aagcagctgc tgcctcaaggc gcgcgcgctg cagcagatcc tggacctaca cgacttccag 360
 ggcgacgcgc tgcagcccgga ggaacttctg gaggaggacg agtaccacgc caccaccgag 420
 accgtcatta gcatggccca ggagacggac ccagcagtac agacagatgg cagccctctc 480
 tgctgccatt ttcaacttcag ccccaagggtg atgttcacaa aggtactgaa ggcccagctg 540
 tgggtgtacc taaggcctgt accccgcccc gccacagtct acctgcagat cttgcgacta 600
 aaacccctaa ctggggaagg gaccgcaggg ggaggggggc gaggccggcg tcacatccgt 660
 atccgtcac tgaagattga gctgcactca cgtccaggcc attggcagag catcgacttc 720
 aagcaagtgc tacacagctg gttccggccg ccacagagca actggggcat cgagatcaac 780
 gcctttgate ccagtggcac agacctggct gtcacctccc tggggccggg agccgagggg 840
 ctgcatccat tcatggagct tcgagtcta gagaacacaa aacgttcccg gcggaacctg 900
 ggtctggact gcgacgagca ctcaagcgag tcccgctgct gccgatatcc cctcacagtg 960
 gactttgagg ctttcggctg ggactggatc atcgaccta agcgctacaa ggccaactac 1020
 tgctccggcc agtgcgagta catgttcatg caaaaatatc cgcataccca tttgggtgcag 1080
 caggccaatc caagaggctc tctggtggcc tgttgtaccc ccaccaagat gtccccaatc 1140
 aacatgctct acttcaatga caagcagcag attatctacg gcaagatccc tggcatgggtg 1200
 gtggatcgct gtggctgctc ttaa 1224

<210> 342
 <211> 407
 <212> PRT
 <213> Homo sapiens

<400> 342
 Met Val Leu Ala Ala Pro Leu Leu Leu Gly Phe Leu Leu Leu Ala Leu
 1 5 10 15
 Glu Leu Arg Pro Arg Gly Glu Ala Ala Glu Gly Pro Ala Ala Ala
 20 25 30
 Ala Ala Ala Ala Ala Ala Ala Ala Gly Val Gly Gly Glu Arg Ser
 35 40 45
 Ser Arg Pro Ala Pro Ser Val Ala Pro Glu Pro Asp Gly Cys Pro Val
 50 55 60
 Cys Val Trp Arg Gln His Ser Arg Glu Leu Arg Leu Glu Ser Ile Lys
 65 70 75 80

Ser Gln Ile Leu Ser Lys Leu Arg Leu Lys Glu Ala Pro Asn Ile Ser
 85 90 95
 Arg Glu Val Val Lys Gln Leu Leu Pro Lys Ala Pro Pro Leu Gln Gln
 100 105 110
 Ile Leu Asp Leu His Asp Phe Gln Gly Asp Ala Leu Gln Pro Glu Asp
 115 120 125
 Phe Leu Glu Glu Asp Glu Tyr His Ala Thr Thr Glu Thr Val Ile Ser
 130 135 140
 Met Ala Gln Glu Thr Asp Pro Ala Val Gln Thr Asp Gly Ser Pro Leu
 145 150 155 160
 Cys Cys His Phe His Phe Ser Pro Lys Val Met Phe Thr Lys Val Leu
 165 170 175
 Lys Ala Gln Leu Trp Val Tyr Leu Arg Pro Val Pro Arg Pro Ala Thr
 180 185 190
 Val Tyr Leu Gln Ile Leu Arg Leu Lys Pro Leu Thr Gly Glu Gly Thr
 195 200 205
 Ala Gly Gly Gly Gly Gly Arg Arg His Ile Arg Ile Arg Ser Leu
 210 215 220
 Lys Ile Glu Leu His Ser Arg Ser Gly His Trp Gln Ser Ile Asp Phe
 225 230 235 240
 Lys Gln Val Leu His Ser Trp Phe Arg Gln Pro Gln Ser Asn Trp Gly
 245 250 255
 Ile Glu Ile Asn Ala Phe Asp Pro Ser Gly Thr Asp Leu Ala Val Thr
 260 265 270
 Ser Leu Gly Pro Gly Ala Glu Gly Leu His Pro Phe Met Glu Leu Arg
 275 280 285
 Val Leu Glu Asn Thr Lys Arg Ser Arg Arg Asn Leu Gly Leu Asp Cys
 290 295 300
 Asp Glu His Ser Ser Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
 305 310 315 320
 Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
 325 330 335
 Lys Ala Asn Tyr Cys Ser Gly Gln Cys Glu Tyr Met Phe Met Gln Lys
 340 345 350
 Tyr Pro His Thr His Leu Val Gln Gln Ala Asn Pro Arg Gly Ser Ala
 355 360 365
 Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
 370 375 380
 Phe Asn Asp Lys Gln Gln Ile Ile Tyr Gly Lys Ile Pro Gly Met Val
 385 390 395 400
 Val Asp Arg Cys Gly Cys Ser
 405

<210> 343
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 343
 Asn Leu Gly Leu Asp Cys Asp Glu His Ser Ser Glu Ser Arg Cys Cys
 1 5 10 15
 Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
 20 25 30
 Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Gln Cys Glu
 35 40 45
 Tyr Met Phe Met Gln Lys Tyr Pro His Thr His Leu Val Gln Gln Ala
 50 55 60
 Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
 65 70 75 80
 Pro Ile Asn Met Leu Tyr Phe Asn Asp Lys Gln Gln Ile Ile Tyr Gly
 85 90 95
 Lys Ile Pro Gly Met Val Val Asp Arg Cys Gly Cys Ser
 100 105

<210> 344
 <211> 1503
 <212> DNA
 <213> Homo sapiens

<400> 344
 atgagactcc ccaaaactcct cactttcttg ctttgggtacc tggcttgggt ggacctggaa 60
 ttcatctgca ctgtgttggg tgccctgac ttgggcccaga gacccaggg gaccaggcca 120
 ggattggcca aagcagaggc caaggagagg ccccccctgg cccggaacgt cttcaggcca 180
 gggggtcaca gctatggtgg gggggccacc aatgccaatg ccagggcaaa gggaggcacc 240
 gggcagacag gaggcctgac acagcccaag aaggatgaac ccaaaaagct gccccccaga 300
 ccgggcgggc ctgaacccaa gccaggacac cctcccaaaa caaggcaggc tacagccogg 360
 actgtgaccc caaaaggaca gcttcccggg ggcaaggcac cccaaaagc aggatctgtc 420
 cccagctcct tccgtgtgaa gaaggccagg gagcccgggc ccccaacgaga gcccaggag 480
 ccgtttcgcc cccccccat cacacccac gagtacatgc tctcgctgta caggacgctg 540
 tccgatgctg acagaaaggg aggcaacagc agcgtgaagt tggaggctgg cctggccaac 600
 accatcacca gctttattga caaagggcaa gatgaccgag gtcccggtgt cagggaagcag 660
 aggtacgtgt ttgacattag tgccctggag aaggatgggc tgctgggggc cgagctgcgg 720
 atcttgcgga agaagccctc ggacacggcc aagccagcgg ccccgaggag cgggcgggct 780
 gcccagctga agctgtccag ctgcccacgc ggccggcagc cggcctcctt gctggatgtg 840
 cgctccgtgc caggcctgga cggatctggc tgggaggtgt tcgacatctg gaagctcttc 900
 cgaaacttta agaactcggc ccagctgtgc ctggagctgg aggcctggga acggggcagg 960
 gccgtggacc tccgtggcct gggtctcgac cgcgcgcgcc ggcagggtcca cgagaaggcc 1020
 ctgttccctg tgtttggccg caccaagaaa cgggaacctgt tctttaatga gattaaggcc 1080
 cgctctggcc aggacgataa gaccgtgtat gaggtaacct tcagccagcg gcgaaaacgg 1140
 cgggccccac tggccactcg ccaggggcaag cgaccagca agaaccttaa ggctcgctgc 1200
 agtcggaagg cactgcatgt caacttcaag gacatgggct gggacgactg gatcatcgca 1260
 ccccttgagt acgaggcttt ccaactgcag gggctgtgag agttcccatt gcgctccac 1320
 ctggagccca cgaatcatgc agtcatccag accctgatga actccatgga ccccgagctc 1380
 acaccaccca cctgtgtgtg gccacgcggc ctgagtccca tcagcatcct cttcattgac 1440
 tctgccaaca acgtggtgta taagcagtat gaggacatgg tcgtggagtc gtgtggctgc 1500
 agg 1503

<210> 345
 <211> 501
 <212> PRT
 <213> Homo sapiens

<400> 345
 Met Arg Leu Pro Lys Leu Leu Thr Phe Leu Leu Trp Tyr Leu Ala Trp
 1 5 10 15
 Leu Asp Leu Glu Phe Ile Cys Thr Val Leu Gly Ala Pro Asp Leu Gly
 20 25 30
 Gln Arg Pro Gln Gly Thr Arg Pro Gly Leu Ala Lys Ala Glu Ala Lys
 35 40 45
 Glu Arg Pro Pro Leu Ala Arg Asn Val Phe Arg Pro Gly Gly His Ser
 50 55 60
 Tyr Gly Gly Gly Ala Thr Asn Ala Asn Ala Arg Ala Lys Gly Gly Thr
 65 70 75 80
 Gly Gln Thr Gly Gly Leu Thr Gln Pro Lys Lys Asp Glu Pro Lys Lys
 85 90 95
 Leu Pro Pro Arg Pro Gly Gly Pro Glu Pro Lys Pro Gly His Pro Pro
 100 105 110
 Gln Thr Arg Gln Ala Thr Ala Arg Thr Val Thr Pro Lys Gly Gln Leu
 115 120 125
 Pro Gly Gly Lys Ala Pro Pro Lys Ala Gly Ser Val Pro Ser Ser Phe
 130 135 140
 Leu Leu Lys Lys Ala Arg Glu Pro Gly Pro Pro Arg Glu Pro Lys Glu
 145 150 155 160
 Pro Phe Arg Pro Pro Pro Ile Thr Pro His Glu Tyr Met Leu Ser Leu
 165 170 175
 Tyr Arg Thr Leu Ser Asp Ala Asp Arg Lys Gly Gly Asn Ser Ser Val

<210> 347
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 347
 Gln Ala Lys His Lys Gln Arg Lys Arg Leu Lys Ser Ser Cys Arg Tyr
 1 5 10 15
 Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala
 20 25 30
 Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val
 35 40 45
 Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro
 50 55 60
 Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile
 65 70 75 80
 Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile
 85 90 95
 Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
 100 105

<210> 348
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 348
 Ala Leu Asp Thr Asn Tyr Cys Phe Ser Ser Thr Glu Lys Asn Cys Cys
 1 5 10 15
 Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
 20 25 30
 Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
 35 40 45
 Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
 50 55 60
 Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
 65 70 75 80
 Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly
 85 90 95
 Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
 100 105

<210> 349
 <211> 111
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 349
 Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1 5 10 15

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

<210> 350
 <211> 110
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 350
 Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1 5 10 15
 Val Arg Gln Leu Tyr Ile Asp Phe Arg Lys Asp Leu Gly Trp Lys Trp
 20 25 30
 Ile His Glu Pro Lys Gly Tyr His Ala Asn Phe Cys Ser Gly Glu Cys
 35 40 45
 Glu Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln
 50 55 60
 Ala Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met
 65 70 75 80
 Ser Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr
 85 90 95
 Gly Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
 100 105 110

<210> 351
 <211> 114
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 351
 Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1 5 10 15
 Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
 20 25 30
 Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Pro
 35 40 45
 Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Ile Val Gln
 50 55 60
 Thr Leu Val Asn Ser Val Asn Ser Lys Ile Pro Lys Ala Cys Cys Thr
 65 70 75 80
 Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu
 85 90 95
 Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly
 100 105 110
 Cys Ser

<210> 352
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 352
 Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1 5 10 15
 Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
 20 25 30
 Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Pro
 35 40 45
 Tyr Ile Trp Ser Leu Asp Thr Gln Tyr Ser Lys Val Leu Ala Leu Tyr
 50 55 60
 Asn Gln His Asn Pro Gly Ala Ser Ala Ala Pro Cys Cys Thr Pro Thr
 65 70 75 80
 Lys Met Ser Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile
 85 90 95
 Ile Tyr Gly Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
 100 105 110

<210> 353
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 353
 Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1 5 10 15
 Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
 20 25 30
 Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
 35 40 45
 Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
 50 55 60
 Asn Ser Val Asn Ser Lys Ile Pro Cys Cys Thr Pro Thr Lys Met Ser
 65 70 75 80
 Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly
 85 90 95
 Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
 100 105

<210> 354
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 354
 Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1 5 10 15
 Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile

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

<210> 355
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

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

<210> 356
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

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

<210> 357

<211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 357
 Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1 5 10 15
 Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
 20 25 30
 Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
 35 40 45
 Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
 50 55 60
 Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
 65 70 75 80
 Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Lys Val Val Leu Lys
 85 90 95
 Asn Tyr Gln Asp Met Val Val Glu Gly Cys Gly Cys Ser
 100 105

<210> 358
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 358
 Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1 5 10 15
 Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
 20 25 30
 Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
 35 40 45
 Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
 50 55 60
 Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
 65 70 75 80
 Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Lys Pro Lys Val Glu Gln
 85 90 95
 Leu Ser Asn Met Ile Val Arg Ser Cys Gly Cys Ser
 100 105

<210> 359
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 359
 gaggtgcagg tgttgaggatc tgggggagac ttggtacagc ctgggggggtc cctgagactc 60
 tectgtgcag cctctggatt caccttttagt gcctatgcca tgacctgggt cgcagggt 120
 ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtggtag cgcatactac 180
 gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa caccgtatat 240
 ctgcagatga acagcctgag agccgaggac acggcogtat attactgtgc gaaagatggg 300
 gcctggaaaaa tgtccggttt ggacgtctgg ggccaaggga ccacgggtcat cgtctctca 360

<210> 360
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 360
 Glu Val Gln Val Leu Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ala Tyr
 20 25 30
 Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ala Ile Ser Gly Ser Gly Gly Ser Ala Tyr Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Lys Asp Gly Ala Trp Lys Met Ser Gly Leu Asp Val Trp Gly Gln
 100 105 110
 Gly Thr Thr Val Ile Val Ser Ser
 115 120

<210> 361
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 361
 ggattcacct ttagtgccta tgcc

24

<210> 362
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 362
 Gly Phe Thr Phe Ser Ala Tyr Ala
 1 5

<210> 363
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 363
 attagtggta gtggtggtag cgca

24

<210> 364
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 364
 Ile Ser Gly Ser Gly Gly Ser Ala
 1 5

<210> 365
 <211> 39
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 365
 gcgaaagatg gggcctggaa aatgtccggt ttggacgtc 39

<210> 366
 <211> 13
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 366
 Ala Lys Asp Gly Ala Trp Lys Met Ser Gly Leu Asp Val
 1 5 10

<210> 367
 <211> 321
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 367
 gacatocaga tgaccocagtc tccagcctcc ctgtctgcat ctgttggaga cagagtcacc 60
 atcacttgtc gggcgagtca ggacattagc gattatttag cctggatatca gcagaaacca 120
 gggaaaattc ctaggctcct gatctatact acatocactt tgcaatcagg ggtcccatct 180
 cggttccgtg gcagtgggtc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
 gaagatgttg caacttatta ctgtcagaag tatgacagtg ccccgctcac ttccggcgga 300
 gggaccaagg tggagatcaa a 321

<210> 368
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 368
 Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

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

<210> 369
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 369
 caggacatta gcgattat 18

<210> 370
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 370
 Gln Asp Ile Ser Asp Tyr
 1 5

<210> 371
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 371
 actacatcc 9

<210> 372
 <211> 3
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 372
 Thr Thr Ser
 1

<210> 373
 <211> 27

<212> DNA
<213> Artificial Sequence

<220>
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<400> 373
cagaagtatg acagtgtccc gctcact

27

<210> 374
<211> 9
<212> PRT
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<220>
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<400> 374
Gln Lys Tyr Asp Ser Ala Pro Leu Thr
1 5

<210> 375
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
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<400> 375
caggtgcagc tgggtggagtc tgggggaggc gtgggtccagc ctgggaagtc cctgcgactc 60
tctgtgcag cgtctggatt caccttcagt agtitttgca tgcattgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt attgggtatg atggaggtaa tgaatactat 180
gcgactccg tgaaggggccg attcaccatc tccagagaca attccaagaa cacgctgaat 240
ctgcaaatga gcagcctgag agccgaagac acggctgtgt attattgttc gactataagt 300
cattacgata ttttgagcgg tatggaogtc tggggccgag ggaccacggt caccgtctcc 360
tca 363

<210> 376
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 376
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Lys
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Val Ile Gly Tyr Asp Gly Gly Asn Glu Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Asn
65 70 75 80
Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ser Thr Ile Ser His Tyr Asp Ile Leu Ser Gly Met Asp Val Trp Gly
100 105 110
Arg Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 377
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 377
ggattcacct tcagtagttt tggc

24

<210> 378
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 378
Gly Phe Thr Phe Ser Ser Phe Gly
1 5

<210> 379
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 379
attgggtatg atggaggtaa tgaa

24

<210> 380
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 380
Ile Gly Tyr Asp Gly Gly Asn Glu
1 5

<210> 381
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 381
tcgactataa gtcattacga tatttttgagc ggtatggacg tc

42

<210> 382
<211> 14
<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 382

Ser Thr Ile Ser His Tyr Asp Ile Leu Ser Gly Met Asp Val
1 5 10

<210> 383

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 383

gacatccaga tgaccagtc tccatcttcc ggtgtgtgat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtc ggggtattag aactgggttag cctgggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctttgct gcatccagtt tgcaaagtgg ggtcccatca 180
cggttcagcg gcagtcgcat tgggacagat ttcactctca ccatcaacag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tcccgtcac tttcggcgga 300
gggaccaagg tggagatcaa acga 324

<210> 384

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 384

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

<210> 385

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 385

cagggtatta gcaactgg

18

<210> 386

<211> 6

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 386
Gln Gly Ile Ser Asn Trp
1 5

<210> 387
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 387
gctgcatcc

9

<210> 388
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 388
Ala Ala Ser
1

<210> 389
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 389
caacaggcta acagtttccc gctcact

27

<210> 390
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 390
Gln Gln Ala Asn Ser Phe Pro Leu Thr
1 5

<210> 391
<211> 340
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 391

Glu	Ala	Glu	Thr	Arg	Glu	Cys	Ile	Tyr	Tyr	Asn	Ala	Asn	Trp	Glu	Leu
1				5				10						15	
Glu	Arg	Thr	Asn	Gln	Ser	Gly	Leu	Glu	Arg	Cys	Glu	Gly	Glu	Gln	Asp
			20					25					30		
Lys	Arg	Leu	His	Cys	Tyr	Ala	Ser	Trp	Ala	Asn	Ser	Ser	Gly	Thr	Ile
		35					40					45			
Glu	Leu	Val	Lys	Lys	Gly	Cys	Trp	Leu	Asp	Asp	Phe	Asn	Cys	Tyr	Asp
	50					55					60				
Arg	Gln	Glu	Cys	Val	Ala	Thr	Glu	Glu	Asn	Pro	Gln	Val	Tyr	Phe	Cys
65					70					75					80
Cys	Cys	Glu	Gly	Asn	Phe	Cys	Asn	Glu	Arg	Phe	Thr	His	Leu	Pro	Glu
				85					90					95	
Ala	Gly	Gly	Pro	Glu	Val	Thr	Tyr	Glu	Pro	Pro	Pro	Thr	Ala	Pro	Ser
			100					105					110		
Gly	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu
	115					120						125			
Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu
	130					135					140				
Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser
145					150					155					160
His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu
				165					170					175	
Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr
		180						185					190		
Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn
	195					200						205			
Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro
	210					215					220				
Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln
225					230					235					240
Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val
			245						250					255	
Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val
		260					265						270		
Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro
	275					280						285			
Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr
	290					295					300				
Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val
305					310					315					320
Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu
				325					330					335	
Ser	Pro	Gly	Lys												
			340												