

eolf-seql
SEQUENCE LISTING

<110> EVIAGENICS S.A.

<120> METHOD OF METABOLIC EVOLUTION

<130> EV002P

<160> 100

<170> PatentIn version 3.5

<210> 1

<211> 801

<212> DNA

<213> artificial

<220>

<223> hybrid

<400> 1

atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctagt	60
tcaattacag aaaatacgtt ttggaacaaa gagttctctg ccgaagccgt caatggtggt	120
ttcgtgcttt gtaaaagtag cagtaaattc tgcgctacca ataacttagc tcgtgcatca	180
aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg cctagaaact	240
ggtgtcataa agaatgagca tcagattttc aaatgggacg gaaaaccaag agccatgaaa	300
caatgggaaa gagacttgag cttagagagg gcaatacaag tttcagcggg tcccgtatgt	360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aatatcttaa aaaattttca	420
tatggtaacc agaatatcag tggcggcatt gacaaattct ggttggaggg tcagcttaga	480
atttccgcag ttaatcaagt ggagtttcta gagtctctat ttttaaataa attgtcagca	540
tcaaaagaaa atcagcta atgtaaaagag gcttttgtaa cggaggctgc gcctgaatat	600
cttgtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattc tgggtgctgca	660
tgggtgggttg gttgggttga gaaggagca gaggtttact ttttcgcatt taacatggat	720
atagacaacg aaaataagtt gccgctaaga aaatccattc ccacaaaat catggcaagt	780
gagggcatca ttggtggcta a	801

<210> 2

<211> 266

<212> PRT

<213> artificial

<220>

<223> hybrid

<400> 2

Met Lys Thr Phe	Ala Ala Tyr Val Ile	Ile Ala Cys Leu Ser	Ser Thr
1	5	10	15

Ala Leu Ala Ser	Ser Ile Thr Glu	Asn Thr Phe Trp	Asn Lys Glu Phe
20	25	30	

eolf-seql

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

Lys Ser Cys Ala Thr Asn Asn Leu Ala Arg Ala Ser Lys Glu Tyr Leu
50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Ile Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Ser Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Phe Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Ala Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Asn Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 3
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

eolf-seql

```

<400> 3
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt      60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatgggtgtc      120
ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca      180
aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg cctagaaaact      240
ggtgtcataa agaatgagca tcagattttc aaatgggacg gaaagccaag agccatgaaa      300
caatgggaaa gagacttgac ctttaagaggg gcaatacaag tttcagcggg tcccgtatatt      360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aatatcttaa aaaattttca      420
tatggtaacc agaatatcag tgggtggcatt gacaaattct ggtcggaggg tcagcttaga      480
atttccgcag ttaatcaagt ggagtttcta gagtctctat ttttaaataa attgtcagca      540
tcaaaagaaa atcagcta atgtaaaagag gctttggtaa cggaggctgc gcctgaatat      600
cttgtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattc tgggtgtcgca      660
tggtggggtt gttgggttga gaaggagca gaggtttact ttttcgcatt taacatggat      720
atagacaacg aaaataagtt gccgctaaga aaatccattc ccaccaaatt catggcaagt      780
gagggcatca ttggtggcta a                                         801

```

```

<210> 4
<211> 266
<212> PRT
<213> artificial

```

```

<220>
<223> hybrid

```

<400> 4

```

Met  Lys  Thr  Phe  Ala  Ala  Tyr  Val  Ile  Ile  Ala  Cys  Leu  Ser  Ser  Thr
 1              5              10              15

Ala  Leu  Ala  Gly  Ser  Ile  Thr  Glu  Asn  Thr  Ser  Trp  Asn  Lys  Glu  Phe
          20              25              30

Ser  Ala  Glu  Ala  Val  Asn  Gly  Val  Phe  Val  Leu  Cys  Lys  Ser  Ser  Ser
          35              40              45

Lys  Ser  Cys  Ala  Thr  Asn  Asp  Leu  Ala  Arg  Ala  Ser  Lys  Glu  Tyr  Leu
          50              55              60

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

Gly  Val  Ile  Lys  Asn  Glu  His  Gln  Ile  Phe  Lys  Trp  Asp  Gly  Lys  Pro
          85              90              95

Arg  Ala  Met  Lys  Gln  Trp  Glu  Arg  Asp  Leu  Thr  Leu  Arg  Gly  Ala  Ile
          100             105             110

```

eo1f-seq1

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Phe Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Ala Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Asn Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 5
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 5
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
ttcgtgcttt gtaaaagtag cagtaaatcc tgcgctacca atgacttagc tcgtgcatca 180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaact 240
ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
caatgggaaa gagacttgac cttagaggg gcaatacaag tttcagctgt tcccgtatct 360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc 420
tatggcagcc agaatatcag tggtggcatt gacaaattct gggttgaaga ccagcttaga 480
atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca 540
tctaaagaaa accagctaag agtaaaagag gctttggttaa cggaggcggc acctgaatat 600

eolf-seql

ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattcc tgggtgtcgca 660
 tgggtggggttg ggtggggttga gaaggagaca gaggtttact ttttcgcctt taacatggat 720
 atagacaacg aaagtaagtt gccgctaaga aaatccattc ccacaaaaat caggggaaagt 780
 gagggcatca ttggtggcta a 801

<210> 6
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 6

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
 1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
 20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
 35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
 50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
 85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
 100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
 165 170 175

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

eolf-seql

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Arg Glu Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 7
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 7
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
ttcgtgcttt gtaaaagtag cagtaaatcc tgcgctacca atgacttagc tcgtgcacca 180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaaact 240
ggtgtcataa agaattagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
caatgggaaa gagacttgac cttaagaggg gcaatacaag tttcagctgt tcccgtatatt 360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc 420
tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaagg tcagcttaga 480
atttccgcag ttaatcaagt ggagtttcta gagtctctat ttttaaataa attgtcagca 540
tcaaaagaaa atcagctaag agtaaaagag gctttggtaa cggaggctgc gcctgaatat 600
cttgtgcatt caaaaactgg tttttctggg gtgggaactg agtcaaattc tgggtgtcgca 660
tggtggggttg gttgggttga gaaggagca gaggtttact ttttcgcatt taacatggat 720
atagacaacg aaaataagtt gccgctaaga aaatccattc ccacaaaat catggcaagt 780
gagggcatca ttggtggcta a 801

<210> 8
<211> 266
<212> PRT
<213> artificial

<220>
<223> hybrid

<400> 8

eolf-seql

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Pro Lys Glu Tyr Leu
50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Phe Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Ala Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Asn Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

eolf-seql

<210> 9
 <211> 801
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400> 9
 atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
 tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
 ttcgtgcttt gtaaaagtag cagtaaattc tgcgctacca atgacttagc tcgtgcatca 180
 aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg cctagaaaact 240
 ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
 caatgggaaa gagacttgac cttagagagg gcaatacaag tttcagctgt tcccgtatatt 360
 caacaaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc 420
 tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaaga ccagcttaga 480
 atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca 540
 tctaaagaaa accagctaatt agtaaaagag gcttttgtaa cggaggcggc acctgaatat 600
 ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattc tgggtgtcgca 660
 tgggtgggttg ggtgggttga gaaggagaca gaggtttact ttttcgcctt taacatggat 720
 atggacaacg aaagtaagtt gccgctaaga aaatccattc ccacaaaat catggaaagt 780
 gagggcatca ttggtggcta a 801

<210> 10
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 10

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
 1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
 20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
 35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
 50 55 60

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

self-seq1

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

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

Ile Met Glu Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 11
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 11
atgaaaacat ttgccgcata tgtaattact gcgtgtcttt caagtacggc attagctagt 60
tcaattacag aaaatacgtt ttggaacaaa gagttctctg ccgaagccgt caatggtggt 120
ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacct ataacttagc tcgtgcatca 180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaact 240
gggtgcataa agaatgagca tcagattttc aaatgggacg gaaagccaag agccatgaaa 300
caatgggaaa gagacttgag cttaagaggg gcaatacaag tttcagcggg tcccgtatatt 360

eolf-seql

caacaaatcg ccagagaagt tggcgaagta agaatgcaga aatatcttaa aaaattttca 420
tatggtaacc agaatatcag tgggtggcatt gacaaattct gggtggaggg tcagcttaga 480
atttccgcag ttaatcaagt ggagtttcta gagtctctat ttttaaataa attgtcagca 540
tcaaaagaaa atcagcta atgtaaaagag gcttttgtaa cggaggctgc gcctgaatat 600
cttgtgcatt caaaaactgg tttttctgggt gtgggaactg agtcaaattc tgggtgctgca 660
tggtggggtt gttgggttga gaaggagca gaggtttact ttttcgcatt taacatggat 720
atagacaacg aaaataagtt gccgctaaga aaatccattc ccacaaaat catggcaagt 780
gagggcatca ttggtggcta a 801

<210> 12
<211> 266
<212> PRT
<213> artificial

<220>
<223> hybrid

<400> 12

Met Lys Thr Phe Ala Ala Tyr Val Ile Thr Ala Cys Leu Ser Ser Thr
1 5 10 15

Ala Leu Ala Ser Ser Ile Thr Glu Asn Thr Phe Trp Asn Lys Glu Phe
20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

Lys Ser Cys Ala Thr Tyr Asn Leu Ala Arg Ala Ser Lys Glu Tyr Leu
50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Ile Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Ser Leu Arg Gly Ala Ile
100 105 110

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

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

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

eolf-seql

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Phe Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Ala Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Asn Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 13
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 13
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca 180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaact 240
ggtgtcataa ggaatgagca tcagggtttc aaatgggacg gaaagccaag agccatgaag 300
caatgggaaa gagacttgac cttagaggg gcaatacaag tttcagctgt tcccgtatct 360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc 420
tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaaga ccagcttaga 480
atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca 540
tctaaagaaa atcagctaag agtaaaagag gctttggtaa cggaggctgc gcctgaatat 600
cttgtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattc tgggtgtcgca 660
tggtgggttg ggtgggttga gaaggagaca gaggtttact ttttcgcatt taacatggat 720
atagacaacg aaaataagtt gccgctaaga aaattcattc ccacaaaaat catggcaagt 780
gagggcatca ttggtggcta a 801

<210> 14
<211> 266

eolf-seql

<212> PRT
<213> artificial

<220>
<223> hybrid

<400> 14

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
50 55 60

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

Gly Val Ile Arg Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Asn Lys Leu Pro Leu ^{eolf-seql} Arg Lys Phe Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

```
<210> 15
<211> 804
<212> DNA
<213> artificial
```

<220>
<223> hybrid

<400>	15						
atgaaaacat	ttgccgcata	tgtattatc	gcgtgtcttt	cgagtacggc	attagctggt		60
tcaattacag	aaaatacgtc	ttggaacaaa	gagttctctg	ccgaagccgt	caatggtgtc		120
ttcgtgcttt	gtaaaagtag	cagtaaattc	tgcgctacca	atgacttagc	tcgtgcatca		180
aaggaatatc	ttccagcatc	aacattttaag	atccccaacg	caattatcgg	cctagagact		240
ggtgtcataa	agaatgagca	tcagggttttc	aaatgggacg	gaaagccaag	agccatgaag		300
caatgggaaa	gagacttgac	cttaagaggg	gcaatacaag	tttcagctgt	tcccgtattt		360
caacaaatcg	ccagagaagt	tggcgaagta	agaatgcaga	aataacctta	aaaattttcc		420
tatggcagcc	agaatatcag	tgggtggcatt	gacaaattct	ggttgggaaga	ccagcttaga		480
atttccgcag	ttaatcaagt	ggagttttcta	gagtctctat	atttaaataa	attgtcagca		540
tctaaagaaa	accagctaatt	agtaaaagag	gcaatagtta	cagaagcaac	tccagaatat		600
atagttcatt	caaaaactgg	tttttctggt	gtgggaactg	agtcaaatcc	tgggtgtcgca		660
tgggtgggttg	ggtgggttga	gaaggagaca	gaggtttact	ttttcgcctt	taacatggat		720
atagacaacg	aaagtaagtt	gccgctaaga	aatccattc	ccacaaaaat	catggaaagt		780
gagggcatca	tcattggtgg	ctaa					804

```
<210> 16
<211> 267
<212> PRT
<213> artificial
```

<220>
<223> hybrid

<400> 16

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

eo1f-seq1

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Thr Pro Glu Tyr Ile Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Glu Ser Glu Gly Ile Ile Ile Gly Gly
260 265

<210> 17
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 17
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60

tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
Page 14

eolf-seql

```

ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca      180
aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg cctagaaact      240
ggtgtcataa agaattgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag      300
caatgggaaa gagacttgac cttagagggg gcaatacaag tttcagctgt tcccgtattt      360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc      420
tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaaga ccagcttaga      480
atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca      540
tctaaagaaa accagctaatt agtaaaagag gctttggtaa cggaggcggc acctgaatat      600
ctagtgcatt caaaaactgg tttttctggg gtgggaactg agtcaaattcc tgggtgtcgca      660
tgggtgggttg ggtgggtaga gaaaggaact gaggtttact ttttcgcctt tagcatggat      720
atagacaacg aaagtaagtt gccgctaaga aaatccattc ccacaaaat catggaaagt      780
gagggcatca ttggtggcta a                                          801

```

<210> 18
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 18

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
 1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
 20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
 35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
 50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
 85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
 100 105 110

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

eo1f-seql

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Thr Glu Val Tyr Phe Phe Ala Phe Ser Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Glu Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 19
<211> 804
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 19
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca 180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaact 240
ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
caatgggaaa gagacttgac ctttaagagg gcaatacaag tttcagctgt tcccgtatatt 360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc 420
tatggcagcc agaatatcag tgggtggcatt gacaaattct ggttggaaga ccagcttaga 480
atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca 540
tctaaagaaa accagctaag agtaaaagag gctttggtta cggaggcggc acctgaatat 600
ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattcc tgggtgtcgca 660
tggtggggttg ggtggggttga gaaggagaca gaggtttact ttttcgcctt taacatggat 720

eolf-seql

atagacaacg agagtaaatt gccgtcaaga aaatccattt caacgaaaat catggcaagt 780
gaaggcatca tcattggtgg ctaa 804

<210> 20
<211> 267
<212> PRT
<213> artificial

<220>
<223> hybrid

<400> 20

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

eolf-seql

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
 210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
 225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Ser Arg Lys Ser Ile Ser Thr Lys
 245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Ile Gly Gly
 260 265

<210> 21
 <211> 801
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400> 21
 atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
 tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatgggtgc 120
 ttcgtgcttt gtaaaagtag cagtaaattc tgcgctacca atgacttagc tcgtgcatca 180
 aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaact 240
 ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
 caatgggaaa gagacttgac cttaagaggg gcaatacaag tttcagctgt tcccgtat 360
 caacaaatcg ccagagaagt tggcgaagtg agaatgcaga aataccttaa aaaattttcc 420
 tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaaga ccagcttaga 480
 atttccgcag ttaatcaagt ggagtctcta gagtctctat atttaaataa attgtcagca 540
 tctaaagaaa accagctaatt agtaaaagag gctttggtaa cggaggcggc acctgaatat 600
 ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattc tgggtgtcgca 660
 tgggtgggttg ggtgggttga gaaggagaca gaggtttact ttttcgcctt taacatggat 720
 atagacaacg aaagtaagtt gccgctaaga aaatccattc ccacaaaaat catggaaagt 780
 gagggcatca ttggtggcta a 801

<210> 22
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 22

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
 1 5 10 15

eolf-seql

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Ser Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Glu Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 23
<211> 804
<212> DNA
<213> artificial

eolf-seql

<220>

<223> hybrid

<400> 23

```

atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt      60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc      120
ttcgtgcttt gtaaaagtag cagtaaattc tgcgctacca atgacttagc tcgtgcatca      180
aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg cctagaaaact      240
ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag      300
caatgggaaa gagacttgac cttaagaggg gcaatacaag tttcagctgt tcccgtattt      360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc      420
tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaaga ccagcttaga      480
atttccgcag ttaatcaaga ggagtttcta gagtctctat atttaaataa attgtcagca      540
tctaaagaaa accagctaata agtaaaagag gctttggtaa cggaggcggc acctgaatat      600
ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattc tggtgtcgca      660
tggtgggttg ggtgggttga gaaggagaca gaggtttact ttttcgcctt taacatggat      720
atagacaacg aaagtaagtt gccgctaaga aaatccattc ccacaaaaat catggaaagt      780
gagggcatca tcattggtgg ctaa                                         804

```

<210> 24

<211> 267

<212> PRT

<213> artificial

<220>

<223> hybrid

<400> 24

```

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
 1          5          10          15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
      20          25          30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
      35          40          45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
 50          55          60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
      85          90          95

```

eolf-seql

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Glu Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Glu Ser Glu Gly Ile Ile Ile Gly Gly
260 265

<210> 25
<211> 800
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 25
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
ttcgtgcttt gtaaaagtag cagtaaattc tgcgctacca atgacttagc tcgtgcatca 180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaact 240
ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
caatgggaaa gagacttgag ctaagaggg gcaatacaag tttcagctgt tcccgtatct 360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga gataccttaa aaaattttcc 420
tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaaga ccagcttaga 480

eolf-seql

atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca 540
tctaaagaaa accagctaata agtaaaagag gcttttggttaa cggaggcggc acctgaatat 600
ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaatac tgggtgtcgca 660
tgggtgggttg ggtgggttg gaaggagaca gaggtttact ttttcgcctt taacatggat 720
atagacaacg aaagtaagtt gccgctaaga aatccattcc caccaaaatc atggaaagtg 780
agggcatcat tgggtggctaa 800

<210> 26
<211> 266
<212> PRT
<213> artificial

<220>
<223> hybrid

<400> 26

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Ser Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

eof-seq1

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Gly Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Glu Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 27
<211> 802
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 27
atgaaaacat ttgccgcata tgtaattact gcgtgtcttt caagtacggc attagctagt 60
tcaattacag aaaatacgtt ttggaacaaa gagttctctg ccgaagccgt caatggtggt 120
ttttcgtgct ttgtaaaagt agcagtaaatt cctgcgctac caataactta gctcgtgcat 180
caaaggaata tcttcagca tcaacattta agatcccca cgcaattatc ggcctagaaa 240
ctggtgtcat aaagaatgag catcaggttt tcaaatggga cggaaagcca agagccatga 300
aacaatggga aagagacttg agcttaagag gggcaatata agtttcagcg gttcccgat 360
ttcaacaaat cgccagagaa gttggcgaag taagaatgca gaaatatctt aaaaaatttt 420
catatggtaa ccagaatata agtggtggca ttgacaaatt ctggttggag ggtcagctta 480
gaatttccgc agttaatcaa gtggagtttc tagagtctct atttttaaat aaattgtcag 540
catcaaaaga aaatcagcta atagtaaaag aggccttggg aacggagggt gcgcctgaat 600
atcttgtgca ttcaaaaact ggtttttctg gtgtgggaac tgagtcaaatt cctggtgtcg 660
catggtgggt tgggtgggtt gagaaggag cagaggttta ctttttcgca ttttaacatgg 720
atatagacaa cgaaaataag ttgccgctaa gaaaatccat tcccacaaa tcatggcaag 780
tgagggcatc attggtggct aa 802

<210> 28
<211> 266
<212> PRT
<213> artificial

<220>

eolf-seql

<223> hybrid

<400> 28

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

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly eolf-seql
 260 265

<210> 29
 <211> 801
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400> 29
 atgaaaacat ttgccgcata cgtaattact gcgtgtcttt caagtacggc attagctagt 60
 tcaattacag aaaatacgtt ttggaacaaa gagttctctg ccgaagccgt caatggtgtt 120
 ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca 180
 aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaaact 240
 ggtgtcataa agaatgagca tcagattttc aaatgggacg gaaagccaag agccatgaag 300
 caatgggaaa gagacttgac ctttaagaggg gcaatacaag tttcagctgt tcccgtattt 360
 caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttca 420
 tatggtaacc agaatatcag tgggtggcatt gacaaattct gggtggaggg tcagcttaga 480
 attcccgtag ttaatcaagt ggagtttcta gagtctctat ttttaaataa attgtcagca 540
 tcaaaagaaa atcagctaata agtaaaagag gctttggtaa cggaggcggc acctgaatat 600
 cttgtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattcc tgggtgtcgca 660
 tgggtgggttg gttgggttga gaaggagca gaggtttact ttttcgcatt taacatggat 720
 atagacaacg aaaataagtt gccgctaaga aaatccattc ccacaaaat catggcaagt 780
 gagggcatca ttggtggcta a 801

<210> 30
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 30

Met Lys Thr Phe Ala Ala Tyr Val Ile Thr Ala Cys Leu Ser Ser Thr
 1 5 10 15

Ala Leu Ala Ser Ser Ile Thr Glu Asn Thr Phe Trp Asn Lys Glu Phe
 20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
 35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
 50 55 60

self-seql

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

Gly Val Ile Lys Asn Glu His Gln Ile Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Pro Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Phe Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Ala Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Asn Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 31
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 31
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca 180
aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg cctagaaact 240

eolf-seql

```

gggtgcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag      300
caatgggaaa gagacttgac cttagaggg gcaatacaag tttcagctgt tcccgtatatt      360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc      420
tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaaga ccagcttaga      480
atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca      540
tctaaagaaa accagctaata agtaaaagag gctttggtaa cggaggcggc acctgaatat      600
ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaatcc tgggtgctgca      660
tgggtgggttg ggtgggttga gaaggagaca gaggtttact ttttcgcctt taacatggat      720
atagacaacg aaagtaagtt gccgctaaga aaatccattc ccaccaaatt catggaaagt      780
gagggcatca ttggtggcta a                                              801

```

<210> 32
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 32

```

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
1          5          10          15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
          20          25          30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
          35          40          45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
          50          55          60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
          85          90          95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
          100          105          110

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

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

```

eo1f-seql

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Glu Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 33
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 33
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
ttcgtgcttt gtaaaagtag cagtaaatcc tgcgctacca atgacttagc tcgtgcatca 180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaact 240
ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
caatgggaaa gagacttgac cttaagaggg gcaatacaag tttcagctgt tcccgtatatt 360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc 420
tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaaga ccagcttaga 480
atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca 540
tctaaagaaa accagctaata agtaaaagag gctttggttaa cggaggcggc acctgaacat 600
ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattc tgggtgtcgca 660
tggtggggttg ggtgggttga gaaggagaca gaggtttact ttttcgcctt taacatggac 720
atagacaacg aaagtaagtt gccgctaaga aaatccattc ccaccaaatt catggaaagt 780
gagggcatca ttggtggcta a 801

eolf-seql

<210> 34
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 34

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
 1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
 20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
 35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
 50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
 85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
 100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
 165 170 175

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

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

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
 210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
 225 230 235 240 eolf-seql

Ile Asp Asn Glu Ser Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
 245 250 255

Ile Met Glu Ser Glu Gly Ile Ile Gly Gly
 260 265

<210> 35
 <211> 804
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400> 35
 atgaaaacat ttgccgcata ttttaattatc gcgtgtcttt cgagtacggc attagctggt 60
 tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
 ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca 180
 aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg cctagaaaact 240
 ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
 caatgggaaa gagacttgac cttagagagg gcaatacaag tttcagctgt tcccgtatct 360
 caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc 420
 tatggcagcc agaatatcag tgggtggcatt gacaaattct gggttgaaga ccagcttaga 480
 atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca 540
 tctaaagaaa accagctaag agtaaaagag gcttttgtaa cggaggcggc acctgaatat 600
 ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattcc tgggtgtcgca 660
 tgggtgggttg ggtgggttga gaaggagaca gaggtttact ttttcgcctt taacatggat 720
 atagacaacg aaagtaagtt gccgctaaga aaatccattc ccacaaaat catggaaagt 780
 gagggcatca tcattggtgg ctta 804

<210> 36
 <211> 267
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 36

Met Lys Thr Phe Ala Ala Tyr Leu Ile Ile Ala Cys Leu Ser Ser Thr
 1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
 20 25 30

eolf-seql

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Glu Ser Glu Gly Ile Ile Ile Gly Gly
260 265

<210> 37
<211> 804
<212> DNA
<213> artificial

<220>
<223> hybrid

eolf-seql

```

<400> 37
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt      60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatgggtgtc      120
ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca      180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaact      240
ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag      300
caatgggaaa gagacttgac cttaagaggg gcaatacaag tttctgctgt tcccgtattt      360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aataccttaa aaaattttcc      420
tatggcagcc agaatatcag tgggtggcatt gacaaattct gggtggaaga ccagcttaga      480
atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca      540
tctaaagaaa accagctaatt agtaaaagag gctttggtaa cggaggcggc acctgaatat      600
ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattcc tgggtgtcgca      660
tggtggggttg ggtgggttga gaaggagact gaggtttact tttttgcttc taacatggac      720
atagacaatg agagtaaatt gccgtcaaga aaatccattt caacgaaaat catggcaagt      780
gaaggcatca tcattggtgg ctaa                                          804

```

```

<210> 38
<211> 267
<212> PRT
<213> artificial

```

```

<220>
<223> hybrid

```

<400> 38

```

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
1           5           10           15

```

```

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
          20           25           30

```

```

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
          35           40           45

```

```

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
          50           55           60

```

```

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

```

```

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
          85           90           95

```

```

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
          100          105          110

```

eofl-seql

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Glu Thr Glu Val Tyr Phe Phe Ala Ser Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Ser Arg Lys Ser Ile Ser Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Ile Gly Gly
260 265

<210> 39
<211> 801
<212> DNA
<213> Pseudomonas. aeruginosa

<400> 39
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
ttcgtgcttt gtaaaagtag cagtaaattc tgcgctacca atgacttagc tcgtgcatca 180
aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg cctagaaact 240
ggtgtcataa agaattgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
caatgggaaa gagacttgac cttaagaggg gcaatacaag tttcagctgt tcccgtatct 360
caacaaatcg ccagagaagt tggcgaagta agaattgcaga aataccttaa aaaattttcc 420
tatggcagcc agaatatcag tgggtggcatt gacaaatcct gggttgaaga ccagcttaga 480
atttccgcag ttaatcaagt ggagtttcta gagtctctat atttaaataa attgtcagca 540
tctaaagaaa accagctaag agtaaaagag gctttggtaa cggaggcggc acctgaatat 600
ctagtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattc tgggtgtcgca 660

eolf-seq1

tggtgggttg ggtgggttga gaaggagaca gaggtttact ttttcgcctt taacatggat	720
atagacaacg aaagtaagtt gccgctaaga aaatccattc ccaccaaagt catggaaagt	780
gagggcatca ttggtggcta a	801

<210> 40
 <211> 801
 <212> DNA
 <213> Escherichia coli

<400> 40	
atgaaaacat ttgccgcata tgtaattact gcgtgtcttt caagtacggc attagctagt	60
tcaattacag aaaatacgtt ttggaacaaa gagttctctg ccgaagccgt caatgggtgtt	120
ttcgtgcttt gtaaaagtag cagtaaattc tgcgctacca ataacttagc tcgtgcacca	180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaact	240
ggtgtcataa agaattgagca tcagattttc aaatgggacg gaaaaccaag agccatgaaa	300
caatgggaaa gagacttgag ctttaagagg gcaatacaag tttcagcggg tcccgatatt	360
caacaaatcg ccagagaagt tggcgaagta agaattgcaga aatatcttaa aaaattttca	420
tatggtaacc agaattatcag tggcggcatt gacaaattct ggtcggaggg tcagcttaga	480
atttccgcag ttaatcaagt ggagtttcta gagtctctat ttttaaataa attgtcagca	540
tcaaaagaaa atcagctaatt agtaaaagag gctttggtaa cggaggctgc gcctgaatat	600
cttgtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattc tgggtgtcgca	660
tggtgggttg gttgggttga gaaggagca gaggtttact ttttcgcatt taacatggat	720
atagacaacg aaaataagtt gccgctaaga aaatccattc ccaccaaagt catggcaagt	780
gagggcatca ttggtggcta a	801

<210> 41
 <211> 804
 <212> DNA
 <213> Pseudomonas aeruginosa

<400> 41	
atgaaaacca tagccgcata cttagttact tcctgttttt caagcaccgc gctctcaaag	60
tctatttctg aaaatttggt gtggaataaa gaattttcta gtgaatccgt acatggcggt	120
tttgtacttt gtaaaagtag tagcaattcc tgtactacaa ataattgcggc acgtgcatct	180
acagcctata ttccagcatc aacattcaaa attcctaatt ctctaattagg tcttgaaacc	240
ggcgccataa aagatgaacg gcagattttc aaatgggacg gcaagcccag agccatgaaa	300
caatgggaaa aagacttaag gctaaggggc gctatacagg tttctgcggg tccggatatt	360
caacaaattg ccagagaagt tggcgaaatg agaattgcaa gatattctta cctgttttca	420
tacggtaacg ccaatatagg gggaggcatt gacaaattct ggctagaggg tcagcttaga	480
atcccagcat tcaatcaaga taaattctta gagtcgctct tcctgaataa tttgccagca	540
tcaaaagcaa atcaactaat agtaaaagag gcaatagtta cagaagctac gccagaatat	600

eolf-seq1

attgttcatt caaaaactgg gtattccggt gttggcacag aatcaagtcc tgggtgctgct 660
 tgggtgggttg gttgggtagg gaaaggagct gaggtttact tttttgcatt taacatggac 720
 atagacaatg agaataaatt gccgtcaaga aaatccattt caacgaaaat catggcaagt 780
 gaaggcatca tcattggtgg ctaa 804

<210> 42
 <211> 827
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400> 42
 atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt 60
 tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgctc 120
 ttcgtgcttt gtaaaagtag cagtaaatcc tgcgctacca atgacttagc tcgtgcatca 180
 aaggaatatc ttccagcatc aacattcaaa attcctaattg ctctaataagg tcttgaaacc 240
 ggcgccataa aagatgaacg gcaggttttc aaatgggacg gcaagcccag agccatgaag 300
 caatgggaaa aagacttaaa gctaaggggc gctatacagg tttctgctgt tccggtatatt 360
 caacaaaattg ccagagaagt tggcgaaata agaattgcaaa aataccttaa cctgttttca 420
 tacggcaacg ccaatatagg gggaggcatt gacaaattct ggctagaagg tcagcttaga 480
 atctcagcat tcaatcaagt taaattttta gagtcgctct acctgaataa tttgccagca 540
 tcaaaagcaa accaactaat agtaaaagag gcaatagtta cagaagcaac tccagaatat 600
 atagttcatt caaaaactgg gtattccggt gttggcacag aatcaagtcc tgggtgctgct 660
 tgggtgggttg gttgggtaga gaaaggaact gaggtttact tttttgcttt taacatggac 720
 atagacaatg agagttaaatt gccgtcaaga aaatccattc ccacaaaaat catggcaagt 780
 gagggcatca ttggtggcta agctgtgaag atcccagcaa aggctta 827

<210> 43
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 43

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
 1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
 20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
 35 40 45

eolf-seql

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
50 55 60

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

Gly Ala Ile Lys Asp Glu Arg Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Lys Asp Leu Lys Leu Arg Gly Ala Ile
100 105 110

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

Glu Ile Arg Met Gln Lys Tyr Leu Asn Leu Phe Ser Tyr Gly Asn Ala
130 135 140

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

Ile Ser Ala Phe Asn Gln Val Lys Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

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

Ser Gly Val Gly Thr Glu Ser Ser Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Ser Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 44
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 44
atgaaaacat ttgccgcata tttagttctc gcgtgtcttt cgagtacggc attagctggt

60

eolf-seq1

tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
 ttcgtgcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca 180
 aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg tctagaaact 240
 ggtgtcataa agaattgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
 caatgggaaa gagacttgac ctttaagaggg gcaatacaag tttcagctgt tcccgtattt 360
 caacaaatcg ccagagaagt tggcgaaata agaattgcaga aatatcttaa aaaattttca 420
 tatggtaacc agaatatcag tgggtggcatt gacaaattct ggctagaagg tcagcttaga 480
 atctcagcat tcaatcaagt taaattttta gagtcgctct acctgaataa tttgccagca 540
 tcaaaagaaa atcagctaatt agtaaaagag gcttttgtaa cggaggctgc gcctgaatat 600
 cttgtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattcc tgggtgtcgca 660
 tgggtgggttg gttgggttga gaaggagca gaggtttact ttttcgcatt taacatggat 720
 atagacaacg aaaataagtt gccgctaaga aaatccattc ccacaaaat catggcaagt 780
 gagggcatca ttggtggcta a 801

<210> 45
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 45

Met Lys Thr Phe Ala Ala Tyr Leu Val Leu Ala Cys Leu Ser Ser Thr
 1 5 10 15

Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
 20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
 35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
 50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
 85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
 100 105 110

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

eolf-seql

Glu Ile Arg Met Gln Lys Tyr Leu Lys Lys Phe Ser Tyr Gly Asn Gln
130 135 140

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

Ile Ser Ala Phe Asn Gln Val Lys Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Ala Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Asn Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 46
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 46
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctagt 60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc 120
ttcgtgcttt gtaaaagtag cagtaaatcc tgcgctacca atgacttagc tcgtgcatca 180
aaggaatatc ttccagcatc aacattttaag atccccaacg caattatcgg cctagaaaact 240
ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag 300
caatgggaaa gagacttgac cttaagaggg gcaatacaag tttcagctgt tcccgtatatt 360
caacaaatcg ccagagaagt tggcgaaata agaatgcaga aatatcttaa aaaattttca 420
tatggtaacc agaatatcag tgggtggcatt gacaaattct gggttgaggg tcagcttaga 480
atttccgcag ttaatcaagt ggagtttcta gagtctctat ttttaaataa attgtcagca 540
tcaaaagaaa atcagcta atgtaaaagag gctttggtaa cggaggctgc gcctgaatat 600
cttgtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattcc tgggtgtcgca 660

eolf-seql

tggtgggttg gttgggttga gaagggagca gaggtttact ttttcgcatt taacatggat 720
 atagacaacg aaaataagtt gccgctaaga aaatccattc ccaccaaagt catggcaagt 780
 gagggcatca ttggtggcta a 801

<210> 47
 <211> 266
 <212> PRT
 <213> artificial

<220>
 <223> hybrid

<400> 47

Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
 1 5 10 15

Ala Leu Ala Ser Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
 20 25 30

Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
 35 40 45

Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
 50 55 60

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

Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
 85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
 100 105 110

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

Glu Ile Arg Met Gln Lys Tyr Leu Lys Lys Phe Ser Tyr Gly Asn Gln
 130 135 140

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Phe Leu Asn
 165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
 195 200 205

eolf-seql

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Ala Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Asn Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 48
<211> 801
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 48
atgaaaacat tagccgcata tttagttcta gttttttatg caagcaccgc gctctcagag 60
tcaattacag aaaatttggc gtggaataaa gaattttcta gtgaatccgt acatggcggtt 120
tttgtacttt gtaaaagtag tagcaattcc tgtactacaa ataatgcggc acgtgcatct 180
acagcctata ttccagcatc aacattcaaa attcctaata ctctaataagg tcttgaaacc 240
ggcgccataa aagatgaacg gcaggttttc aaatgggacg gaaagccaag agccatgaag 300
caatgggaaa gagacttaaa gctaaggggc gctatacagg tttctgctgt tccggtatct 360
caacaaattg ccagagaagt tggcgaaata agaatgcaaa aataccttaa cctgttttca 420
tacggcaacg ccaatatagg gggaggcatt gacaaattct ggctagaagg tcagcttaga 480
atctcagcat tcaatcaagt taaattttta gagtcgctct acctgaataa attgtcagca 540
tcaaaagaaa accaactaat agtaaaagag gcaatagtta cagaagcaac tccagaatat 600
atagttcatt caaaaactgg tttttctggg gttggcacag aatcaagtcc tgggtgctgct 660
tgggtgggttg gttgggtaga gaaaggaact gaggtttact tttttgcttt taacatggac 720
atagacaatg agagtaaatt gccgtcaaga aaatccattc ccaccaaatt catggcaagt 780
gagggcatca ttggtggcta a 801

<210> 49
<211> 266
<212> PRT
<213> artificial

<220>
<223> hybrid

<400> 49

Met Lys Thr Leu Ala Ala Tyr Leu Val Leu Val Phe Tyr Ala Ser Thr
1 5 10 15

eolf-seql

Ala Leu Ser Glu Ser Ile Thr Glu Asn Leu Ala Trp Asn Lys Glu Phe
20 25 30

Ser Ser Glu Ser Val His Gly Val Phe Val Leu Cys Lys Ser Ser Ser
35 40 45

Asn Ser Cys Thr Thr Asn Asn Ala Ala Arg Ala Ser Thr Ala Tyr Ile
50 55 60

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

Gly Ala Ile Lys Asp Glu Arg Gln Val Phe Lys Trp Asp Gly Lys Pro
85 90 95

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Lys Leu Arg Gly Ala Ile
100 105 110

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

Glu Ile Arg Met Gln Lys Tyr Leu Asn Leu Phe Ser Tyr Gly Asn Ala
130 135 140

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

Ile Ser Ala Phe Asn Gln Val Lys Phe Leu Glu Ser Leu Tyr Leu Asn
165 170 175

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

Val Thr Glu Ala Thr Pro Glu Tyr Ile Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Ser Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Thr Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Ser Lys Leu Pro Ser Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 50
<211> 801
<212> DNA

eolf-seql

<213> artificial

<220>

<223> hybrid

<400> 50

```
atgaaaacat ttgccgcata tgtaattatc gcgtgtcttt cgagtacggc attagctggt      60
tcaattacag aaaatacgtc ttggaacaaa gagttctctg ccgaagccgt caatggtgtc      120
ttcgtgtcttt gtaaaagtag cagtaaattcc tgcgctacca atgacttagc tcgtgcatca      180
aaggaatatc ttccagcatc aacatttaag atccccaacg caattatcgg cctagaaaact      240
ggtgtcataa agaatgagca tcaggttttc aaatgggacg gaaagccaag agccatgaag      300
caatgggaaa gagacttgac cttagagagg gcaatacaag tttcagctgt tcccgtatatt      360
caacaaatcg ccagagaagt tggcgaagta agaatgcaga aatatcttaa aaaattttca      420
tatggtaacc agaatatcag tgggtggcatt gacaaattct ggttggaagg tcagcttaga      480
atttccgcag ttaatcaagt ggagtttcta gagtctctat ttttaaataa attgtcagca      540
tcaaaagaaa atcagcta atgtaaaagag gctttggtaa cggaggctgc gcctgaatat      600
cttgtgcatt caaaaactgg tttttctggt gtgggaactg agtcaaattcc tgggtgtcgca      660
tggtggggtt gttgggttga gaaggagca gaggtttact ttttcgcatt taacatggat      720
atagacaacg aaaataagtt gccgctaaga aaatccattc ccacaaaat catggcaagt      780
gagggcatca ttggtggcta a                                          801
```

<210> 51

<211> 266

<212> PRT

<213> artificial

<220>

<223> hybrid

<400> 51

```
Met Lys Thr Phe Ala Ala Tyr Val Ile Ile Ala Cys Leu Ser Ser Thr
1          5          10          15
```

```
Ala Leu Ala Gly Ser Ile Thr Glu Asn Thr Ser Trp Asn Lys Glu Phe
          20          25          30
```

```
Ser Ala Glu Ala Val Asn Gly Val Phe Val Leu Cys Lys Ser Ser Ser
          35          40          45
```

```
Lys Ser Cys Ala Thr Asn Asp Leu Ala Arg Ala Ser Lys Glu Tyr Leu
          50          55          60
```

```
Pro Ala Ser Thr Phe Lys Ile Pro Asn Ala Ile Ile Gly Leu Glu Thr
65          70          75          80
```

```
Gly Val Ile Lys Asn Glu His Gln Val Phe Lys Trp Asp Gly Lys Pro
          85          90          95
```

eolf-seql

Arg Ala Met Lys Gln Trp Glu Arg Asp Leu Thr Leu Arg Gly Ala Ile
100 105 110

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

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

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

Ile Ser Ala Val Asn Gln Val Glu Phe Leu Glu Ser Leu Phe Leu Asn
165 170 175

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

Val Thr Glu Ala Ala Pro Glu Tyr Leu Val His Ser Lys Thr Gly Phe
195 200 205

Ser Gly Val Gly Thr Glu Ser Asn Pro Gly Val Ala Trp Trp Val Gly
210 215 220

Trp Val Glu Lys Gly Ala Glu Val Tyr Phe Phe Ala Phe Asn Met Asp
225 230 235 240

Ile Asp Asn Glu Asn Lys Leu Pro Leu Arg Lys Ser Ile Pro Thr Lys
245 250 255

Ile Met Ala Ser Glu Gly Ile Ile Gly Gly
260 265

<210> 52
<211> 1704
<212> DNA
<213> artificial

<220>
<223> hybrid

<400> 52
atgatgtctg ttgctactgt tgaaccacca aagccagaat tgtctccacc acaaaaccaa 60
aacgtcccat cttctcacga aactgatcac attttcagat ctaagttgcc agatattact 120
atttctaacg atttgccatt gcacgcttac tgtttcgaaa acttgtctga tttctctgat 180
agaccatgtt tgatttctgg ttctactggg aagactttca cttacgctga tactcacttg 240
atttcttcta agattgctgc tggtttgtct aacttgggta ttttgaaggg tgatgttggt 300
atgattttgt tgcaaaactc tgctgatttc gttttctctt tcttggctat ttctatgatt 360
ggtgctgttg ctactactgc ttctccattc tacactgctc cagaaatatt caagcaattc 420

eolf-seq1

actgtttcta	aggaaaagtt	ggttattact	caagctatgt	acgttgataa	gttgagaaac	480
cacgatgggtg	ctaagttggg	tgaagatttc	attgttatta	ctattgatga	tccaccagaa	540
aactgtttgc	acttcaacgt	tttggttgaa	gcttctgaat	ctgaaatgcc	aactgtttct	600
attttgccag	atgatccagt	tgctttgcca	ttctcttctg	gtactactgg	tttgccaaag	660
ggtgttattt	tgactcacia	gtctttgatt	acttctgttg	ctcaacaagt	tgatggtgaa	720
attccaaact	tgtacttgaa	gcaagatgat	gttgttttgt	gtgttttgcc	attgtttcac	780
attttctctt	tgaactctgt	tttgttgtgt	tctttgagag	ctggttctgc	tgttttgttg	840
atgcaaaaagt	tcgaaattgg	ttctttgttg	gaattgatgc	aaagacacag	agtttctggt	900
gctatgggtg	ttccaccatt	ggttttggct	ttggctaaga	acccaatggt	tgctgatttc	960
gatttgtctt	ctattagatt	ggttttgtct	ggtgctgctc	cattgggtaa	ggaattggaa	1020
gaagctttga	gaaacagaat	gccacaagct	gttttggtgc	aagggttacg	tatgactgaa	1080
gctgggtccag	ttttgtctat	gtgtttggct	ttcgctaagc	aaccattcca	aactaagtct	1140
ggttcttgtg	gtactgttgt	tagaaacgct	gaattgaagg	ttgttgatcc	agaaactggt	1200
agatctttgg	gttacaacca	accagggtgaa	atgtgtatta	gagggtcaaca	aattatgaag	1260
ggttacttga	acgatgaagc	tgctactgct	tctactattg	attctgaagg	ttggttgcac	1320
actggtgatg	ttggttacgt	tgatgatgat	gatgaaattt	tcattgttga	tagagttaag	1380
gaaattatta	agttcaagg	tttccaagtt	ccaccagctg	aattggaagc	tttgttggtt	1440
aaccacccat	ctattgctga	tgctgctggt	gttccacaaa	aggatgaagt	tgctggtgaa	1500
gttccagttg	ctttcgttgt	tagatctgat	gatttggatt	tgtctgaaga	agctgttaag	1560
gaatacattg	ctaagcaagt	tgttttctac	aagaagttgc	acaaggtttt	cttcgttcac	1620
tctattccaa	agtctgcttc	tggttaagatt	ttgagaaagg	atgtgagagc	taagttggct	1680
actgctacta	ctcaaactcc	ataa				1704

<210> 53
 <211> 1518
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400> 53	
atggatttgt	tggtgttgga aaaggctttg atgggtttgt tcttggtgc tggtgttgct 60
attgctgttt	ctactttgag aggttaagaag ttgaagttgc caccagggtcc aattccagtt 120
ccagttttcg	gtaactgggt gcaagttggt gatgatttga accaaagaaa cttgggtgat 180
tacgctaaga	agttcggtaga tttgttcattg ttgagaatgg gtcaaagaaa cttgggtggt 240
gtttcttctc	cagaattggc taaggaagtt ttgcacactc aagggtgttga attcggttct 300
agaactagaa	acgttgtttt cgatattttc actggtaagg gtcaagatat ggttttcact 360
gtttacggtg	aacactggag aaagatgaga agaattatga ctgttccatt cttcactaac 420

eolf-seq1

aaggttggtc	aacaatacag	acacggttgg	gaatctgaag	ctgctgctgt	tgttgaagat	480
gttaagaaga	accagatgc	tgctactact	ggtactgtta	tgagaagaag	attgcaattg	540
atgatgtaca	acaacatgta	cagaattatg	ttcगतatagaa	gattcgaatc	tgatgaagat	600
ccaatgttct	tgagattgaa	agctttgaac	ggtgaaagat	ctagattggc	tcaatctttc	660
gaatacaact	acggtgattt	cattccaatt	ttgagaccat	tcttgaaggg	ttacttgaag	720
atttgaagg	aagttaagga	aactagattg	aagttgttca	aggattactt	cgttgatgaa	780
agaaagaagt	tggaatctac	taagtctgct	gacaacaact	ctttgaagtg	tgctattgat	840
cacattattg	aagctcaaag	aaagggtgaa	attaacgaag	ataacgtttt	gtacattggt	900
gaaaacatta	acgttgctgc	tattgaaact	actttgtggt	ctattgaatg	gggtattgct	960
gaattggtta	accaccaga	aattcaacaa	aagttgagag	atgaaattga	tagagttttg	1020
ggtgctggtc	accaagttac	tgaaccagat	attcaaaagt	tgccatactt	gcaagctggt	1080
gttaaggaaa	ctttgagatt	cagaatggct	attccattgt	tggttccaca	catgaacttg	1140
cacgatgcta	agttgggtgg	ttacgatatt	ccagctgaat	ctaagatttt	ggttaacgct	1200
tggtgggttg	ctaacaaccc	agctcactgg	aacaagccag	aagaattcag	accagaaaga	1260
ttcttggaa	agaatctaa	ggttgaagct	aacggtaacg	atttcaaata	cattccattc	1320
ggtgttggt	gaagatcttg	tccaggtatt	attttggctt	tgccaatttt	gggtattgct	1380
atgggtagat	tggttcaaaa	cttcgaattg	ttgccaccac	caggtcaatc	tcaaatgat	1440
acttctgaaa	agggtggtca	attctctttg	cacattttga	agcactctac	tattgtttgt	1500
aagccaagat	ctttgtaa					1518

<210> 54
 <211> 705
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400> 54	
atggctttcc	catctgttac
ttctgttact	gttgaaaacg
ttactttccc	accaactggt
60	
aagccacat	gttctccaaa
cactttcttc	ttggctgggtg
ctgggtgtag	aggtttgcaa
120	
attcaccacg	ctttcgttaa
gttcactgct	atgtgtattt
acttgcaata	cgatgctttg
180	
tctttcttgt	ctgttaagtg
gaagactaag	tctactcacc
aattgactga	atctgatcaa
240	
ttcttctctg	atattgttac
tggtccattc	gaaaagttca
tgcaagttac	tatgattttg
300	
ccattgactg	gtcaacaata
ctctgaaaag	gttgctgaaa
actgtgttgc	tatttgagaga
360	
tctttgggta	tttactactga
ttctgaagct	gaagctattg
ataagttctt	gtctgttttc
420	
aaggatttga	ctttcccacc
aggtgcttct	atgtttgttca
ctacttctcc	agatggttct
480	
ttgactattt	ctttctctaa
ggatgggatg	attccagaag
ctgctaaca	tgttttggaa
540	
aacgaaaagt	tggtcaagc
tgttattgaa	tctgttattg
gtaagaacgg	tgtttctcca
600	

	eolf-seq1	
gctactaagc aatctttggc ttctagattg tctgatttga tgaaccactt cgatgaaaag		660
gctactactg atgctgaacc aaacttgtct aagaacgggtt tgtaa		705

<210> 55
 <211> 1170
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400> 55	
atggttactg ttgaagaagt tagaaaggct caaagagctg aagggtccagc tactgttatg	60
gctattggta ctgctactcc accaaactgt gttgatcaat ctacttacc agattactac	120
ttcagaatta ctaactctga acacaagact gaattgaagg aaaagttcca gagaatgtgt	180
gaaaagtcta tgattaagaa gagatacatg cacttgactg aagaaatfff gaaggaaaac	240
ccaaacatgt gtgaatacat ggctccatct ttggatgcta gacaagatat tgttggtgtt	300
gaagttccaa agttgggtaa ggaagctgct caaaaggcta ttaaggaatg ggggtcaacca	360
aagtctaaga ttactcactt ggttttctgt actacttctg gtgttgatat gccagggtgt	420
gattaccaat tgactaagtt gttgggtttg agaccatctg ttaagagatt gatgatgtac	480
caacaagggt gtttcgctgg tgggtactgt ttgagattgg ctaaggattt ggctgaaaac	540
aacaaggggtg ctagagtttt gggtgtttgt tctgaaatta ctgctgttac ttccagaggt	600
ccaaacgata ctacttgga ttctttgggt ggtcaagctt tggtcgggtga tgggtgctgct	660
gctattatta ttggttctga tccaattcca ggtgttgaaa gaccattgtt cgaattgggt	720
tctgctgctc aaactatfff gccagattct gaaggtgcta ttgatgggtca cttgagagaa	780
gttggtttga ctttcactt gttgaaggat gttccagggt tgatttctaa gaacattgaa	840
aagtctttgg aagaagcttt caagccattg ggtatttctg attggaactc tttgttctgg	900
attgctcacc cagggtggtcc agctatfff gatcaagttg aaattaagtt ggggttgaag	960
ccagaaaagt tgagagctac tagacacgtt ttgtctgaat acggtaacat gtcttctgct	1020
tgtgttttgt tcattttgga tgaaatgaga agaaagtcta aggaagatgg tttgaagact	1080
actggtgaag gtattgaatg ggggtgtttt ttcgggttcg gtccagggtt gactgttgaa	1140
actgttgttt tgcactctgt tgctacttaa	1170

<210> 56
 <211> 1131
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400> 56	
atgggtccaa ctgctaagac tttgacttac ttggctcaag aaaagacttt ggaatcttct	60
ttcgtagag atgaagaaga aagaccaaag gttgcttaca acgaattctc tgatgaaatt	120

eolf-seql

ccagttat	ttt	ggt	g	tattgat	gaa	gttgat	ggta	gaaga	agaga	aattt	gtg	aa	180	
aagatt	gttg	aagct	tgt	ga	aaact	gggg	t	at	tttcca	ag	ttgtt	gat	ca	240
gctgatt	tga	ttgct	gatat	gactag	attg	gctag	aga	at	tcttc	gctt	gccag	ctg	aa	300
gataag	tga	gatac	gatat	gtctg	gtg	aaga	aggg	t	gtttc	att	gt	ttct	ctc	360
ttgca	aggt	g	aagct	gtt	ca	agatt	ggaga	gaa	att	gtt	a	cttact	ttct	420
aaggct	agag	attac	ggt	ag	atggc	cagaa	aagcc	agct	g	gttggt	gtg	c	tg	480
agatac	tctg	aaagatt	gat	ggg	ttt	gtct	t	tgta	act	tga	tgggt	gtt	tt	540
atggg	ttt	gg	ttt	gt	ct	t	tgta	act	tga	tgggt	gtt	tt	tt	600
gtta	act	ttct	accca	agat	g	tccaca	acca	gattt	gact	t	tggg	ttt	gaa	660
gatcc	aggt	a	ctattact	ttt	gtt	gtt	gcaa	gattt	gg	ttg	gtg	gtt	gca	720
gatgg	tggt	gga	aga	act	ggat	tact	gtt	caa	cca	attt	ctg	gtg	ctt	780
ggtgat	cacg	gtcact	ttcat	gtcta	acgg	agatt	caaga	acgct	gat	ca	cca	agct	gtt	840
gtta	acgg	t	aatctt	ctag	attgt	ctatt	gctact	tttcc	aaa	acc	cagc	tccag	atg	900
agagt	ttg	gc	cattg	gct	gt	tagaga	aggt	gaaga	accaa	tttt	gga	aga	acca	960
ttcact	gaaa	tgtac	aga	ag	aaagat	ggaa	agagatt	ttg	attt	gg	ctaa	gagaa	aga	1020
caagct	aagg	atcaatt	gat	gcaaca	acaa	ttgcaatt	gc	aaca	aca	aca	agct	gtt	gct	1080
gctgct	ccaa	tgcca	act	gc	tacta	agcca	ttga	acg	aaa	tttt	gg	ctta	a	1131

<210> 57
 <211> 1011
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

atggg	gttg	aaagag	ttca	agatatt	gct	tctact	at	ttt	ctga	agata	c	tattcc	agct	60
gaata	catta	gatct	gaaaa	cgaaca	acca	ggtatt	acta	ctgtt	ccaaa	cactg	tttt	g		120
gaatg	tcaa	ctatt	gattt	ctctg	atcca	gatga	agaaa	agttg	ttgaa	gcaa	atttt	c		180
gaagc	ttcta	ttgatt	gggg	tatgt	accaa	attgt	taacc	acgat	atttc	taacg	agct			240
atttcta	agt	tgcaag	ctgt	tggt	aaggaa	ttcttc	gaag	aattg	ccaca	aga	agaaa	ag		300
gaagtt	tacg	ctaagg	atcc	aaact	ctaag	tctgt	tgaag	gttac	ggtac	tttct	t	gcaa		360
aagga	attt	g	aagta	agaa	gggtt	gggt	gatc	att	gt	tccaca	agat	ttggc	acca	420
tctgct	atta	actac	agatt	ctggc	caaag	aacc	caccat	cttac	agaga	agcta	acgaa			480
gaatac	gcta	agtgg	ttgag	aaagg	ttgtt	gatga	gtt	gt	t	tcaag	ttgtt	gtctt	tggt	540
ttggg	ttt	gg	ttt	g	aagct	caaga	aatga	agaag	gctg	ctggt	ctgat	gattt	tg	600
ttga	agatta	actact	accc	accat	gtcca	agacc	agatt	tggc	ttt	ggg	tg	ttg	ttg	660
cacact	gata	tgtct	tacat	tact	ttg	ttg	gtt	ccaa	acg	aag	ttca	agg	ttt	720

			eolf-seql		
ttcaaggatg	gtcactggta	cgatgttaac	tacattccaa	acgctattat	tgttcacatt 780
ggtgatcaag	ttgaaatfff	gtctaacggt	aagtacaagt	ctgtttacca	cagaactact 840
gttaacaagt	acaagactag	aatgtcttgg	ccagttttct	tggaaccatc	ttctgaacac 900
gaagttggtc	caattccaaa	gttgattaac	gataaggaaa	accaccaga	gttcaagact 960
aagaagtaca	aggattacgt	ttactgtaag	ttgaacaagt	tgccacaata	a 1011

<210> 58
 <211> 2148
 <212> DNA
 <213> artificial

<220>
 <223> hybrid

<400>	58	
atggaaactg	ttactaagaa	cggttaccaa aacggtaacg gttggaatff gtgtatgaag 60
aaggaagatc	cattgaactg	gggtgttgct gctgaagctt tgactggttc tcacttggat 120
gaagttaaga	gaatggttgc	tgaatacaga aagccagttg ttaagttgga aggtgaaact 180
ttgactatff	ctcaagttgc	tgctatffct gctagagatg attctgggtg taaggttgaa 240
ttgtctgaag	aagctagagc	tggtgttaag gcttcttctg attgggttat ggattctatg 300
aacaagggtg	ctgattctta	cggtgttact actggtttcg gtgctacttc tcacagaaga 360
actaagcaag	gtgggtgctff	gcaaaggaa ttgattagat tcttgaacgc tggatffttc 420
ggtaacggta	ctgaaacttg	tcacactttg ccacactctg ctactagagc tgctatgttg 480
gttagaatta	acactffgtt	gcaaggttac tctggtatta gattcgaaat tffggaagct 540
attactaagt	tcttgaacca	caacattact ccatgtffgc cattgagagg tactattact 600
gcttctggtg	atffggttcc	attgtcttac attgctgggt tgttgactgg tagaccaaac 660
tctaaggctg	ttggtccaac	tggtgttact ttgtctccag aagaagctff caagttggct 720
ggtgttgaag	gtggttffct	cgaattgcaa ccaaaggaa gtttggctff ggttaacggt 780
actgctgttg	gttctgggat	ggcttctatg gttffgttcg aagctaacat tffggtgtt 840
ttggctgaag	ttatgtctgc	tatfftcgct gaagttatgc aaggtaagcc agaattcact 900
gatcacttga	ctcacaagtt	gaagcaccac ccaggtcaaa ttgaagctgc tgctattatg 960
gaacacatff	tggtatggttc	tgcttacgtt aaggctgctc aaaagttgca cgaaatggat 1020
ccattgcaaa	agccaaagca	agatagatac gctfftgaaa cttctccaca atggttgggt 1080
ccacaaattg	aagttattag	atcttctact aagatgattg aaagagaaat taactctgtt 1140
aacgataacc	cattgattga	tgffttctaga aacaaggcta ttcacggtgg taacttccaa 1200
ggttctccaa	ttggtgtff	tatggataac actagattgg ctattgctgc tattggtaaag 1260
ttgatgttcg	ctcaattctc	tgaattgggt aacgattffct acaacaacgg tffgccatct 1320
aacttgtctg	gtggtagaaa	cccatctffg gattacgggt tcaagggtgc tgaaattgct 1380
atggcttctt	actgttctga	attgcaattc ttggctaacc cagttactaa ccacgttcaa 1440

eolf-seq1

tctgctgaac aacacaacca agatgttaac tctttgggtt tgatttcttc tagaaagact	1500
tctgaagctg ttgaaatfff gaagttgatg tctactactt tcttggttgg tttgtgtcaa	1560
gctattgatt tgagacactt ggaagaaaac ttgaagtcta ctgttaagaa cactgtttct	1620
caagttgcta agagagtttt gactatgggt gttaacggtg aattgcaccc atctagattc	1680
tgtgaaaagg atttggtgag agttgttgat agagaatata ttttcgctta cattgatgat	1740
ccatgttctg ctacttacc c attgatgcaa aagttgagag aaactttggt tgaacacgct	1800
ttgaacaacg gtgaaaacga aaagaacttc tctacttctg ttttccaaaa gattgctgct	1860
ttcgaagatg aattgaaggc tttgttgcca aaggaagttg aaactgctag agctgctttg	1920
gaatctggta acccagctat tccaaacaga attaaggaat gtagatctta cccattgtac	1980
aagttcgcta gagaagaatt ggggtactgaa tacttgactg gtgaaaagg tagatctcca	2040
ggtgaagaat tcgaaaagg tttcactgct atgtctaagg gtgaaattat tgatccattg	2100
ttggaatggt tggaatcttg gaacggtgct ccattgcca tttgttaa	2148

<210> 59
 <211> 22
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 59	
ctgtgctgtc tgcgctgcat tc	22

<210> 60
 <211> 23
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 60	
ttacttgta gattgtggat cac	23

<210> 61
 <211> 21
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 61	
atggctttcc catctgttac t	21

<210> 62
 <211> 21
 <212> DNA
 <213> artificial

<220>
 <223> primer

eolf-seql

<400> 62
atggctccaa ctgctaagac t 21

<210> 63
<211> 23
<212> DNA
<213> artificial

<220>
<223> primer

<400> 63
ttaagccaaa atttccttca atg 23

<210> 64
<211> 23
<212> DNA
<213> artificial

<220>
<223> primer

<400> 64
ttaacaaatt ggcaatggag aac 23

<210> 65
<211> 24
<212> DNA
<213> artificial

<220>
<223> primer

<400> 65
atggaaactg ttactaagaa cggt 24

<210> 66
<211> 22
<212> DNA
<213> artificial

<220>
<223> primer

<400> 66
ttaagtagca acagagtgc aa 22

<210> 67
<211> 25
<212> DNA
<213> artificial

<220>
<223> primer

<400> 67
atggttactg ttgaagaata cagaa 25

<210> 68
<211> 24
<212> DNA

<213> artificial
 <220>
 <223> primer
 <400> 68
 ttagaaagat cttggcttag caac 24

<210> 69
 <211> 22
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 69
 atggatttgt tgttgttgga aa 22

<210> 70
 <211> 22
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 70
 ttattgtggc aacttgttca ac 22

<210> 71
 <211> 24
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 71
 atgaagacta ttcaaggtca atct 24

<210> 72
 <211> 21
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 72
 ttatggagtt tgagtagcag c 21

<210> 73
 <211> 23
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 73
 atgattactt tggctccatc ttt 23

eolf-seql

<210> 74
 <211> 20
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 74
 gcgcatgtgt ccgatctttg 20

<210> 75
 <211> 21
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 75
 atggctttcc catctgttac t 21

<210> 76
 <211> 21
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 76
 atggctccaa ctgctaagac t 21

<210> 77
 <211> 24
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 77
 atggaaactg ttactaagaa cggt 24

<210> 78
 <211> 22
 <212> DNA
 <213> artificial
 <220>
 <223> primer
 <400> 78
 ttaagtagca acagagtgca aa 22

<210> 79
 <211> 22
 <212> DNA
 <213> artificial
 <220>
 <223> primer

eolf-seql

<400> 79
atggatttgt tgttggtgga aa 22

<210> 80
<211> 22
<212> DNA
<213> artificial

<220>
<223> primer

<400> 80
ttattgtggc aacttggtca ac 22

<210> 81
<211> 24
<212> DNA
<213> artificial

<220>
<223> primer

<400> 81
atgaagacta ttcaaggtca atct 24

<210> 82
<211> 21
<212> DNA
<213> artificial

<220>
<223> primer

<400> 82
ttatggagtt tgagtagcag c 21

<210> 83
<211> 20
<212> DNA
<213> artificial

<220>
<223> primer

<400> 83
caccagcgct ctagatacat 20

<210> 84
<211> 22
<212> DNA
<213> artificial

<220>
<223> primer

<400> 84
tgtgttaccg atatcggcga at 22

<210> 85
<211> 21
<212> DNA

<213> artificial

<220>

<223> primer

<400> 85

tcattaccgc ttccaagtct a

21

<210> 86

<211> 22

<212> DNA

<213> artificial

<220>

<223> primer

<400> 86

acgcagaatt ttcgagttat ta

22

<210> 87

<211> 23

<212> DNA

<213> artificial

<220>

<223> primer

<400> 87

agaagtgtca acaacgtatc tac

23

<210> 88

<211> 24

<212> DNA

<213> artificial

<220>

<223> primer

<400> 88

ggtggtaatg ccatgtaata tgat

24

<210> 89

<211> 25

<212> DNA

<213> artificial

<220>

<223> primer

<400> 89

ttcggtttgt attacttctt attca

25

<210> 90

<211> 22

<212> DNA

<213> artificial

<220>

<223> primer

<400> 90

tacatgcgta cacgcgtctg ta

22

eolf-seql

<210> 91
 <211> 23
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 91
 ccaattgggtt caagtctcca aat

23

<210> 92
 <211> 22
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 92
 acgcagaatt ttcgagttat ta

22

<210> 93
 <211> 22
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 93
 ctactgccta gcatcttgct aa

22

<210> 94
 <211> 20
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 94
 aatagggacc tagacttcag

20

<210> 95
 <211> 20
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 95
 acgcacacta ctctctaag

20

<210> 96
 <211> 24
 <212> DNA
 <213> artificial

<220>
 <223> primer

eof-seq1

<400> 96
cccttacaag aacattcacg aaat 24

<210> 97
<211> 21
<212> DNA
<213> artificial

<220>
<223> primer

<400> 97
agacggtagg tattgattgt a 21

<210> 98
<211> 22
<212> DNA
<213> artificial

<220>
<223> primer

<400> 98
cgacctcatg ctatacctga ga 22

<210> 99
<211> 20
<212> DNA
<213> artificial

<220>
<223> primer

<400> 99
ctacttcgag cggaggcac 20

<210> 100
<211> 20
<212> DNA
<213> artificial

<220>
<223> primer

<400> 100
tcattgcctt ctccactctc 20