

eolf-seql (2)  
SEQUENCE LISTING

<110> PsiOxus Therapeutics Limited  
<120> Virus Encoding An Anti-TCR-Complex Antibody or Fragment  
<130> P000164W0  
<150> GB1522334.0  
<151> 2015-12-17  
<150> GB1607463.5  
<151> 2016-04-29  
<150> GB1617207.4  
<151> 2016-10-10  
<150> GB1617206.6  
<151> 2016-10-10  
<160> 127  
<170> PatentIn version 3.5  
<210> 1  
<211> 119  
<212> PRT  
<213> Artificial Sequence  
<220>  
<223> Muromonab-CD3 (OKT3) VH  
<400> 1

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

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr  
          20                      25                      30

Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
          35                      40                      45

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe  
          50                      55                      60

eolf-seql (2)

Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr  
65 70 75 80

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

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly  
100 105 110

Thr Thr Leu Thr Val Ser Ser  
115

<210> 2  
<211> 107  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Muromonab-CD3 (OKT3) VL

<400> 2

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

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met  
20 25 30

Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr  
35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala His Phe Arg Gly Ser  
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Gly Met Glu Ala Glu  
65 70 75 80

eolf-seql (2)

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr  
85 90 95

Phe Gly Ser Gly Thr Lys Leu Glu Ile Asn Arg  
100 105

<210> 3  
<211> 241  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Muromonab -CD3 (OKT3) single chain Fv

<400> 3

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

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr  
20 25 30

Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
35 40 45

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe  
50 55 60

Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr  
65 70 75 80

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

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly  
100 105 110

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

eolf-seql (2)

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

Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser  
145 150 155 160

Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser  
165 170 175

Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro  
180 185 190

Ala His Phe Arg Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile  
195 200 205

Ser Gly Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp  
210 215 220

Ser Ser Asn Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Asn  
225 230 235 240

Arg

<210> 4

<211> 322

<212> PRT

<213> Artificial Sequence

<220>

<223> Membrane anchored form of the anti-human CD3 single chain Fv

<400> 4

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

eolf-seql (2)

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

Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
35 40 45

Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu  
50 55 60

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn  
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser  
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val  
100 105 110

Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp  
115 120 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly  
130 135 140

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

Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys  
165 170 175

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser  
180 185 190

Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser  
195 200 205

eolf-seql (2)

Gly Val Pro Ala His Phe Arg Gly Ser Gly Ser Gly Thr Ser Tyr Ser  
210 215 220

Leu Thr Ile Ser Gly Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys  
225 230 235 240

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

Glu Ile Asn Arg Gly Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu  
260 265 270

Asn Ala Val Gly Gln Asp Thr Gln Glu Val Ile Val Val Pro His Ser  
275 280 285

Leu Pro Phe Lys Val Val Val Ile Ser Ala Ile Leu Ala Leu Val Val  
290 295 300

Leu Thr Ile Ile Ser Leu Ile Ile Leu Ile Met Leu Trp Gln Lys Lys  
305 310 315 320

Pro Arg

<210> 5

<211> 333

<212> PRT

<213> Artificial Sequence

<220>

<223> Membrane anchored form of anti-human CD3 single chain Fv with  
C-terminal V5 tag

<400> 5

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

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg

eolf-seql (2)

20

25

30

Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
35 40 45

Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu  
50 55 60

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn  
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser  
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val  
100 105 110

Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp  
115 120 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly  
130 135 140

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

Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys  
165 170 175

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser  
180 185 190

Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser  
195 200 205

Gly Val Pro Ala His Phe Arg Gly Ser Gly Ser Gly Thr Ser Tyr Ser

eolf-seql (2)

210

215

220

Leu Thr Ile Ser Gly Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys  
225 230 235 240

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

Glu Ile Asn Arg Gly Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu  
260 265 270

Asn Ala Val Gly Gln Asp Thr Gln Glu Val Ile Val Val Pro His Ser  
275 280 285

Leu Pro Phe Lys Val Val Val Ile Ser Ala Ile Leu Ala Leu Val Val  
290 295 300

Leu Thr Ile Ile Ser Leu Ile Ile Leu Ile Met Leu Trp Gln Lys Lys  
305 310 315 320

Pro Arg Gly Ser Ile Pro Asn Pro Leu Leu Gly Leu Asp  
325 330

<210> 6

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Teplizumab VH sequence

<400> 6

Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
1 5 10 15

Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr  
20 25 30



eolf-seql (2)

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

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val  
 50 55 60

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

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys  
 85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly  
 100 105 110

Thr Pro Val Thr Val Ser Ser  
 115

<210> 7

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Teplizumab VL sequence

<400> 7

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 Ser Ala Ser Ser Ser Val Ser Tyr Met  
 20 25 30

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr  
 35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser

eolf-seql (2)

50

55

60

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu  
65 70 75 80

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr  
85 90 95

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr Arg  
100 105

<210> 8

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<223> Teplizumab Heavy chain sequence

<400> 8

Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
1 5 10 15

Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr  
20 25 30

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

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val  
50 55 60

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

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys  
85 90 95

eolf-seql (2)

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly  
100 105 110

Thr Pro Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe  
115 120 125

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu  
130 135 140

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp  
145 150 155 160

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu  
165 170 175

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser  
180 185 190

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro  
195 200 205

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys  
210 215 220

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro  
225 230 235 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser  
245 250 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp  
260 265 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn  
275 280 285

eolf-seql (2)

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val  
290 295 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu  
305 310 315 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys  
325 330 335

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr  
340 345 350

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

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu  
370 375 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu  
385 390 395 400

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

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu  
420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly  
435 440 445

Lys

<210> 9

<211> 213

<212> PRT

eolf-seql (2)

<213> Artificial Sequence

<220>

<223> Teplizumab Light Chain Sequence

<400> 9

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 Ser Ala Ser Ser Ser Val Ser Tyr Met  
20 25 30

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr  
35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser  
50 55 60

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu  
65 70 75 80

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr  
85 90 95

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr Arg Thr Val Ala Ala Pro  
100 105 110

Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr  
115 120 125

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys  
130 135 140

Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu  
145 150 155 160

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser

eolf-seql (2)

165

170

175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala  
180 185 190

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

Asn Arg Gly Glu Cys  
210

<210> 10  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> PDGFR Receptor A

<400> 10

Ala Val Leu Val Leu Leu Val Ile Val Ile Ile Ser Leu Ile Val Leu  
1 5 10 15

Val Val Ile Trp  
20

<210> 11  
<211> 21  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> PDGFR Receptor B

<400> 11

Val Val Ile Ser Ala Ile Leu Ala Leu Val Val Leu Thr Ile Ile Ser  
1 5 10 15

Leu Ile Ile Leu Ile

eolf-seql (2)

20

<210> 12  
 <211> 24  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Insulin-Like growth factor 1

<400> 12

Ile Ile Ile Gly Pro Pro Leu Ile Phe Val Phe Leu Phe Ser Val Val  
 1 5 10 15

Ile Gly Ser Ile Tyr Leu Phe Leu  
 20

<210> 13  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> IL6-R

<400> 13

Ser Ser Ser Val Pro Leu Pro Thr Phe Leu Val Ala Gly Gly Ser Leu  
 1 5 10 15

Ala Phe Gly Thr Leu Leu Cys Ile Ala Ile Val Leu  
 20 25

<210> 14  
 <211> 27  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> CD28

<400> 14

eolf-seql (2)

Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser Leu  
1 5 10 15

Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val  
20 25

<210> 15  
<211> 49  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> PDGFR TM Domain

<400> 15

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

Pro Phe Lys Val Val Val Ile Ser Ala Ile Leu Ala Leu Val Val Leu  
20 25 30

Thr Ile Ile Ser Leu Ile Ile Leu Ile Met Leu Trp Gln Lys Lys Pro  
35 40 45

Arg

<210> 16  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> c-myc tag

<400> 16

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu  
1 5 10



eolf-seql (2)

<210> 17  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> c-myc tag with spacers

<400> 17

Gly Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn  
 1 5 10

<210> 18  
 <211> 62  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> PDGFR TM Domain with N-terminal c-myc tag

<400> 18

Gly Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn Ala Val Gly  
 1 5 10 15

Gln Asp Thr Gln Glu Val Ile Val Val Pro His Ser Leu Pro Phe Lys  
 20 25 30

Val Val Val Ile Ser Ala Ile Leu Ala Leu Val Val Leu Thr Ile Ile  
 35 40 45

Ser Leu Ile Ile Leu Ile Met Leu Trp Gln Lys Lys Pro Arg  
 50 55 60

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

<220>  
 <223> HuVH human VH leader sequence

eolf-seql (2)

<400> 19

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

Val His Ser

<210> 20

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker

<400> 20

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

<210> 21

<211> 32326

<212> DNA

<213> Artificial Sequence

<220>

<223> EnAd Genome

<400> 21

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| tctatctata taatataacct tatagatgga atggtgccaa tatgtaaatg aggtgatttt | 60  |
| aaaaagtgtg gatcgtgtgg tgattggctg tggggttaac ggctaaaagg ggcggtgcga  | 120 |
| ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt  | 180 |
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggg atttaacagg  | 240 |
| aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa  | 300 |
| tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg  | 360 |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt  | 420 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtaggtgt cagctgatcg ctaggggtatt | 480  |
| tataacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc | 540  |
| tctgcgccgg cagtttaata ataaaaaaat gagagatttg cgattttctgc ctcaggaaat | 600  |
| aatctctgct gagactggaa atgaaatatt ggagcttgtg gtgcacgccc tgatgggaga  | 660  |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt  | 720  |
| agaggtagag ggatcggagg attctaataa ggaagctgta aatggctttt ttaccgattc  | 780  |
| tatgctttta gctgctaata aagggttaga attagatccg cttttggaca cttttgatac  | 840  |
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt  | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga  | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt  | 1020 |
| tcagttggat tgcccggagc ttcctggaca tggctgtaag tcttgtgaat ttcacaggaa  | 1080 |
| aaatactgga gtaaaggaac tgttatgttc gctttgttat atgagaacgc actgccactt  | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat  | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc  | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg  | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga  | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaacgctc caagacaata  | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta | 1500 |
| ataaaaaatat gttaactgtt cactggtttt tattgctttt tgggcgggga ctcaggtata | 1560 |
| taagtagaag cagacctgtg tggtagctc ataggagctg gctttcatcc atggaggttt   | 1620 |
| gggccatttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag  | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa  | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgcccagga ctttttgaag  | 1800 |
| ctcttaattt gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt  | 1860 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga  | 1920 |
| tcccgagac tcatttcagc aggggatacg ttttgattt catagccaca gcattgtgga    | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg  | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc  | 2100 |
| aagaggacaa cccgagagcc ggcttgacc ctccagtgga ggaggcggag tagctgactt   | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt  | 2220 |
| taagaggag agggcatcta gtggtactga tgctagatct gagttggctt taagttta     | 2280 |
| gagtcgcaga cgtcctgaaa ccatttggtg gcatgaggtt cagaaagagg gaagggatga  | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacagggtg aaaacatgtt gggtggagcc | 2400 |
| tgaggatgat tgggagggtg ccattaaaaa ttatgccaag atagctttga ggctgataa   | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg  | 2520 |
| ggctgagggtg gtaatagata ctcaagacaa ggagttatt agatgctgca tgatggatat  | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga  | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt  | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag  | 2760 |
| tttctatgcg tggttgattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa  | 2820 |
| atgcatattt caaagatgta acctgggcat tctgaatgaa ggcaagcaa ggggtccgcca  | 2880 |
| ctgcgcttct acagatactg gatgttttat ttgattaag ggaaatgcca gcgtaaagca   | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctggtgg  | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt  | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt  | 3120 |
| tatgccttac cagtgaaca tgaatcatgt gaaagtgtt ttggaaccag atgccttttc    | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta  | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca  | 3300 |

eolf-seql (2)

|                                                                      |      |
|----------------------------------------------------------------------|------|
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac    | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt    | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaaattt gttttttctg tcttgcagct  | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtccttca gcccttatct gacagggcgt   | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc    | 3600 |
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagttcttc acctttggac    | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac    | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac    | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct    | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa    | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt    | 3960 |
| gtttttattt catttttcgc gcacggtatg ccctagacca ccgatctcta tcattgagaa    | 4020 |
| ctcgggtggat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca   | 4080 |
| ttaggccgctc tttgggggtgg agatagctcc attgaaggga ttcattgctcc ggggtagtgt | 4140 |
| tgtaaatcac ccagtcataa caaggtcgca gtgcatggtg ttgcacaata tcttttagaa    | 4200 |
| gtaggctgat tgccacagat aagcccttgg tgtaggtgtt taaaaaccgg ttgagctggg    | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttgattg gatttttaag ttggcaatat     | 4320 |
| tgccgccaag atcccgctctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg   | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac    | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg    | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagtatatgt tcctgagtta   | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg    | 4620 |
| ttccttcggg ccccgagca tagttccctt cacagatttg catttcccaa gctttcagtt     | 4680 |
| ccgaggggtgg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg   | 4740 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tgattaattg tgatgatagc aaattttctga gcaattgaga tttgccacat ccggtggggc | 4800 |
| cataaatgat tccgattacg ggttgcaggt ggtagtttag ggaacggcaa ctgccgtctt  | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca  | 4920 |
| aatccattag gaggcgctct cctcctagtg atagaagttc ttgtagtgag gaaaagtttt  | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttggagag agtttgctgc aaaagttcta  | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt  | 5100 |
| tcgcgggttt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag  | 5160 |
| ggttcggtcc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaaggg  | 5220 |
| gtgtgcgcct gcttgggcgc ttgccagggt gcgcttcaga ctcatcctgc tggtcgaaaa  | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag tttacatga gttcgtagtt   | 5340 |
| gagcgctcg gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatac   | 5400 |
| cgggcagtat aggcathttca gcgcatacaa cttgggcgca aggaaaacgg attctgggga | 5460 |
| gtatgcatct gcgccgcagg aggcgcaaac agtttcacat tccaccagcc aggttaaadc  | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatttt ttgatgcgtt tcttaccttt | 5580 |
| ggtctccatg agttcgtgtc ctcgttgagt gacaaacagg ctgtccgtgt ccccgtagac  | 5640 |
| tgattttaca ggctctttct ccagtggagt gcctcgggtc tcttcgtaca ggaactctga  | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcacaaag gaggctatgt gggaggggta  | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcacctc   | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc   | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact  | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc  | 6060 |
| tttcatgagg ttttctcca tctggtcaga aaacacaatt tttttattgt caagtttggt   | 6120 |
| ggcaaatgat ccatacaggg cgttggataa aagtttggca atggatcgca tggtttgggt  | 6180 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag  | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcattctggc acgattctca cttgccaccc | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt  | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag  | 6420 |
| ttcatcgga ggggtctgcat ccatggtaaa gattcccga agtaaatcct tatcaaaata   | 6480 |
| gctgatggga gtgggggtcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc   | 6720 |
| cggacccaag ttggtgcgat tgggtttttc tgttctgtag acgatctggc gaaagatggc  | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggt  | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg  | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggatttct tcgcgatcct tccagtactc  | 7020 |
| ttctagcgga aacctgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac  | 7080 |
| tgccttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgc tctgaccatg actttgagga attggtatct  | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat  | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaaggta ggtctgtggg   | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg | 7620 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ccgtccgact gccatTTTTT ctggggtgac gcaatagaag gtttgggggt cctgccgcca  | 7680 |
| gcgatccac ttgagtttta tggcgaggtc ataggcgatg ttgacgagcc gctgggtctcc  | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtttcc acatcgtagg tgagaaagag cttttctgtg cgaggatgag agccaatcgg  | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgacag ggttgatatc cgtgaatgag ttgtacctgg cttcccttga cgagaaattt  | 8040 |
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc  | 8100 |
| ctgttcatct tctgtctcga tgggtggcat gctgacgagc cctcgcgga ggcaagtcca   | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag  | 8220 |
| ggtcctgaga cgctcggac tcaggtagt aggcagtgtc aggagattaa cttgcatgat    | 8280 |
| cttttgagg gcgtcggga ggttcagata gtacttgatc tcaacgggtc cgttggtgga    | 8340 |
| gatgtcgatg gcttgcaggg ttccgtgtcc cttgggcgct accaccgtgc cttgttttt   | 8400 |
| cattttggac ggcggtggct ctgttgcttc ttgcatgttt agaagcggtg tcgaggcg    | 8460 |
| gcaccgggcg gcaggggcgg ctcgggaccc ggcgcatgg ctggcagtgg tacgtcggcg   | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg  | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac  | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt  | 8700 |
| tcttgacgt caccagagtt gtcctgtag gcgatctccg ccatgaactg ctcgatctct    | 8760 |
| tcctcttgaa gatctccgcg gcccgctctc tcgacgggtg ccgcgaggtc gttggagatg  | 8820 |
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc  | 8880 |
| acggcccca cgggatctct cgcgcgcgatg accacctggg cgaggttgag ctccacgtgg  | 8940 |
| cgggtgaaga ccgcatagtt gcataggcg tggaagggt agttgagtgt ggtggcgatg    | 9000 |
| tgctcgggtga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc | 9060 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| agagcttcca agcgctccat ggcctcgtag aagtccacgg caaaattaaa aaactgggag   | 9120  |
| tttcgcgcgg acacgggtcaa ctctctttcc agaagacgga taagttcggc gatgggtggtg | 9180  |
| cgcacctcgc gctcgaaagc ccctgggatt tcttcctcaa tctcttcttc ttccactaac   | 9240  |
| atctcttcct cttcaggtgg ggctgcagga ggaggggggaa cgcggcgacg ccggcggcgc  | 9300  |
| acgggcagac ggtc gatgaa tctttcaatg acctctccgc ggcgggcgcg catggtttca  | 9360  |
| gtgacggcgc ggccgtttctc gcgcgggtcgc agagtaaaaa caccgccgcg catctcctta | 9420  |
| aagtggtgac tgggaggttc tccgtttggg agggagaggg cgctgattat acattttatt   | 9480  |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa   | 9540  |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct   | 9600  |
| tgtgggcggg ggtggttatg tgttcgggtct gggctttctg tttcttcttc atctcgggaa  | 9660  |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatgggtg  | 9720  |
| gcgaggagca ccaggctctt ggggtccggct tgctggatac gcaggcgatt ggccattccc  | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg   | 9840  |
| ggcacttctt cctcaccctg tctgccatgc atacgtgtga gtccaaatcc gcgcattggt   | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta   | 9960  |
| agggtggctt gaaagtcac aaaatccaca aagcgggtgg aagctcctgt attaatgggtg   | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggt gaccagggcg cacgagctcg   | 10080 |
| gtgtatttaa ggcggaata ggcgcggggtg tcaaagatgt aatcgttgca ggtgcgcacc   | 10140 |
| agatactggt accctataag aaaatgcggc ggtggttggc ggtagagagg ccatcgttct   | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac   | 10260 |
| ctggacatcc aggtgattcc tgcggcggtg gtagaagccc gaggaaactc gcgtacgcgg   | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgtag gcacggtttg accagtgagg    | 10380 |
| cgcgcgcagt cattgatgct ctatagacac ggagaaaaatg aaagcgttca gcgactcgac  | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcgggtg taccgccggtt cgagacttgt | 10500 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| actcgagccg gccggagccg cggctaacgt ggtattggca ctcccgtctc gaccagcct    | 10560 |
| acaaaaatcc aggatacggga atcgagtcgt tttgctgggt tccgaatggc aggggaagtga | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa   | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact   | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc   | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa   | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag   | 10920 |
| gagccggagg agatgcgagc ttcccgtttt aacgcgggtc gtgagctgcg tcacggtttg   | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagtgt atgaaatgac agggatcagt   | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag   | 11100 |
| gaagagcgta acttcaaaaa gtcttttaaat aatcatgtgc gaaccctgat tgcccgcgaa  | 11160 |
| gaagttaccc ttggtttgat gcatttgtgg gatttgcagg aagctatcat tcagaacctt   | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtgggtc aacacagcag agacaatgag   | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt   | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg  | 11400 |
| gctgccatca attactcggg tttgagcttg ggaaaaatatt acgctcgcaa aatctacaag  | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg  | 11520 |
| ctcaaggctt tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc   | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa   | 11640 |
| agagctctga ctggagctgg aaccgagggt gagaattact tcgacatggg agctgacttg   | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac   | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac   | 11820 |
| aacccgtgtt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct   | 11880 |
| gcagagccag ccgtccggca ttaactcctc ggacgattgg acccaggcca tgcaacgtat   | 11940 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| catggcggtg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct   | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggctct  | 12060 |
| ggccatcgtg aacgcggttg tggagaacaa agctattcgt ccagatgagg ccggactggt   | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaatct   | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagg tccagcgtga    | 12240 |
| tgccaacctg gggtcgctgg tggcgtaaaa tgctttcttg agtactcagc ctgctaattg   | 12300 |
| gccgcgtggt caacaggatt atactaactt ttttaagtgt ttgagactga tggatatcaga  | 12360 |
| agtacctcag agcgaagtgt atcagtccgg tcctgattac ttctttcaga ctagcagaca   | 12420 |
| gggcttgtag acggtaaatc tgagccaagc ttttaaaaaac cttaaagggt tgtggggagt  | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actcccgct    | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctatct   | 12600 |
| gggttaccta ctaaacctgt atcgcaagc catagggcaa agtcagggtg acgagcagac    | 12660 |
| ctatcaagaa attaccaag tcagtcgagc tttgggacag gaagacactg gcagtttgga    | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaaag atccctcctc aatatgctct  | 12780 |
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat   | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag   | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc   | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgcactggc tgccccacc    | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaata gacggatttc tgtgggacga  | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg   | 13140 |
| cgatagaatg cattcttctg catcgctgtc cggggctcatg ggtgctaccg cggctgagcc  | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga   | 13260 |
| agtgggtaga ataagtcgcc cgagtttaata gggcgaagag gtagtatctaa acgattcctt | 13320 |
| gctcagaccg gcaagagaaa aaaatttccc aaacaatgga atagaaaagt tgggtggataa  | 13380 |

eolf-seql (2)

|             |            |            |             |             |            |       |
|-------------|------------|------------|-------------|-------------|------------|-------|
| aatgagtaga  | tggaagactt | atgctcagga | tcacagagac  | gagcctggga  | tcatggggat | 13440 |
| tacaagtaga  | gcgagccgta | gacgccagcg | ccatgacaga  | cagaggggtc  | ttgtgtggga | 13500 |
| cgatgaggat  | tcggccgatg | atagcagcgt | gctggacttg  | ggtgggagag  | gaaggggcaa | 13560 |
| cccgtttgct  | catttgcgcc | ctcgcttggg | tggtatgttg  | taaaaaaaa   | taaaaaaaa  | 13620 |
| actcaccaag  | gccatggcga | cgagcgtagc | ttcgttcttc  | tttattatct  | gtgtctagta | 13680 |
| taatgaggcg  | agtcgtgcta | ggcggagcgg | tggtgtatcc  | ggagggtcct  | cctccttcgt | 13740 |
| acgagagcgt  | gatgcagcag | cagcaggcga | cggcgggtgat | gcaatcccca  | ctggaggctc | 13800 |
| cctttgtgcc  | tccgcgatac | ctggcaccta | cggagggcag  | aaacagcatt  | cgttattcgg | 13860 |
| aactggcacc  | tcagtacgat | accaccaggt | tgtatctggg  | ggacaacaag  | tcggcggaca | 13920 |
| ttgcttctct  | gaactatcag | aatgaccaca | gcaacttctt  | gaccacgggtg | gtgcaaaaca | 13980 |
| atgactttac  | ccctacggaa | gccagcacc  | agaccattaa  | ctttgatgaa  | cgatcgcggt | 14040 |
| ggggcgggtca | gctaaagacc | atcatgcata | ctaacatgcc  | aaacgtgaac  | gagtatatgt | 14100 |
| ttagtaacaa  | gttcaaagcg | cgtgtgatgg | tgtccagaaa  | acctcccgac  | ggtgctgcag | 14160 |
| ttggggatac  | ttatgatcac | aagcaggata | ttttgaaata  | tgagtgggtc  | gagtttactt | 14220 |
| tgccagaagg  | caacttttca | gttactatga | ctattgattt  | gatgaacaat  | gccatcatag | 14280 |
| ataattactt  | gaaagtgggt | agacagaatg | gagtgcctga  | aagtgcatt   | ggtgttaagt | 14340 |
| tcgacaccag  | gaacttcaag | ctgggatggg | atcccgaac   | caagttgatc  | atgcctggag | 14400 |
| tgtatacgta  | tgaagccttc | catcctgaca | ttgtcttact  | gcctggctgc  | ggagtggatt | 14460 |
| ttaccgagag  | tcgtttgagc | aaccttcttg | gtatcagaaa  | aaaacagcca  | tttcaagagg | 14520 |
| gttttaagat  | tttgtatgaa | gatttagaag | gtggtaatat  | tccggccctc  | ttggatgtag | 14580 |
| atgcctatga  | gaacagtaag | aaagaacaaa | aagccaaaat  | agaagctgct  | acagctgctg | 14640 |
| cagaagctaa  | ggcaaacata | gttgccagcg | actctacaag  | ggttgctaac  | gctggagagg | 14700 |
| tcagaggaga  | caattttgcg | ccaacacctg | ttccgactgc  | agaatcatta  | ttggccgatg | 14760 |
| tgtctgaagg  | aacggacgtg | aaactcacta | ttcaacctgt  | agaaaaagat  | agtaagaata | 14820 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| gaagctataa tgtgttggaa gacaaaatca acacagccta tcgcagttgg tatctttcgt    | 14880 |
| acaattatgg cgatcccga aaaggagtg gttcctggac attgctcacc acctcagatg      | 14940 |
| tcacctgcgg agcagagcag gtctactgggt cgcttccaga catgatgaag gatcctgtca   | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtgggt ggggtgcagag cttatgccccg | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca    | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gatttttaatc cgtccgccgg   | 15180 |
| cgcccacat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc     | 15240 |
| cgttgcgag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccga      | 15300 |
| cctgtcccta cgtgtacaag gactgggca tagtcgcacc gcgcgtcctt tcaagccgca     | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg    | 15420 |
| tctgcgcgt ccaagcaaga tgtacggagg cgacgcaaa cgttctaccc aacatcctgt      | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg    | 15540 |
| aaccaccgtc gatgatgtaa tcgatcaggt ggttgccgac gcccgttaatt atactcctac   | 15600 |
| tgcgctaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta     | 15660 |
| tgctcgacgt aagagccggc gaaggcgcgt tgccagacgc caccgagcta cactgccat     | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag    | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag cgccggcagg tcccgcaggc aagcagccgc    | 15840 |
| tgctgcagcg gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt     | 15900 |
| gcgtgacgt gccaccggc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa      | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa    | 16020 |
| ggaagaaatg ctgcaggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa    | 16080 |
| aaaacccgc aaaatcaagc ggggttaaaaa ggacaaaaaa gaagaggaag atggcgatga    | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga cgcggtgcaat ggcggtggcg   | 16200 |
| caaagttcga catgtgttga gacctggaac ttcgggtggc ttacacccg gcgagcggtc     | 16260 |

eolf-seql (2)

|             |             |             |             |             |             |       |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| aagcgctact  | tttaagcggt  | cctatgatga  | gggtgtacggg | gatgatgata  | ttcttgagca  | 16320 |
| ggcgggctgac | cgattaggcg  | agtttgctta  | tggcaagcgt  | agtagaataa  | cttccaagga  | 16380 |
| tgagacagtg  | tcgataccct  | tggatcatgg  | aaatcccacc  | cctagtctta  | aaccgggtcac | 16440 |
| tttgcagcaa  | gtgttacccg  | taactccgcg  | aacaggtggt  | aaacgcgaag  | gtgaagattt  | 16500 |
| gtatcccact  | atgcaactga  | tggtagccaa  | acgccagaag  | ttggaggacg  | ttttggagaa  | 16560 |
| agtaaaagt   | gatccagata  | ttcaacctga  | ggttaaagt   | agacccatta  | agcaggtagc  | 16620 |
| gcctgggtctg | gggggtacaaa | ctgtagacat  | taagattccc  | actgaaagta  | tggaagtgc   | 16680 |
| aactgaaccc  | gcaaagccta  | ctgccacctc  | cactgaagt   | caaacggatc  | catggatgcc  | 16740 |
| catgcctatt  | acaactgacg  | ccgccgggtcc | cactcgaaga  | tcccgcacgaa | agtacgggtcc | 16800 |
| agcaagtctg  | ttgatgcca   | attatgttgt  | acacccatct  | attattccta  | ctcctgggtta | 16860 |
| ccgaggcact  | cgctactatc  | gcagccgaaa  | cagtacctcc  | cgccgtcgcc  | gcaagacacc  | 16920 |
| tgcaaatcgc  | agtcgtcgcc  | gtagacgcac  | aagcaaaccg  | actcccggcg  | ccctgggtgcg | 16980 |
| gcaagtgtac  | cgcaatggta  | gtgcggaacc  | tttgacactg  | ccgcgtcgcc  | gttaccatcc  | 17040 |
| gagtatcatc  | acttaataca  | tgttgccgct  | gcctccttgc  | agatatggcc  | ctcacttgtc  | 17100 |
| gccttcgcgt  | tcccatcact  | ggttaccgag  | gaagaaactc  | gcgccgtaga  | agagggatgt  | 17160 |
| tgggacgcgg  | aatgcgacgc  | tacaggcgac  | ggcgtgctat  | ccgcaagcaa  | ttgcgggggtg | 17220 |
| gttttttacc  | agccttaatt  | ccaattatcg  | ctgctgcaat  | tggcgcgata  | ccaggcatag  | 17280 |
| cttccgtggc  | ggttcaggcc  | tcgcaacgac  | attgacattg  | gaaaaaaacg  | tataaataaa  | 17340 |
| aaaaaaaaaa  | tacaatggac  | tctgacactc  | ctggtcctgt  | gactatgttt  | tcttagagat  | 17400 |
| ggaagacatc  | aatttttcat  | ccttgggtcc  | gcgacacggc  | acgaagccgt  | acatgggcac  | 17460 |
| ctggagcgac  | atcggcacga  | gccaactgaa  | cggggggcgcc | ttcaattgga  | gcagtatctg  | 17520 |
| gagcgggctt  | aaaaattttg  | gctcaaccat  | aaaaacatac  | gggaacaaag  | cttggaacag  | 17580 |
| cagtacagga  | caggcgctta  | gaaataaact  | taaagaccag  | aacttccaac  | aaaaagtagt  | 17640 |
| cgatgggata  | gcttccggca  | tcaatggagt  | ggtagatttg  | gctaaccagg  | ctgtgcagaa  | 17700 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| aaagataaac agtcgtttgg acccgccgcc agcaacccca ggtgaaatgc aagtggagga   | 17760 |
| agaaaattcct ccgccagaaa aacgaggcga caagcgtccg cgtcccgatt tggaaagagac | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc   | 17880 |
| caccactaga ccgatagccc caatggccac cgggggtgatg aaaccttctc agttgcatcg  | 17940 |
| acccgtcacc ttggatttgc cccctcccc tgctgctact gctgtacccg cttctaagcc    | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccggggggcg ctccctcgtcc | 18060 |
| aaatgcgcac tggcaaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa  | 18120 |
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgcttat ctgtgtatat   | 18180 |
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct   | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc atgggcatac atgcacatcg    | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctggt gcagttcgcc cgcgccacag   | 18360 |
| acacctactt caatctggga aataagtta gaaatccac cgtagcgccg acccacgatg     | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca   | 18480 |
| atacatactt ttacaaagtg cggtacaccc tggccgtggg cgacaacaga gtgctggata   | 18540 |
| tggccagcac gttctttgac attaggggtg tgttggacag aggtcccagt ttcaaaccct   | 18600 |
| attctggtac ggcttacaac tccctggctc cttaaaggcg tccaaataca tctcagtgga   | 18660 |
| ttgcagaagg tgtaaaaaat acaactgggtg aggaacacgt aacagaagag gaaaccaata  | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag   | 18780 |
| gactcccagt aggtttggaa gtttcagatg aagaaaagta accgatttat gctgataaaa   | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg   | 18900 |
| aaaagtatgg aggcagggtc ctcaaaccgc atactaagat gaaaccatgc tacgggtcct   | 18960 |
| ttgccaaacc tactaatgtg aaaggcggtc aggcaaaaca aaaaacaacg gagcagccaa   | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa  | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc   | 19140 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| atgtagtgta caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat  | 19200 |
| ctatgccccaa cagacccaac tacattggct tcagagataa ctttattgga cttatgtact | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctgggtcaagc gtctcagtta aatgcagtgg | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg  | 19380 |
| acagaaccag atacttttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac | 19440 |
| gtgttattga aaatcatggt gtggaagatg aacttcccaa ctactgtttt ccactggacg  | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgccta  | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca  | 19620 |
| tggaaattaa ccttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat  | 19680 |
| atctcccaga ctcgtacaaa tacaccccggt ccaatgtcac tcttccagaa aacaaaaaca | 19740 |
| cctacgacta catgaacggg cgggtgggtgc cgccatctct agtagacacc tatgtgaaca | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta  | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca  | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca  | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt  | 20100 |
| tccccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg  | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg   | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctggcat   | 20280 |
| ttaccagact gaaaacaaaa gaaactccct ctttggggtc tggatttgac ccctactttg  | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |
| ctaacgaatt tgaaataaag cgactgtgg atggcgaagg ctacaacgta gcccaatgca   | 20520 |
| acatgaccaaa agactgggtt ttggtacaga tgctcgccaa ctacaacatc ggctatcagg | 20580 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gcttctacat tccagaagga tacaaagatc gcatgtattc atttttcaga aacttccagc  | 20640 |
| ccatgagcag gcaggtgggt gatgaggtca attacaaaga cttcaaggcc gtcgccatac  | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccctatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcac accgttctcg agcaacttca  | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg  | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct  | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct   | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc  | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca  | 21180 |
| gagccattgt ccaagacctg ggttgccggac cctatTTTTT gggaacctac gataagcgct | 21240 |
| tcccgggggt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg   | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc  | 21360 |
| TTTTTgatcc TTTTggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg  | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat  | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcattgtcc   | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaacccacc atgaaattgc   | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca   | 21660 |
| atcaaaaaagc actctaccat tttcttaata cccattcgcc ttatTTTcgc tcccatcgta | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa  | 21780 |
| caacgtgttc aataaacatc actttatTTT tttacatgta tcaaggctct gcattactta  | 21840 |
| tttatTTTaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg | 21900 |
| ttgcggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt  | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca | 22020 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ggagccgaaa tcttgaaatc acaattagga ccagtgcctt gagcgcgaga gttgcggtac  | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacggtg  | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cgggggtcatc | 22200 |
| ttgcaggtct gcctacccat ggcgggcacc caattaggct tgtggttgca atcgcagtgc  | 22260 |
| agggggatca gtatcatctt ggcctgatcc tgtctgattc ctggatacac ggctctcatg  | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcggtata aaacatcccg  | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcgggcg  | 22440 |
| tcattgttag ctatttgcac cacacttctg cccagcgggt tttgggtgat tttggttcgc  | 22500 |
| tcgggattct cctttaaggc tcgttgtccg ttctcgctgg ccacatccat ctcgataatc  | 22560 |
| tgctccttct gaatcataat attgccatgc aggcacttca gcttgccctc ataattcattg | 22620 |
| cagccatgag gccacaacgc acagcctgta cattcccaat tatggtgggc gatctgagaa  | 22680 |
| aaagaatgta tcattccctg cagaaatctt cccatcatcg tgctcagtgt cttgtgacta  | 22740 |
| gtgaaagtta actggatgcc tcggtgctcc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttaa aaagagggtc taagtctggt atccagcctg  | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc  | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcattctta | 22980 |
| gcgatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg  | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgtttggt cttccttggc ttcttttttg ggggtatcgg aggaggagga  | 23160 |
| ctgtcgctcc gttccggaga caggaggat tgtgacgttt cgctcaccat taccaactga   | 23220 |
| ctgtcggtag aagaacctga cccacacagg cgacagggtg ttctcttcgg gggcagaggt  | 23280 |
| ggaggcgatt gcgaagggtc gcggtccgac ctggaaggcg gatgactggc agaaccctt   | 23340 |
| ccgcgttcgg ggggtgtgct cctgtggcgg tcgcttaact gatttccttc gcggctggcc  | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cgccacgagt gccatcacat ctcgtcctca gcgacgagga aaaggagcag agcttaagca   | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggagggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gacccgggct   | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa   | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca   | 23760 |
| ccgactacct catagggctt gacggggaag acgcgctcct taaacatcta gcaagacagt   | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccacagc gtggaagagc    | 23880 |
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tcccccaaa cgtcagccaa    | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag   | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta   | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag   | 24120 |
| cttccttggga agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg | 24180 |
| caaatgctct gcaaaaggga gaaaatggca tggatgagca tcacagcgtt ctggtggaat   | 24240 |
| tggaaggcga taatgccaga ctcgcagtac tcaagcgaag catcgagggtc acacacttcg  | 24300 |
| catatccgc tgtcaacctg cccctaaag tcatgacggc ggtcatggac cagttactca     | 24360 |
| ttaagcgcg aagtccccct tcagaagaca tgcatgaccc agatgcctgt gatgagggtg    | 24420 |
| aaccagtggc cagtgatgag cagctaaccg gatggctggg caccgactct cccagggtt    | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tgggtgctggt taccgtagaa ctagagtgtc  | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca   | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatatc taacgtggaa ctcaccaacc   | 24660 |
| tggtttccta catgggtatt ctgcatgaga atcgccctagg acaaagcgtg ctgcacagca  | 24720 |
| ccctgaaggg ggaagccgc cgtgattaca tccgcgattg tgtctatctg tacctgtgcc    | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag   | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca   | 24900 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa  | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcacacctg  | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca  | 25080 |
| cctaccgcga gtgccccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact  | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc  | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga  | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt  | 25320 |
| cttctcctgg gcaaagttaa aaactgaccc cgggactgtg gacctccgcc tacttgcgca  | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc   | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcaccagggg ggcaattctg gcccaattgc  | 25500 |
| aagccatcca aaaatcccg ccaagaatttc tactgaaaaa gggtaagggg gtctaccttg  | 25560 |
| acccccagac cggcgaggaa ctcaacacaa ggttccctca ggatgtccca acgacgagaa  | 25620 |
| aacaagaagt tgaagggtgca gccgccgccc ccagaagata tggaggaaga ttgggacagt | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttggag  | 25740 |
| gaggaaaacg aggaggcaga ggagggtggaa gaagtaaccg ccgacaaaca gttatcctcg | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt  | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcgc ttccaagacc  | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcgggggc ataagaatgc catcatctcc  | 25980 |
| tgcttgcatg agtgcggggg caacatatcc ttcacgcggc gctacttgct attccaccat  | 26040 |
| ggggtgaact ttccgcgcaa tgttttgcat tactaccgtc acctccacag cccctactat  | 26100 |
| agccagcaaa tcccggcagt ctcgacagat aaagacagcg gcggcgacct ccaacagaaa  | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac  | 26220 |
| agccaacgag ccagcgcaaa cccgagagtt aagaaatcgg atctttccaa ccctgtatgc  | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| ttcgctcacc agaagttggt tgtatcacaa gagcgaagat caacttcagc gcactctcga   | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac   | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcatcctcga catgagtaaa gaaattccca   | 26520 |
| cgccctacat gtggagttat caaccccaaa tgggattggc ggccaggcgcc tcccaggact  | 26580 |
| actccacccg catgaattgg ctacgcgccg ggcccttctat gatttctcga gttaatgata  | 26640 |
| tacgcgccta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc   | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca   | 26760 |
| ccactgtatt acttcctcga gacgcccagg ccgaagtcca aatgactaat gcagggtgcgc  | 26820 |
| agttagctgg cggctccacc ctatgtcgtc acaggcctcg gcataatata aaacgcctga   | 26880 |
| tgatcagagg ccgagggtatc cagctcaacg acgagtcggt gagctctccg cttgggtctac | 26940 |
| gaccagacgg aatctttcag attgccggct gcgggagatc ttccttcacc cctcgtcagg   | 27000 |
| ctgttctgac tttggaaaagt tcgtcttcgc aaccccgctc gggcggaatc gggaccgttc  | 27060 |
| aatttgtgga ggagtttact ccctctgtct atttcaaccc cttctccgga tctcctgggc   | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg   | 27180 |
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg   | 27240 |
| ctttcgtgc tttgcccggg aactcattga gttcatctac ttcgaactcc ccaaggatca    | 27300 |
| ccctcaaggt ccggcccacg gaggcgggat ttctatcgaa ggcaaaatag actctcgcct   | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccaggga acaccacggt    | 27420 |
| ttccatctac tgcatttgta atcaccgccg attgcatgaa agcctttgct gtcttatgtg   | 27480 |
| tactgagttt aataaaaaact gaattaagac tctcctacgg actgccgctt cttcaacccg  | 27540 |
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctgtt aacttcacct   | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttccta    | 27660 |
| ctaatactac tttcaaaacc ggagggtgagc tccaagggtc tcctacagaa aacccttggg  | 27720 |
| tggaagcggg ccttgtagtg ctaggaattc ttgcgggtgg gcttgtgatt attctttgct   | 27780 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| acctatacac accttgcttc acttttcttag tgggtgtgtg gtattggttt aaaaaatggg | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga  | 27900 |
| tccatgtcta gacttcgacc cagaaaactg cacacttact tttgcacccg acacaagccg  | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aattttacctg | 28020 |
| catggtggga atcaacccca tagttatcac ccagcaaagt ggagatacta agggttgcat  | 28080 |
| tcactgctcc tgcgattcca tcgagtgcac ctacaccctg ctgaagaccc tatgcggcct  | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca  | 28200 |
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttccctc ttcccaactc  | 28260 |
| tgggtattcta aaccccgttc agcggcatac tttctccata ctttaaaggg gatgtcaa   | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt   | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca  | 28440 |
| cccctttata aacccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt  | 28500 |
| tcttacttta aaatgtttta cccactaac aaccacaggc ggatctctac agctaaaagt   | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac  | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac  | 28680 |
| gaatgaaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aaccccaccg aagccaactg  | 28800 |
| tcaaatacatg aactccagtg aatctaata ttgcaaatta attctaacac tagttaaaac  | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct  | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaattt  | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc  | 29040 |
| tactggtgcc attactaatg ctaaaggttt catgcccagc acgactgcct atcctttcaa  | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga  | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga  | 29220 |

eolf-seql (2)

|             |             |             |             |             |            |       |
|-------------|-------------|-------------|-------------|-------------|------------|-------|
| gacatcatat  | tgtattcgta  | taacttgggc  | ctggaacaca  | ggagatgccc  | cagaggtgca | 29280 |
| aacctctgct  | acaaccctag  | tcacctcccc  | atttaccttt  | tactacatca  | gagaagacga | 29340 |
| ctgacaaata  | aagtttaact  | tgttttatttg | aaaatcaatt  | cacaaaatcc  | gagtagttat | 29400 |
| tttgccctccc | ccttcccatt  | taacagaata  | caccaatctc  | tccccacgca  | cagctttaaa | 29460 |
| catttggata  | ccattagata  | tagacatggc  | tttagattcc  | acattccaaa  | cagtttcaga | 29520 |
| gcgagccaat  | ctgggggtcag | tgatagataa  | aaatccatcg  | ggatagtctt  | ttaaagcgct | 29580 |
| ttcacagtcc  | aactgctgcg  | gatgcgactc  | cggagtctgg  | atcacggtca  | tctggaagaa | 29640 |
| gaacgatggg  | aatcataatc  | cgaaaacggc  | atcggaacgat | tgtgtctcat  | caaaccaca  | 29700 |
| agcagccgct  | gtctgcgtcg  | ctccgtgcga  | ctgctgttta  | tgggatcagg  | gtccacagtg | 29760 |
| tcctgaagca  | tgattttaat  | agcccttaac  | atcaactttc  | tgggtcgatg  | cgcgagcaa  | 29820 |
| cgcattctga  | tttcaactca  | atctttgcag  | taggtacaac  | acattattac  | aatattgttt | 29880 |
| aataaaccat  | aattaaaagc  | gctccagcca  | aaactcatat  | ctgatataat  | cgcccctgca | 29940 |
| tgaccatcat  | accaaagttt  | aatataaatt  | aaatgacgtt  | ccctcaaaaa  | cacactaccc | 30000 |
| acatacatga  | tctcttttgg  | catgtgcata  | ttaacaatct  | gtctgtacca  | tggacaacgt | 30060 |
| tggttaatca  | tgcaacccaa  | tataaccttc  | cgggaaccaca | ctgccaacac  | cgctccccc  | 30120 |
| gccatgcatt  | gaagtgaacc  | ctgctgatta  | caatgacaat  | gaagaaccca  | attctctcga | 30180 |
| ccgtgaatca  | cttgagaatg  | aaaaatatct  | atagtggcac  | aacatagaca  | taaatgcatg | 30240 |
| catcttctca  | taatttttaa  | ctcctcagga  | tttagaaaca  | tatcccaggg  | aataggaagc | 30300 |
| tcttgagaa   | cagtaaagct  | ggcagaacaa  | ggaagaccac  | gaacacaact  | tacactatgc | 30360 |
| atagtcatag  | tatcacaatc  | tggcaacagc  | gggtgggtctt | cagtcataga  | agctcgggtt | 30420 |
| tcattttcct  | cacaacgtgg  | taactgggct  | ctgggtgtaag | ggtgatgtct  | ggcgcatgat | 30480 |
| gtcgagcgtg  | cgcgcaacct  | tgtcataatg  | gagttgcttc  | ctgacattct  | cgtattttgt | 30540 |
| atagcaaaac  | gcgcccttgg  | cagaacacac  | tcttcttcgc  | cttctatcct  | gccgcttagc | 30600 |
| gtgttccgtg  | tgatagttca  | agtacaacca  | cactcttaag  | ttgggtcaaaa | gaatgctggc | 30660 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ttcagttgta atcaaaaactc catcgcatct aatcgttctg aggaaatcat ccaagcaatg | 30720 |
| caactggatt gtgtttcaag caggagagga gaggggaagag acggaagaac catgttaatt | 30780 |
| tttattccaa acgatctcgc agtacttcaa attgtagatc gcgcagatgg catctctcgc  | 30840 |
| ccccactgtg ttggtgaaaa agcacagcta gatcaaaaga aatgcgattt tcaaggtgct  | 30900 |
| caacgggtggc ttccagcaaa gcctccacgc gcacatccaa gaacaaaaga ataccaaaag | 30960 |
| aaggagcatt ttctaactcc tcaatcatca tattacattc ctgcaccatt cccagataat  | 31020 |
| tttcagcttt ccagccttga attattcgtg tcagttcttg tggtaaattcc aatccacaca | 31080 |
| ttacaaacag gtcccggagg gcgccctcca ccaccattct taaacacacc ctcataatga  | 31140 |
| caaaatatct tgctcctgtg tcacctgtag cgaattgaga atggcaacat caattgacat  | 31200 |
| gcccttggct ctaagttctt ctttaagttc tagttgtaaa aactctctca tattatcacc  | 31260 |
| aaactgctta gccagaagcc ccccggaac aagagcaggg gacgctacag tgcagtacaa   | 31320 |
| gcgcagacct cccaattgg ctccagcaaa aacaagattg gaataagcat attgggaacc   | 31380 |
| gccagtaata tcatcgaagt tgctggaaat ataatcaggc agagtttctt gtaaaaattg  | 31440 |
| aataaaagaa aaatttgcca aaaaaacatt caaaacctct gggatgcaaa tgcaataggt  | 31500 |
| taccgcgctg cgctccaaca ttgttagttt tgaattagtc tgcaaaaata aaaaaaaaaa  | 31560 |
| caagcgtcat atcatagtag cctgacgaac agatggataa atcagtcttt ccatcacaag  | 31620 |
| acaagccaca gggctctccag ctcgaccctc gtaaaacctg tcatcatgat taaacaacag | 31680 |
| caccgaaagt tcctcgcggt gaccagcatg aataattctt gatgaagcat acaatccaga  | 31740 |
| catgttagca tcagttaacg agaaaaaaca gccaacatag cttttgggta taattatgct  | 31800 |
| taatcgtaag tatagcaaag ccacccctcg cggatacaaa gtaaaaggca caggagaata  | 31860 |
| aaaaatataa ttatttctct gctgctgttc aggcaacgct gcccccggct cctctaaata  | 31920 |
| cacatacaaa gcctcatcag ccatggctta ccagacaaag tacagcgggc acacaaagca  | 31980 |
| caagctctaa agtgactctc caacctctcc acaatatata tatacacaag ccctaaactg  | 32040 |
| acgtaatggg agtaaagtgt aaaaaatccc gccaaacca acacacaccc cgaaactgcg   | 32100 |



eolf-seql (2)

tcaccaggga aaagtacagt ttcacttccg caatcccaac aggcgtaact tcctctttct 32160  
cacggtacgt gatatcccac taacttgcaa cgtcattttc ccacggtcgc accgcccctt 32220  
ttagccgtta accccacagc caatcaccac acgatccaca ctttttaaaa tcacctcatt 32280  
tacatattgg caccattcca tctataaggt atattatata gataga 32326

<210> 22  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> hinge linker sequence

<400> 22

Asp Lys Thr His Thr Cys Ala Ala  
1 5

<210> 23  
<211> 11  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> hinge linker sequence

<400> 23

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala  
1 5 10

<210> 24  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> hinge linker sequence

<400> 24

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Thr Cys Pro Pro Cys

eolf-seql (2)

1 5 10 15

Pro Ala

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

<220>  
 <223> hinge linker sequence

<400> 25

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Thr Cys Pro Pro Cys  
 1 5 10 15

Pro Ala Thr Cys Pro Pro Cys Pro Ala  
 20 25

<210> 26  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> hinge linker sequence

<400> 26

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Gly Lys Pro Thr Leu  
 1 5 10 15

Tyr Asn Ser Leu Val Met Ser Asp Thr Ala Gly Thr Cys Tyr  
 20 25 30

<210> 27  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

eolf-seql (2)

<220>

<223> hinge linker sequence

<400> 27

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Thr | His | Thr | Cys | Pro | Pro | Cys | Pro | Ala | Gly | Lys | Pro | Thr | His |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asn | Val | Ser | Val | Val | Met | Ala | Glu | Val | Asp | Gly | Thr | Cys | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |

<210> 28

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> hinge linker sequence

<400> 28

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Thr | His | Thr | Cys | Cys | Val | Glu | Cys | Pro | Pro | Cys | Pro | Ala |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |

<210> 29

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> hinge linker sequence

<400> 29

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Thr | His | Thr | Cys | Pro | Arg | Cys | Pro | Glu | Pro | Lys | Ser | Cys | Asp |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Pro | Pro | Cys | Pro | Arg | Cys | Pro | Ala |
|     |     |     | 20  |     |     |     | 25  |     |     |

<210> 30

<211> 11

<212> PRT

eolf-seql (2)

<213> Artificial Sequence

<220>

<223> hinge linker sequence

<400> 30

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Thr | His | Thr | Cys | Pro | Ser | Cys | Pro | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |

<210> 31

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> flexible linker sequence

<400> 31

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Gly | Gly | Gly | Ser | Glu |
| 1   |     |     |     | 5   |     |     |

<210> 32

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> flexible linker sequence

<400> 32

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Thr | His | Thr | Ser |
| 1   |     |     |     | 5   |     |

<210> 33

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> flexible linker sequence

eolf-seql (2)

<220>  
<221> misc\_feature  
<222> (1)..(1)  
<223> Xaa is absent or S

<400> 33

Xaa Gly Gly Gly Gly Ser  
1 5

<210> 34  
<211> 11  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> flexible linker sequence

<220>  
<221> misc\_feature  
<222> (1)..(1)  
<223> Xaa is absent or S

<400> 34

Xaa Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
1 5 10

<210> 35  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> flexible linker sequence

<220>  
<221> misc\_feature  
<222> (1)..(1)  
<223> Xaa is absent or S

<400> 35

Xaa Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

|   |   |               |    |
|---|---|---------------|----|
|   |   | eolf-seql (2) |    |
| 1 | 5 | 10            | 15 |

<210> 36  
 <211> 21  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> flexible linker sequence

<220>  
 <221> misc\_feature  
 <222> (1)..(1)  
 <223> Xaa is absent or S

<400> 36

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Gly | Gly | Gly | Gly | Ser | Gly | Gly | Gly | Gly | Ser | Gly | Gly | Gly | Gly | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Gly | Gly | Gly | Gly | Ser |
|     |     |     |     | 20  |

<210> 37  
 <211> 26  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> flexible linker sequence

<220>  
 <221> misc\_feature  
 <222> (1)..(1)  
 <223> Xaa is absent or S

<400> 37

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Gly | Gly | Gly | Gly | Ser | Gly | Gly | Gly | Gly | Ser | Gly | Gly | Gly | Gly | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Gly | Gly | Ser | Gly | Gly | Gly | Gly | Ser |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

20

25

<210> 38  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> flexible linker sequence

<400> 38

Ala Ala Ala Gly Ser Gly Gly Ala Ser Ala Ser  
 1 5 10

<210> 39  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> flexible linker sequence

<220>  
 <221> misc\_feature  
 <222> (7)..(7)  
 <223> X represents an amino acid

<400> 39

Ala Ala Ala Gly Ser Gly Xaa Gly Gly Gly Ser Gly Ala Ser Ala Ser  
 1 5 10 15

<210> 40  
 <211> 21  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> flexible linker sequence

<220>  
 <221> misc\_feature

eolf-seql (2)

<222> (7)..(7)

<223> X represents an amino acid

<220>

<221> misc\_feature

<222> (12)..(12)

<223> X represents an amino acid

<400> 40

Ala Ala Ala Gly Ser Gly Xaa Gly Gly Gly Ser Xaa Gly Gly Gly Ser  
1 5 10 15

Gly Ala Ser Ala Ser  
20

<210> 41

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> flexible linker sequence

<220>

<221> misc\_feature

<222> (7)..(7)

<223> X represents an amino acid

<220>

<221> misc\_feature

<222> (12)..(12)

<223> X represents an amino acid

<220>

<221> misc\_feature

<222> (17)..(17)

<223> X represents an amino acid

<400> 41

Ala Ala Ala Gly Ser Gly Xaa Gly Gly Gly Ser Xaa Gly Gly Gly Ser  
1 5 10 15



eolf-seql (2)

Xaa Gly Gly Gly Ser Gly Ala Ser Ala Ser  
20 25

<210> 42  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> flexible linker sequence

<220>  
<221> misc\_feature  
<222> (7)..(7)  
<223> X represents an amino acid

<220>  
<221> misc\_feature  
<222> (12)..(12)  
<223> X represents an amino acid

<220>  
<221> misc\_feature  
<222> (17)..(17)  
<223> X represents an amino acid

<220>  
<221> misc\_feature  
<222> (22)..(22)  
<223> X represents an amino acid

<400> 42

Ala Ala Ala Gly Ser Gly Xaa Gly Gly Gly Ser Xaa Gly Gly Gly Ser  
1 5 10 15

Xaa Gly Gly Gly Ser Xaa Gly Gly Gly Ser Gly Ala Ser Ala Ser  
20 25 30

<210> 43  
<211> 13  
<212> PRT  
<213> Artificial Sequence

eolf-seql (2)

<220>

<223> flexible linker sequence

<220>

<221> misc\_feature

<222> (7)..(7)

<223> X represents an amino acid

<400> 43

Ala Ala Ala Gly Ser Gly Xaa Ser Gly Ala Ser Ala Ser  
1 5 10

<210> 44

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> flexible linker sequence

<400> 44

Pro Gly Gly Asn Arg Gly Thr Thr Thr Thr Arg Arg Pro Ala Thr Thr  
1 5 10 15

Thr Gly Ser Ser Pro Gly Pro Thr Gln Ser His Tyr  
20 25

<210> 45

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> flexible linker sequence

<400> 45

Ala Thr Thr Thr Gly Ser Ser Pro Gly Pro Thr  
1 5 10

<210> 46

eolf-seql (2)

<211> 6  
 <212> PRT  
 <213> Artificial Sequence  
 <220>  
 <223> flexible linker sequence  
 <400> 46

Ala Thr Thr Thr Gly Ser  
 1 5

<210> 47  
 <211> 21  
 <212> PRT  
 <213> Artificial Sequence  
 <220>  
 <223> Flexible linker sequence  
 <400> 47

Glu Pro Ser Gly Pro Ile Ser Thr Ile Asn Ser Pro Pro Ser Lys Glu  
 1 5 10 15

Ser His Lys Ser Pro  
 20

<210> 48  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence  
 <220>  
 <223> Flexible linker sequence  
 <400> 48

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

<210> 49  
 <211> 15  
 <212> PRT

eolf-seql (2)

<213> Artificial Sequence

<220>

<223> Flexible linker sequence

<400> 49

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Gly | Gly | Ile | Ala | Pro | Ser | Met | Val | Gly | Gly | Gly | Gly | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |

<210> 50

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Flexible linker sequence

<400> 50

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Gly | Gly | Lys | Val | Glu | Gly | Ala | Gly | Gly | Gly | Gly | Gly | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |

<210> 51

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Flexible linker sequence

<400> 51

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Gly | Gly | Ser | Met | Lys | Ser | His | Asp | Gly | Gly | Gly | Gly | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |

<210> 52

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Flexible linker sequence

<400> 52

eolf-seql (2)

Gly Gly Gly Gly Asn Leu Ile Thr Ile Val Gly Gly Gly Gly Ser  
1 5 10 15

<210> 53  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 53

Gly Gly Gly Gly Val Val Pro Ser Leu Pro Gly Gly Gly Gly Ser  
1 5 10 15

<210> 54  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 54

Gly Gly Glu Lys Ser Ile Pro Gly Gly Gly Gly Ser  
1 5 10

<210> 55  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 55

Arg Pro Leu Ser Tyr Arg Pro Pro Phe Pro Phe Gly Phe Pro Ser Val  
1 5 10 15

Arg Pro

eolf-seql (2)

<210> 56  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 56

Tyr Pro Arg Ser Ile Tyr Ile Arg Arg Arg His Pro Ser Pro Ser Leu  
1 5 10 15

Thr Thr

<210> 57  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 57

Thr Pro Ser His Leu Ser His Ile Leu Pro Ser Phe Gly Leu Pro Thr  
1 5 10 15

Phe Asn

<210> 58  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 58

eolf-seql (2)

Arg Pro Val Ser Pro Phe Thr Phe Pro Arg Leu Ser Asn Ser Trp Leu  
1 5 10 15

Pro Ala

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

<220>  
<223> Flexible linker sequence

<400> 59

Ser Pro Ala Ala His Phe Pro Arg Ser Ile Pro Arg Pro Gly Pro Ile  
1 5 10 15

Arg Thr

<210> 60  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 60

Ala Pro Gly Pro Ser Ala Pro Ser His Arg Ser Leu Pro Ser Arg Ala  
1 5 10 15

Phe Gly

<210> 61  
<211> 18  
<212> PRT

eolf-seql (2)

<213> Artificial Sequence

<220>

<223> Flexible linker sequence

<400> 61

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Asn | Ser | Ile | His | Phe | Leu | His | Pro | Leu | Leu | Val | Ala | Pro | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

Gly Ala

<210> 62

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Flexible linker sequence

<400> 62

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Ser | Leu | Ser | Gly | Val | Leu | Gln | Val | Arg | Tyr | Leu | Ser | Pro | Pro |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

Asp Leu

<210> 63

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Flexible linker sequence

<400> 63

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Gln | Tyr | Pro | Ser | Pro | Leu | Thr | Leu | Thr | Leu | Pro | Pro | His | Pro |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

Ser Leu



eolf-seql (2)

<210> 64  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 64

Asn Pro Ser Leu Asn Pro Pro Ser Tyr Leu His Arg Ala Pro Ser Arg  
1 5 10 15

Ile Ser

<210> 65  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 65

Leu Pro Trp Arg Thr Ser Leu Leu Pro Ser Leu Pro Leu Arg Arg Arg  
1 5 10 15

Pro

<210> 66  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 66

eolf-seql (2)

Pro Pro Leu Phe Ala Lys Gly Pro Val Gly Leu Leu Ser Arg Ser Phe  
1 5 10 15

Pro Pro

<210> 67  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 67

Val Pro Pro Ala Pro Val Val Ser Leu Arg Ser Ala His Ala Arg Pro  
1 5 10 15

Pro Tyr

<210> 68  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Flexible linker sequence

<400> 68

Leu Arg Pro Thr Pro Pro Arg Val Arg Ser Tyr Thr Cys Cys Pro Thr  
1 5 10 15

Pro

<210> 69  
<211> 18  
<212> PRT

eolf-seql (2)

<213> Artificial Sequence

<220>

<223> Flexible linker sequence

<400> 69

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Asn | Val | Ala | His | Val | Leu | Pro | Leu | Leu | Thr | Val | Pro | Trp | Asp | Asn |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

Leu Arg

<210> 70

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Flexible linker sequence

<400> 70

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Asn | Pro | Leu | Leu | Pro | Leu | Cys | Ala | Arg | Ser | Pro | Ala | Val | Arg | Thr |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     |     | 15  |     |

Phe Pro

<210> 71

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> linker sequence

<400> 71

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Pro | Ala | Pro | Ala | Ala | Pro | Ala | Pro | Ala |
| 1   |     |     | 5   |     |     |     | 10  |     |     |     |

<210> 72

eolf-seql (2)

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

<220>  
 <223> linker sequence

<400> 72

Pro Pro Pro Pro  
 1

<210> 73  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Linker sequence

<400> 73

Asp Leu Cys Leu Arg Asp Trp Gly Cys Leu Trp  
 1 5 10

<210> 74  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Linker sequence

<400> 74

Asp Ile Cys Leu Pro Arg Trp Gly Cys Leu Trp  
 1 5 10

<210> 75  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Linker sequence

eolf-seql (2)

<400> 75

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Asp | Ile | Cys | Leu | Pro | Arg | Trp | Gly | Cys | Leu | Trp | Gly | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |

<210> 76

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker sequence

<400> 76

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Arg | Leu | Met | Glu | Asp | Ile | Cys | Leu | Pro | Arg | Trp | Gly | Cys | Leu | Trp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Glu | Asp | Asp | Glu |
|     |     |     | 20  |

<210> 77

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker sequence

<400> 77

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Leu | Ile | Gly | Asp | Ile | Cys | Leu | Pro | Arg | Trp | Gly | Cys | Leu | Trp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Gly | Arg | Ser | Val |
|     |     |     | 20  |

<210> 78

<211> 21

<212> PRT

<213> Artificial Sequence

eolf-seql (2)

<220>

<223> Linker sequence

<400> 78

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Leu | Ile | Gly | Asp | Ile | Cys | Leu | Pro | Arg | Trp | Gly | Cys | Leu | Trp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Gly | Arg | Ser | Val | Lys |
|     |     |     |     | 20  |

<210> 79

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker sequence

<400> 79

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asp | Ile | Cys | Leu | Pro | Arg | Trp | Gly | Cys | Leu | Trp | Glu | Asp | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |

<210> 80

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker sequence

<400> 80

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Met | Glu | Asp | Ile | Cys | Leu | Pro | Arg | Trp | Gly | Cys | Leu | Trp | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

Asp Asp

<210> 81

<211> 16

<212> PRT

eolf-seql (2)

<213> Artificial Sequence

<220>

<223> Linker sequence

<400> 81

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Asp | Ile | Cys | Leu | Pro | Arg | Trp | Gly | Cys | Leu | Trp | Glu | Asp | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

<210> 82

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker sequence

<400> 82

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Asp | Ile | Cys | Leu | Pro | Arg | Trp | Gly | Cys | Leu | Trp | Glu | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |

<210> 83

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker sequence

<400> 83

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Met | Glu | Asp | Ile | Cys | Leu | Ala | Arg | Trp | Gly | Cys | Leu | Trp | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

Asp Asp

<210> 84

<211> 20

<212> PRT

<213> Artificial Sequence

eolf-seql (2)

<220>

<223> Linker sequence

<400> 84

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Arg | Ser | Phe | Cys | Thr | Arg | Trp | Pro | Ala | Glu | Lys | Ser | Cys | Lys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Pro | Leu | Arg | Gly |
|     |     |     | 20  |

<210> 85

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker sequence

<400> 85

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ala | Pro | Glu | Ser | Phe | Val | Cys | Tyr | Trp | Glu | Thr | Ile | Cys | Phe | Glu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Arg | Ser | Glu | Gln |
|     |     |     | 20  |

<210> 86

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker sequence

<400> 86

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Met | Cys | Tyr | Phe | Pro | Gly | Ile | Cys | Trp | Met |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |

<210> 87

<211> 5288

<212> DNA



eolf-seql (2)

<213> Artificial Sequence

<220>

<223> DNA sequence corresponding to E2B region of the ENAD GENOME (BP 10355-5068)

<400> 87

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ctatggcatc tcgatccagc agacctctc gtttcgcggg tttggacggc tcctggaata   | 60   |
| gggtatgaga cgatgggcgt ccagcgctgc cagggttcgg tccttccagg gtctcagtgt  | 120  |
| tcgagtcagg gttgtttccg tcacagtga ggggtgtgcg cctgcttggg cgcttgccag   | 180  |
| ggtgcgcttc agactcatcc tgctggtcga aaacttctgt cgcttggcgc cctgtatgtc  | 240  |
| ggccaagtag cagtttacca tgagttcgta gttgagcgcc tcggctgcgt ggcccttggc  | 300  |
| gcggagctta cctttggaag ttttcttgca taccgggcag tataggcatt tcagcgcata  | 360  |
| caacttgggc gcaaggaaaa cggattctgg ggagtatgca tctgcgccgc aggaggcgca  | 420  |
| aacagtttca cattccacca gccaggttaa atccggttca ttgggggtcaa aaacaagttt | 480  |
| tccgccatat tttttgatgc gtttcttacc tttggctctc atgagttcgt gtcctcgttg  | 540  |
| agtgacaaac aggctgtccg tgtccccgta gactgatttt acaggcctct tctccagtgg  | 600  |
| agtgccctcg tcttcttcgt acaggaactc tgaccactct gatacaaagg cgcgcgtcca  | 660  |
| ggccagcaca aaggaggcta tgtgggaggg gtagcgatcg ttgtcaacca ggggggtccac | 720  |
| cttttccaaa gtatgcaaac acatgtcacc ctcttcaaca tccaggaatg tgattggctt  | 780  |
| gtaggtgtat ttcacgtgac ctgggggtccc cgctgggggg gtataaaagg gggcggttct | 840  |
| ttgctcttcc tactgtctt ccggatcgct gtccaggaac gtcagctgtt ggggtaggta   | 900  |
| ttccctctcg aaggcgggca tgacctctgc actcaggttg tcagtttcta agaacgagga  | 960  |
| ggatttgata ttgacagtgc cggttgagat gcctttcatg aggttttctgt ccatctggtc | 1020 |
| agaaaacaca atttttttat tgtcaagttt ggtggcaa at gatccataca gggcggttga | 1080 |
| taaaagtttg gcaatggatc gcatggtttg gttcttttcc ttgtccgcgc gctctttggc  | 1140 |
| ggcgatgttg agttggacat actcgctgc caggcacttc cattcgggga agatagttgt   | 1200 |
| taattcatct ggcacgattc tcaattgcca ccttcgatta tgcaaggtaa ttaaattccac | 1260 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| actggtggcc acctcgctc gaaggggttc attggtccaa cagagcctac ctcctttcct   | 1320 |
| agaacagaaa gggggaagtg ggtctagcat aagttcatcg ggaggggtctg catccatggt | 1380 |
| aaagattccc ggaagtaaat ccttatcaaa atagctgatg ggagtgggggt catctaaggc | 1440 |
| catttgccat tctcgagctg ccagtgcgcg ctcatatggg ttaaggggac tgcccatgg   | 1500 |
| catgggatgg gtgagtgcag aggcatacat gccacagatg tcatagacgt agatgggatc  | 1560 |
| ctcaaagatg cctatgtagg ttggatagca tcgccccct ctgatacttg ctcgcacata   | 1620 |
| gtcatatagt tcatgtgatg gcgctagcag ccccggaacc aagttggtgc gattgggttt  | 1680 |
| ttctgttctg tagacgatct ggcgaaagat ggcgtgagaa ttggaagaga tgggtgggtct | 1740 |
| ttgaaaaatg ttgaaatggg catgaggtag acctacagag tctctgacaa agtgggcata  | 1800 |
| agattcttga agcttgggta ccagttcggc ggtgacaagt acgtctaggg cgcagtagtc  | 1860 |
| aagtgtttct tgaatgatgt cataacctgg ttggtttttc ttttcccaca gttcgcggtt  | 1920 |
| gagaaggtat tcttcgcgat ccttcagta ctcttctagc ggaaacccgt ctttgtctgc   | 1980 |
| acggtaagat cctagcatgt agaactgatt aactgccttg taagggcagc agcccttctc  | 2040 |
| tacgggtaga gagtatgctt gagcagcttt tcgtagcgaa gcgtgagtaa gggcaaaggt  | 2100 |
| gtctctgacc atgactttga ggaattggta tttgaagtcg atgtcgtcac aggctccctg  | 2160 |
| ttcccagagt tggaagtcta cccgtttctt gtaggcgggg ttgggcaaag cgaaagtaac  | 2220 |
| atcattgaag agaatcttgc cggccctggg catgaaattg cgagtgatgc gaaaaggctg  | 2280 |
| tggtacttcc gctcggttat tgataacctg ggcagctagg acgatctcgt cgaaaccgtt  | 2340 |
| gatgttgtgt cctacgatgt ataattctat gaaacgcggc gtgcctctga cgtgaggtag  | 2400 |
| cttactgagc tcatcaaagg ttaggtctgt ggggtcagat aaggcgtagt gttcgagagc  | 2460 |
| ccattcgtgc aggtgaggat tcgctttaag gaaggaggac cagagggtcca ctgccagtgc | 2520 |
| tgtttgtaac tgggtcccgt actgacgaaa atgccgtccg actgccattt tttctggggt  | 2580 |
| gacgcaatag aaggtttggg ggtcctgccg ccagcgatcc cacttgagtt ttatggcgag  | 2640 |
| gtcataggcg atgttgacga gccgctggtc tccagagagt ttcatgacca gcatgaaggg  | 2700 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| gattagctgc ttgccaaagg accccatcca ggtgtaggtt tccacatcgt aggtgagaaa  | 2760 |
| gagcctttct gtgcgaggat gagagccaat cgggaagaac tggatctcct gccaccagtt  | 2820 |
| ggaggaatgg ctgttgatgt gatggaagta gaactccctg cgacgcgccg agcattcatg  | 2880 |
| cttgtgcttg tacagacggc cgacagtagtc gcagcgttgc acgggttgta tctcgtgaat | 2940 |
| gagttgtacc tggcttccct tgacgagaaa tttcagtggg aagccgaggc ctggcgattg  | 3000 |
| tatctcgtgc tttactatgt tgtctgcatc ggctgttca tcttctgtct cgatggtggt   | 3060 |
| catgctgacg agccctcgcg ggaggcaagt ccagacctcg gcgcggcagg ggcgagctc   | 3120 |
| gaggacgaga gcgcgcaggc tggagctgtc cagggtcctg agacgctgcg gactcaggtt  | 3180 |
| agtaggcagt gtcaggagat taacttgcat gatcttttgg agggcgtgcg ggaggttcag  | 3240 |
| atagtacttg atctcaacgg gtccgttggg ggagatgtcg atggcttgca gggttccgtg  | 3300 |
| tcccttgggc gctaccaccg tgcccttggt tttcattttg gacggcgggtg gctctgttgc | 3360 |
| ttcttgcatg tttagaagcg gtgtcgaggg cgcgaccgg gcggcagggg cggctcggga   | 3420 |
| cccggcggca tggctggcag tggtagctcg gcgccgcgcg cgggtaggtt ctggtactgc  | 3480 |
| gccctgagaa gactcgcatt cgcgacgacg cggcggttga catcctggat ctgacgcctc  | 3540 |
| tgggtgaaaag ctaccggccc cgtgagcttg aacctgaaaag agagttcaac agaataatc | 3600 |
| tcggtatcgt tgacggcggc ttgcctaagg atttcttgca cgtcaccaga gttgtcctgg  | 3660 |
| taggcgatct ccgccatgaa ctgctcgatc tcttctctt gaagatctcc gcggcccgct   | 3720 |
| ctctcgacgg tggccgcgag gtcgttgag atgcgccaa tgagttgaga gaatgcattc    | 3780 |
| atgcccgcct cgttccagac gcggctgtag accacggccc ccacgggatc tctcgcgcg   | 3840 |
| atgaccacct gggcgagggt gagctccacg tggcgggtga agaccgcata gttgcatagg  | 3900 |
| cgctggaaaa ggtagttgag tgtggtggcg atgtgctcgg tgacgaagaa atacatgatc  | 3960 |
| catcgtctca gcggcatctc gctgacatcg cccagagctt ccaagcgctc catggcctcg  | 4020 |
| tagaagtcca cggcaaaaatt aaaaaactgg gagtttcgcg cggacacggt caactcctct | 4080 |
| tccagaagac ggataagttc ggcgatgggt gtgcgcacct cgcgctcgaa agcccctggg  | 4140 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| atttcttcct caatctcttc ttcttccact aacatctctt cctcttcagg tggggctgca  | 4200 |
| ggaggagggg gaacgcggcg acgccggcgg cgcacgggca gacggtcgat gaatctttca  | 4260 |
| atgacctctc cgcggcggcg gcgcatgggt tcagtgacgg cgcggccgtt ctcgcgcggt  | 4320 |
| cgcagagtaa aaacaccgcc gcgcatctcc ttaaagtggg gactgggagg ttctccgttt  | 4380 |
| gggagggaga gggcgctgat tatacatttt attaattggc ccgtagggac tgcacgcaga  | 4440 |
| gatctgatcg tgtcaagatc cacgggatct gaaaaccttt cgacgaaagc gtctaaccag  | 4500 |
| tcacagtcac aaggtaggct gagtacggct tcttggtggc ggggggtgggt atgtgttcgg | 4560 |
| tctgggtctt ctgtttcttc ttcattctcg gaaggtgaga cgatgctgct ggtgatgaaa  | 4620 |
| ttaaagtagg cagtcttaag acggcggatg gtggcgagga gcaccagggtc tttgggtccg | 4680 |
| gcttgctgga tacgcaggcg attggccatt cccaagcat tatcctgaca tctagcaaga   | 4740 |
| tctttgtagt agtcttgcat gagccgttct acgggcactt cttcctcacc cgttctgcca  | 4800 |
| tgcatacgtg tgagtccaaa tccgcgcatt ggttgtagca gtgccaagtc agctacgact  | 4860 |
| ctttcggcga ggatggcttg ctgtacttgg gtaagggtgg cttgaaagtc atcaaaatcc  | 4920 |
| acaaagcggg ggtaagctcc tgtattaatg gtgtaagcac agttggccat gactgaccag  | 4980 |
| ttaactgtct ggtgaccagg gcgcacgagc tcggtgtatt taaggcgcga ataggcgcgg  | 5040 |
| gtgtcaaaga tgtaatcggt gcagggtgcgc accagatact ggtaccctat aagaaaatgc | 5100 |
| ggcgggtgggt ggcggtagag aggccatcgt tctgtagctg gagcgccagg ggcgagggtc | 5160 |
| tccaacataa ggcggtgata gccgtagatg tacctggaca tccagggtgat tcctgcggcg | 5220 |
| gtagtagaag cccgaggaaa ctcgcgtacg cggttccaaa tggtgcgtag cggcatgaag  | 5280 |
| tagttcat                                                           | 5288 |

<210> 88

<211> 201

<212> DNA

<213> Artificial Sequence

<220>

eolf-seql (2)

<223> A non-coding sequence suitable for inclusion into BX

<400> 88  
 aaaatgatta ataaaaaatc acttacttga aatcagcaat aaggtctctg ttgaaatfff 60  
 ctcccagcag cacctcactt cctctttccc aactctggta ttctaaaccc cgttcagcgg 120  
 catactttct ccatacttta aaggggatgt caaatfftag ctctctctct gtaccacaa 180  
 tcttcatgtc tttcttccca g 201

<210> 89  
 <211> 34  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> A non-coding sequence suitable for inclusion into BY

<400> 89  
 caaataaagt ttaacttggt tatttgaaaa tcaa 34

<210> 90  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Splice acceptor sequence

<400> 90  
 tttctctctt cagg 14

<210> 91  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Splice acceptor sequence

<400> 91  
 tgctaactct ctttctctc ttcagg 26

eolf-seql (2)

<210> 92  
 <211> 13  
 <212> RNA  
 <213> Artificial Sequence

<220>  
 <223> sequence comprising a start codon

<400> 92  
 gccgccrcca ugg 13

<210> 93  
 <211> 550  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Internal Ribosome Entry Sequence (IRES)

<400> 93  
 gttactggcc gaagccgctt ggaataaggc cgggtgtcgt ttgtctatat gttattttcc 60  
 accatattgc cgtcttttgg caatgtgagg gcccggaaac ctggccctgt cttcttgacg 120  
 agcattccta ggggtctttc ccctctcgcc aaaggaatgc aaggctctgtt gaatgtcgtg 180  
 aaggaagcag ttcctctgga agcttcttga agacaaacaa cgtctgtagc gaccctttgc 240  
 aggcagcggg accccccacc tggcgacagg tgcctctgcg gccaaaagcc acgtgtataa 300  
 gatacacctg caaaggcggc acaaccccag tgccacgttg tgagttggat agttgtggaa 360  
 agagtcaa at ggctccccctc aagcgtattc aacaaggggc tgaaggatgc ccagaaggta 420  
 cccattgta tgggatctga tctggggcct cgggtgcacat gcttttcatg tgttttagtcg 480  
 aggttaaaaa acgtctaggc cccccgaacc acgggggacgt ggttttcctt tgaaaaacac 540  
 gatgataata 550

<210> 94  
 <211> 22  
 <212> PRT  
 <213> Artificial Sequence

<220>

eolf-seql (2)

<223> High efficiency self-cleavable P2A peptide sequence

<400> 94

Gly Ser Gly Ala Thr Asn Phe Ser Leu Leu Lys Gln Ala Gly Asp Val  
1 5 10 15

Glu Glu Asn Pro Gly Pro  
20

<210> 95

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> High efficiency self-cleavable F2A peptide sequence

<400> 95

Gly Ser Gly Glu Gly Arg Gly Ser Leu Leu Thr Cys Gly Asp Val Glu  
1 5 10 15

Glu Asn Pro Gly Pro  
20

<210> 96

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> High efficiency self-cleavable E2A peptide sequence

<400> 96

Gly Ser Gly Gln Cys Thr Asn Tyr Ala Leu Leu Lys Leu Ala Gly Asp  
1 5 10 15

Val Glu Ser Asn Pro Gly Pro  
20

eolf-seql (2)

<210> 97

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> High efficiency self-cleavable T2A peptide sequence

<400> 97

Gly Ser Gly Val Lys Gln Thr Leu Asn Phe Asp Leu Leu Lys Leu Ala  
1 5 10 15

Gly Asp Val Glu Ser Asn Pro Gly Pro  
20 25

<210> 98

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Human CD80 amino acid sequence

<400> 98

Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr  
1 5 10 15

Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys  
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu  
35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile  
50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp  
65 70 75 80



eolf-seql (2)

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr  
85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly  
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg  
115 120 125

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr  
130 135 140

Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile  
145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu  
165 170 175

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

Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met  
195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg  
210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro  
225 230 235 240

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

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg  
260 265 270

eolf-seql (2)

Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val  
 275 280 285

<210> 99  
 <211> 192  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> poly adenylation sequence (SV40 late polyA sequence)

<400> 99  
 cagacatgat aagatacatt gatgagtttg gacaaaccac aactagaatg cagtgaaaaa 60  
 aatgctttat ttgtgaaatt tgtgatgcta ttgctttatt tgtaaccatt ataagctgca 120  
 ataaacaagt taacaacaac aattgcattc attttatgtt tcaggttcag ggggaggtgt 180  
 gggaggtttt tt 192

<210> 100  
 <211> 34522  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> NG-348 virus genome sequence comprising the EnAd genome with a transgene cassette that encodes a membrane-anchored chimeric form of the single chain Fv anti-human CD3e and the T lymphocyte activation antigen, CD80 inserted in the region BY.

<400> 100  
 tctatctata taatatacct tatagatgga atggtgcca tatgtaaatg aggtgatttt 60  
 aaaaagtgtg gatcgtgtgg tgattggctg tggggttaac ggctaaaagg ggcggtgcga 120  
 ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt 180  
 gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggt atttaacagg 240  
 aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa 300  
 tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg 360  
 ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt 420

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtg cagctgatcg ctaggggtatt | 480  |
| tatacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc  | 540  |
| tctgcgccgg cagtttaata ataaaaaat gagagatttg cgatttctgc ctcaggaaat   | 600  |
| aatctctgct gagactggaa atgaaatatt ggagcttgtg gtgcacgccc tgatgggaga  | 660  |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt  | 720  |
| agaggtagag ggatcggagg attctaataa ggaagctgta aatggctttt ttaccgattc  | 780  |
| tatgctttta gctgctaata aagggttaga attagatccg cttttggaca cttttgatac  | 840  |
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt  | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga  | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt  | 1020 |
| tcagttggat tgcccggagc ttcctggaca tggctgtaag tcttgatgaat ttcacaggaa | 1080 |
| aaatactgga gtaaaggaac tgttatgttc gctttgttat atgagaacgc actgccactt  | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat  | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc  | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg  | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga  | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaacgctc caagacaata  | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta | 1500 |
| ataaaaaatat gttaactgtt cactggtttt tattgctttt tgggcgggga ctcaggata  | 1560 |
| taagtagaag cagacctgtg tggtagctc ataggagctg gctttcatcc atggaggttt   | 1620 |
| gggccatttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag  | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa  | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgcccagga ctttttgaag  | 1800 |
| ctcttaattt gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt  | 1860 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga  | 1920 |
| tcccgagac tcatttcagc aggggatacg ttttgattt catagccaca gcattgtgga    | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg  | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc  | 2100 |
| aagaggacaa cccgagagcc ggcctggacc ctccagtgga ggaggcggag tagctgactt  | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt  | 2220 |
| taagaggggag agggcatcta gtggtactga tgctagatct gagttggctt taagtttaat | 2280 |
| gagtcgcaga cgtcctgaaa ccatttggtg gcatgagggt cagaaagagg gaagggatga  | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacagggtg aaaacatgtt ggttggagcc | 2400 |
| tgaggatgat tgggagggtg ccattaaaaa ttatgccaag atagctttga ggcctgataa  | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg  | 2520 |
| ggctgagggtg gtaatagata ctcaagacaa ggcagttatt agatgctgca tgatggatat | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga  | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt  | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag  | 2760 |
| tttctatgcg tgttggattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa  | 2820 |
| atgcatattt caaagatgta acctgggcat tctgaatgaa ggcgaagcaa ggggtccgcca | 2880 |
| ctgcgcttct acagatactg gatgttttat tttgattaag ggaaatgcca gcgtaaagca  | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctgggtg  | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt  | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt  | 3120 |
| tatgccttac cagtgtaca tgaatcatgt gaaagtgtt ttggaaccag atgccttttc    | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta  | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca  | 3300 |

eolf-seql (2)

|                                                                      |      |
|----------------------------------------------------------------------|------|
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac    | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt    | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaaattt gttttttctg tcttgcagct  | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtccttca gcccttatct gacagggcgt   | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc    | 3600 |
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagttcttc acctttggac    | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac    | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac    | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct    | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa    | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt    | 3960 |
| gtttttattt catttttcgc gcacggtatg ccctagacca ccgatctcta tcattgagaa    | 4020 |
| ctcgggtgat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca    | 4080 |
| ttaggccgctc tttgggggtgg agatagctcc attgaaggga ttcattgctcc ggggtagtgt | 4140 |
| tgtaaatcac ccagtcataa caaggtcgca gtgcatggtg ttgcacaata tcttttagaa    | 4200 |
| gtaggctgat tgccacagat aagcccttgg tgtaggtgtt taaaaaccgg ttgagctggg    | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttggttgg gatttttaag ttggcaatat    | 4320 |
| tgccgccaag atcccgtctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg    | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac    | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg    | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagtatatgt tcctgagtta   | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg    | 4620 |
| ttccttcggg ccccgagca tagttccctt cacagatttg catttcccaa gctttcagtt     | 4680 |
| ccgaggggtgg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg   | 4740 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tgattaattg tgatgatagc aaattttctga gcaattgaga tttgccacat ccggtggggc | 4800 |
| cataaatgat tccgattacg ggttgcaggt ggtagtttag ggaacggcaa ctgccgtctt  | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatatTT tcccgcacca  | 4920 |
| aatccattag gaggcgctct cctcctagtg atagaagttc ttgtagtgag gaaaagtttt  | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttggagag agtttgctgc aaaagttcta  | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt  | 5100 |
| tcgcgggttt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag  | 5160 |
| ggttcgggcc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaaggg  | 5220 |
| gtgtgcgcct gcttgggcgc ttgccagggt gcgcttcaga ctcatcctgc tggtcgaaaa  | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag tttacatga gttcgtagtt   | 5340 |
| gagcgccctg gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatac  | 5400 |
| cgggcagtat aggcatTTtca gcgcatacaa cttgggcgca aggaaaacgg attctgggga | 5460 |
| gtatgcatct gcgccgcagg aggcgcaaac agtttcacat tccaccagcc aggttaaadc  | 5520 |
| cggttcattg gggTcaaaaa caagttttcc gccatatttt ttgatgcgtt tcttaccttt  | 5580 |
| ggtctccatg agttcgtgtc ctggttgagt gacaaacagg ctgtccgtgt ccccgtagac  | 5640 |
| tgatTTttaca ggccctttct ccagtggagt gcctcgggtc tcttcgtaca ggaactctga | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcacaaag gaggctatgt gggaggggta  | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcacctc   | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg gggTccccgc  | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc   | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact  | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc  | 6060 |
| tttcatgagg ttttctcca tctggtcaga aaacacaatt tttttattgt caagtttggt   | 6120 |
| ggcaaatgat ccatacaggg cgttggataa aagtttggca atggatcgca tggtttggtt  | 6180 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag  | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcattctggc acgattctca cttgccaccc | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt  | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag  | 6420 |
| ttcatcgga gggctctgat ccatggtaaa gattcccga agtaaatcct tatcaaaata    | 6480 |
| gctgatggga gtggggctcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc   | 6720 |
| cggacccaag ttggtgcat tgggtttttc tgttctgtag acgatctggc gaaagatggc   | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaaagt gggcataaga ttcttgaagc ttggttacca gttcggcgg  | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg  | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggatttct tcgcgatcct tccagtactc  | 7020 |
| ttctagcgga aaccgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac   | 7080 |
| tgccttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgc tctgacatg actttgagga attggtat     | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat  | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaaggta ggtctgtggg   | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg | 7620 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ccgtccgact gccatTTTTT ctggggtgac gcaatagaag gtttgggggt cctgccgcca  | 7680 |
| gcgatccac ttgagtttta tggcgaggct ataggcgatg ttgacgagcc gctgggtctcc  | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtttcc acatcgtagg tgagaaagag cttttctgtg cgaggatgag agccaatcgg  | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgacag ggttgatatc cgtgaatgag ttgtacctgg cttcccttga cgagaaattt  | 8040 |
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc  | 8100 |
| ctgttcatct tctgtctcga tgggtggcat gctgacgagc cctcgcgga ggcaagtcca   | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag  | 8220 |
| ggctctgaga cgctcggac tcaggtagt aggcagtgtc aggagattaa cttgcatgat    | 8280 |
| cttttgagg gcgtcggga ggttcagata gtacttgatc tcaacgggtc cgttgggtga    | 8340 |
| gatgtcgatg gcttgcaggg ttccgtgtcc cttgggcgct accaccgtgc cttgttttt   | 8400 |
| cattttggac ggcggtggct ctgttgcttc ttgcatgttt agaagcgggtg tcgaggcg   | 8460 |
| gcaccgggcg gcaggggcgg ctcgggaccc ggcgcatgg ctggcagtgg tacgtcggcg   | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg  | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac  | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt  | 8700 |
| tcttgacagt caccagagtt gtcctgtag gcgatctccg ccatgaactg ctcgatctct   | 8760 |
| tcctcttgaa gatctccgcg gcccgtctc tcgacgggtg ccgcgaggct gttggagatg   | 8820 |
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc  | 8880 |
| acggcccca cgggatctct cgcgcgcatg accacctggg cgaggttgag ctccacgtgg   | 8940 |
| cgggtgaaga ccgcatagtt gcataggcg tggaagggt agttgagtgt ggtggcgatg    | 9000 |
| tgctcgggtga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc | 9060 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| agagcttcca agcgctccat ggcctcgtag aagtccacgg caaaattaaa aaactgggag   | 9120  |
| tttcgcgcgg acacgggtcaa ctctctttcc agaagacgga taagttcggc gatgggtggtg | 9180  |
| cgcacctcgc gctcgaaagc ccctgggatt tcttcctcaa tctcttcttc ttccactaac   | 9240  |
| atctcttcct cttcaggtgg ggctgcagga ggaggggggaa cgcggcgacg ccggcggcgc  | 9300  |
| acgggcagac ggtc gatgaa tctttcaatg acctctccgc ggcgggcgcg catggtttca  | 9360  |
| gtgacggcgc ggccgtttctc gcgcgggtcgc agagtaaaaa caccgccgcg catctcctta | 9420  |
| aagtggtgac tgggaggttc tccgtttggg agggagaggg cgctgattat acattttatt   | 9480  |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa   | 9540  |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct   | 9600  |
| tgtgggcggg ggtgggttatg tgttcgggtct gggctttctg tttcttcttc atctcgggaa | 9660  |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatgggtg  | 9720  |
| gcgaggagca ccaggtcttt ggggtccggct tgctggatac gcaggcgatt ggccattccc  | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg   | 9840  |
| ggcacttctt cctcaccctg tctgccatgc atacgtgtga gtccaaatcc gcgcattggt   | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta   | 9960  |
| agggtggctt gaaagtcac aaaatccaca aagcgggtggt aagctcctgt attaatgggtg  | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggt gaccagggcg cacgagctcg   | 10080 |
| gtgtatttaa ggcggaata ggcgcggggtg tcaaagatgt aatcgttgca ggtgcgcacc   | 10140 |
| agatactggt accctataag aaaatgcggc ggtggttggc ggtagagagg ccatcgttct   | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac   | 10260 |
| ctggacatcc aggtgattcc tgcggcggtg gtagaagccc gaggaaactc gcgtacgcgg   | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgtag gcacggtttg accagtgagg    | 10380 |
| cgcgcgcagt cattgatgct ctatagacac ggagaaaaatg aaagcgttca gcgactcgac  | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcgggtg taccgccggtt cgagacttgt | 10500 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| actcgagccg gccggagccg cggctaacgt ggtattggca ctcccgtctc gaccagcct    | 10560 |
| acaaaaatcc aggatacggga atcgagtcgt tttgctgggt tccgaatggc aggggaagtga | 10620 |
| gtcctattttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa  | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact   | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc   | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa   | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag   | 10920 |
| gagccggagg agatgcgagc ttcccgtttt aacgcgggtc gtgagctgcg tcacggtttg   | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagtgt atgaaatgac agggatcagt   | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag   | 11100 |
| gaagagcgta acttcaaaaa gtcttttaaat aatcatgtgc gaaccctgat tgcccgcgaa  | 11160 |
| gaagttaccc ttggtttgat gcatttgtgg gatttgcagg aagctatcat tcagaacctt   | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtgggtgc aacacagcag agacaatgag  | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt   | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg  | 11400 |
| gctgccatca attactcggg tttgagcttg ggaaaaatatt acgctcgcaa aatctacaag  | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg  | 11520 |
| ctcaaggctc tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc   | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa   | 11640 |
| agagctctga ctggagctgg aaccgagggt gagaattact tcgacatggg agctgacttg   | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac   | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac   | 11820 |
| aacccgtgtt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct   | 11880 |
| gcagagccag ccgtccggca ttaactcctc ggacgattgg acccaggcca tgcaacgtat   | 11940 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| catggcggtg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct    | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggtcct   | 12060 |
| ggccatcgtg aacgcggttg tggagaacaa agctattcgt ccagatgagg ccggactggt    | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaatct    | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagg tccagcgtga     | 12240 |
| tgccaacctg ggttcgctgg tggcgtaaaa tgctttcttg agtactcagc ctgctaattg    | 12300 |
| gccgcgtggt caacaggatt atactaactt ttttaagtgt ttgagactga tggatatcaga   | 12360 |
| agtacctcag agcgaagtgt atcagtccgg tcctgattac ttctttcaga ctagcagaca    | 12420 |
| gggcttgtag acggtaaaatc tgagccaagc ttttaaaaaac cttaaagggt tgtggggagt  | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actcccgct     | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctatct    | 12600 |
| gggttaccta ctaaacctgt atcgcggaagc catagggcaa agtcagggtg acgagcagac   | 12660 |
| ctatcaagaa attaccaag tcagtcgagc tttgggacag gaagacactg gcagtttgga     | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaag atccctcctc aatatgctct    | 12780 |
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat    | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag    | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc    | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgcactggc tgccccacc     | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaata gacggatttc tgtgggacga   | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg    | 13140 |
| cgatagaatg cattcttctg catcgctgtc cggggctcatg ggtgctaccg cggctgagcc   | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga    | 13260 |
| agtgggtaga ataagtcgcc cgagtttaata gggcggaagag gtagtatctaa acgattcctt | 13320 |
| gctcagaccg gcaagagaaa aaaatttccc aaacaatgga atagaaaagt tgggtggataa   | 13380 |

eolf-seql (2)

|             |            |            |            |             |            |       |
|-------------|------------|------------|------------|-------------|------------|-------|
| aatgagtaga  | tggaagactt | atgctcagga | tcacagagac | gagcctggga  | tcatggggat | 13440 |
| tacaagtaga  | gcgagccgta | gacgccagcg | ccatgacaga | cagaggggtc  | ttgtgtggga | 13500 |
| cgatgaggat  | tcggccgatg | atagcagcgt | gctggacttg | ggtgggagag  | gaaggggcaa | 13560 |
| cccgtttgct  | catttgcgcc | ctcgcttggg | tggtatgttg | taaaaaaaaa  | taaaaaaaaa | 13620 |
| actcaccaag  | gccatggcga | cgagcgtacg | ttcgttcttc | tttattatct  | gtgtctagta | 13680 |
| taatgaggcg  | agtcgtgcta | ggcggagcgg | tggtgtatcc | ggagggtcct  | cctccttcgt | 13740 |
| acgagagcgt  | gatgcagcag | cagcaggcga | cggcggtgat | gcaatcccca  | ctggaggctc | 13800 |
| ccttttgccc  | tccgcgatac | ctggcaccta | cggagggcag | aaacagcatt  | cgttattcgg | 13860 |
| aactggcacc  | tcagtacgat | accaccaggt | tgtatctggg | ggacaacaag  | tcggcggaca | 13920 |
| ttgcttctct  | gaactatcag | aatgaccaca | gcaacttctt | gaccacgggtg | gtgcaaaaca | 13980 |
| atgactttac  | ccctacggaa | gccagcacc  | agaccattaa | ctttgatgaa  | cgatcgcggt | 14040 |
| ggggcgggtca | gctaaagacc | atcatgcata | ctaacatgcc | aaacgtgaac  | gagtatatgt | 14100 |
| ttagtaacaa  | gttcaaagcg | cgtgtgatgg | tgtccagaaa | acctcccgac  | ggtgctgcag | 14160 |
| ttggggatac  | ttatgatcac | aagcaggata | ttttgaaata | tgagtgggtc  | gagtttactt | 14220 |
| tgccagaagg  | caacttttca | gttactatga | ctattgattt | gatgaacaat  | gccatcatag | 14280 |
| ataattactt  | gaaagtgggt | agacagaatg | gagtgcctga | aagtgcatt   | ggtgttaagt | 14340 |
| tcgacaccag  | gaacttcaag | ctgggatggg | atcccgaac  | caagttgatc  | atgcctggag | 14400 |
| tgtatacgta  | tgaagccttc | catcctgaca | ttgtcttact | gcctggctgc  | ggagtggatt | 14460 |
| ttaccgagag  | tcgtttgagc | aaccttcttg | gtatcagaaa | aaaacagcca  | tttcaagagg | 14520 |
| gttttaagat  | tttgtatgaa | gatttagaag | gtggtaatat | tccggccctc  | ttggatgtag | 14580 |
| atgcctatga  | gaacagtaag | aaagaacaaa | aagccaaaat | agaagctgct  | acagctgctg | 14640 |
| cagaagctaa  | ggcaaacata | gttgccagcg | actctacaag | ggttgctaac  | gctggagagg | 14700 |
| tcagaggaga  | caattttgcg | ccaacacctg | ttccgactgc | agaatcatta  | ttggccgatg | 14760 |
| tgtctgaagg  | aacggacgtg | aaactcacta | ttcaacctgt | agaaaaagat  | agtaagaata | 14820 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gaagctataa tgtgttgga gacaaaatca acacagccta tcgcagttgg tatctttcgt   | 14880 |
| acaattatgg cgatcccga aaaggagtg gttcctggac attgctcacc acctcagatg    | 14940 |
| tcacctgcgg agcagagcag gtctactggc cgcttccaga catgatgaag gatcctgtca  | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggc gggcgcagag cttatgccc   | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca  | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg  | 15180 |
| cgcccacat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc   | 15240 |
| cgttgccgag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccga   | 15300 |
| cctgtcccta cgtgtacaag gactgggca tagtcgcacc gcgcgtcctt tcaagccga    | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg  | 15420 |
| tctgcgcgt ccaagcaaga tgtacggagg cgacgcaaa cgttctaccc aacatcctgt    | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccga ctcgcgttcg   | 15540 |
| aaccaccgtc gatgatgtaa tcgatcaggc ggttgccgac gcccgtaatt atactcctac  | 15600 |
| tgccgctaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta  | 15660 |
| tgctcgacgt aagagccggc gaaggcgcac tgccagacgc caccgagcta cactgccat   | 15720 |
| gcgagccga agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag   | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag cgccggcagg tcccgcaggc aagcagccgc  | 15840 |
| tgctgcagcg gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt   | 15900 |
| gcgtgacgt gccaccggc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa    | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa  | 16020 |
| ggaagaaatg ctgcaggcta tcgcacctga agtctacggc caaccgttga aggatgaaaa  | 16080 |
| aaaacccgc aaaatcaagc ggggttaaaaa ggacaaaaaa gaagaggaag atggcgatga  | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga cgcggtgcaat ggcggtggcg | 16200 |
| caaagttcga catgtgttga gacctggaac ttcgggtggc ttacacccg gcgagcgctc   | 16260 |

eolf-seql (2)

|             |            |             |             |            |              |       |
|-------------|------------|-------------|-------------|------------|--------------|-------|
| aagcgctact  | tttaagcggt | cctatgatga  | gggtgtacggg | gatgatgata | ttcttgagca   | 16320 |
| ggcggctgac  | cgattaggcg | agtttgctta  | tggcaagcgt  | agtagaataa | cttccaagga   | 16380 |
| tgagacagtg  | tcgataccct | tggatcatgg  | aaatcccacc  | cctagtctta | aaccgggtcac  | 16440 |
| tttgcagcaa  | gtgttacccg | taactccgcg  | aacaggtggt  | aaacgcgaag | gtgaagattt   | 16500 |
| gtatcccact  | atgcaactga | tggtagccaa  | acgccagaag  | ttggaggacg | ttttggagaa   | 16560 |
| agtaaaagt   | gatccagata | ttcaacctga  | ggttaaagt   | agacccatta | agcaggtagc   | 16620 |
| gcctgggtctg | ggggtacaaa | ctgtagacat  | taagattccc  | actgaaagta | tggaagtgc    | 16680 |
| aactgaaccc  | gcaaagccta | ctgccacctc  | cactgaagt   | caaacggatc | catggatgcc   | 16740 |
| catgcctatt  | acaactgacg | ccgccgggtcc | cactcgaaga  | tcccgcgacg | agtagcgggtcc | 16800 |
| agcaagtctg  | ttgatgcca  | attatgttgt  | acacccatct  | attattccta | ctcctgggtta  | 16860 |
| ccgaggcact  | cgctactatc | gcagccgaaa  | cagtacctcc  | cgccgtcgcc | gcaagacacc   | 16920 |
| tgcaaatcgc  | agtcgtcgcc | gtagacgcac  | aagcaaaccg  | actcccggcg | ccctgggtgcg  | 16980 |
| gcaagtgtac  | cgcaatggta | gtgcggaacc  | tttgacactg  | ccgcgtcgcc | gttaccatcc   | 17040 |
| gagtatcatc  | acttaatcaa | tgttgccgct  | gcctccttgc  | agatatggcc | ctcacttgtc   | 17100 |
| gccttcgcgt  | tcccatcact | ggttaccgag  | gaagaaactc  | gcgccgtaga | agagggatgt   | 17160 |
| tgggacgcgg  | aatgcgacgc | tacaggcgac  | ggcgtgctat  | ccgcaagcaa | ttgcgggggtg  | 17220 |
| gttttttacc  | agccttaatt | ccaattatcg  | ctgctgcaat  | tggcgcgata | ccaggcatag   | 17280 |
| cttccgtggc  | ggttcaggcc | tcgcaacgac  | attgacattg  | gaaaaaaacg | tataaataaa   | 17340 |
| aaaaaaaaaa  | tacaatggac | tctgacactc  | ctggtcctgt  | gactatgttt | tcttagagat   | 17400 |
| ggaagacatc  | aatttttcat | ccttgggtcc  | gcgacacggc  | acgaagccgt | acatgggcac   | 17460 |
| ctggagcgac  | atcggcacga | gccaactgaa  | cggggggcgcc | ttcaattgga | gcagtatctg   | 17520 |
| gagcgggctt  | aaaaattttg | gctcaaccat  | aaaaacatac  | gggaacaaag | cttggaacag   | 17580 |
| cagtacagga  | caggcgctta | gaaataaact  | taaagaccag  | aacttccaac | aaaaagtagt   | 17640 |
| cgatgggata  | gcttccggca | tcaatggagt  | ggtagatttg  | gctaaccagg | ctgtgcagaa   | 17700 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| aaagataaac agtcgttttg acccgccgcc agcaaccca ggtgaaatgc aagtggagga   | 17760 |
| agaaaattcct ccgccagaaa aacgaggcga caagcgccg cgtcccgatt tggaaagagac | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc  | 17880 |
| caccactaga ccgatagccc caatggccac cgggggtgatg aaaccttctc agttgcatcg | 17940 |
| acccgtcacc ttggatttgc cccctcccc tgctgctact gctgtacccg cttctaagcc   | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccgggggcg ctccctcgtcc | 18060 |
| aaatgcgcac tggcaaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa | 18120 |
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgcttat ctgtgtatat  | 18180 |
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct  | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc atgggcatac atgcacatcg   | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctggt gcagttcgcc cgcgccacag  | 18360 |
| acacctactt caatctggga aataagtta gaaatccac cgtagcgccg acccacgatg    | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca  | 18480 |
| atacatactt ttacaaagtg cggtacaccc tggccgtggg cgacaacaga gtgctggata  | 18540 |
| tggccagcac gttctttgac attaggggtg tgttggacag aggtcccagt ttcaaaccct  | 18600 |
| attctggtac ggcttacaac tccctggctc cttaaaggcg tccaaataca tctcagtgga  | 18660 |
| ttgcagaagg tgtaaaaaat acaactgggtg aggaacacgt aacagaagag gaaaccaata | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag  | 18780 |
| gactcccagt aggtttggaa gtttcagatg aagaaagtaa accgatttat gctgataaaa  | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg  | 18900 |
| aaaagtatgg aggcagggtc ctcaaaccgc atactaagat gaaaccatgc tacgggtcct  | 18960 |
| ttgccaaacc tactaatgtg aaaggcggtc aggcaaaaca aaaaacaacg gagcagccaa  | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc  | 19140 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| atgtagtgta caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat  | 19200 |
| ctatgccccaa cagacccaac tacattggct tcagagataa ctttattgga cttatgtact | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctgggtcaagc gtctcagtta aatgcagtgg | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg  | 19380 |
| acagaaccag atacttttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac | 19440 |
| gtgttattga aaatcatggt gtggaagatg aacttcccaa ctactgtttt ccactggacg  | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgccta  | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca  | 19620 |
| tggaaattaa ctttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat  | 19680 |
| atctcccaga ctcgtacaaa tacaccccggt ccaatgtcac tcttccagaa aacaaaaaca | 19740 |
| cctacgacta catgaacggg cgggtgggtgc cgccatctct agtagacacc tatgtgaaca | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta  | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca  | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca  | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt  | 20100 |
| tccccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg  | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg   | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctggcat   | 20280 |
| ttaccagact gaaaacaaaa gaaactccct ctttggggtc tggatttgac ccctactttg  | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |
| ctaacgaatt tgaaataaag cgactgtgg atggcgaagg ctacaacgta gcccaatgca   | 20520 |
| acatgaccaa agactgggtt ttggtacaga tgctcgccaa ctacaacatc ggctatcagg  | 20580 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gcttctacat tccagaagga tacaaagatc gcatgtattc atttttcaga aacttccagc  | 20640 |
| ccatgagcag gcaggtgggt gatgaggtca attacaaaga cttcaaggcc gtcgccatac  | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccctatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcac accgttctcg agcaacttca  | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg  | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct  | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct   | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc  | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca  | 21180 |
| gagccattgt ccaagacctg ggttgccggac cctatTTTTT gggaacctac gataagcgct | 21240 |
| tcccgggggt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg   | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc  | 21360 |
| TTTTTgatcc TTTTggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg  | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat  | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcattgtcc   | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaacccacc atgaaattgc   | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca   | 21660 |
| atcaaaaaagc actctaccat tttcttaata cccattcgcc ttatTTTcgc tcccatcgta | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa  | 21780 |
| caacgtgttc aataaacatc actttatTTT tttacatgta tcaaggctct gcattactta  | 21840 |
| tttatTTTaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg | 21900 |
| ttgcggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt  | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca | 22020 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ggagccgaaa tcttgaaatc acaattagga ccagtgcctt gagcgcgaga gttgcggtac  | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacggtg  | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cgggggtcatc | 22200 |
| ttgcaggtct gcctacccat ggcgggcacc caattaggct tgtggttgca atcgcagtgc  | 22260 |
| agggggatca gtatcatctt ggctgatcc tgtctgattc ctggatacac ggctctcatg   | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcggtata aaacatcccg  | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcgggcg  | 22440 |
| tcattgttag ctatttgcac cacacttctg cccagcgggt tttgggtgat tttggttcgc  | 22500 |
| tcgggattct cctttaaggc tcgttgtccg ttctcgctgg ccacatccat ctcgataatc  | 22560 |
| tgctccttct gaatcataat attgccatgc aggcacttca gcttgccctc ataatcattg  | 22620 |
| cagccatgag gccacaacgc acagcctgta cattccaat tatggtgggc gatctgagaa   | 22680 |
| aaagaatgta tcattccctg cagaaatctt cccatcatcg tgctcagtgt cttgtgacta  | 22740 |
| gtgaaagtta actggatgcc tcggtgctcc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttaa aaagagggtc taagtctgtt atccagcctg  | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc  | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcattctta | 22980 |
| gcgatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg  | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgtttggt cttccttggc ttcttttttg ggggtatcgg aggaggagga  | 23160 |
| ctgtcgctcc gttccggaga caggaggat tgtgacgttt cgctcaccat taccaactga   | 23220 |
| ctgtcggtag aagaacctga cccacacagg cgacagggtgt ttctcttcgg gggcagaggt | 23280 |
| ggaggcgatt gcgaagggtc gcggtccgac ctggaaggcg gatgactggc agaaccctt   | 23340 |
| ccgcgttcgg ggggtgtgct cctgtggcgg tcgcttaact gatttccttc gcggctggcc  | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cgccacgagt gccatcacat ctcgtcctca gcgacgagga aaaggagcag agcttaagca   | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggagggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gacccgggct   | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa   | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca   | 23760 |
| ccgactacct catagggctt gacggggaag acgcgctcct taaacatcta gcaagacagt   | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccacatcagt gtggaagagc | 23880 |
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tccccccaaa cgtcagccaa   | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag   | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta   | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag   | 24120 |
| cttccttggga agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg | 24180 |
| caaatgctct gcaaaaggga gaaaatggca tggatgagca tcacagcggt ctggtggaat   | 24240 |
| tggaaggcga taatgccaga ctcgcagtac tcaagcgaag catcgagggtc acacacttcg  | 24300 |
| catatccgc tgtcaacctg ccccttaaag tcatgacggc ggtcatggac cagttactca    | 24360 |
| ttaagcgcg aagtccccct tcagaagaca tgcatgaccc agatgcctgt gatgagggtg    | 24420 |
| aaccagtggc cagtgatgag cagctaaccg gatggctggg caccgactct cccagggatt   | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tgggtgctggt taccgtagaa ctagagtgtc  | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca   | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatatc taacgtggaa ctcaccaacc   | 24660 |
| tggtttccta catgggtatt ctgcatgaga atcgcctagg acaaagcgtg ctgcacagca   | 24720 |
| ccctgaaggg ggaagccgc cgtgattaca tccgcgattg tgtctatctg tacctgtgcc    | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag   | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca   | 24900 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa  | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcacctgg   | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca  | 25080 |
| cctaccgcga gtgccccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact  | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc  | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga  | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt  | 25320 |
| cttctcctgg gcaaagttaa aaactgaccc cgggactgtg gacctccgcc tacttgcgca  | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc   | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcaccaggg ggcaattctg gcccaattgc   | 25500 |
| aagccatcca aaaatccgc caagaatttc tactgaaaaa gggtaagggg gtctaccttg   | 25560 |
| acccccagac cggcgaggaa ctcaacacaa ggttccctca ggatgtccca acgacgagaa  | 25620 |
| aacaagaagt tgaagggtgca gccgccgccc ccagaagata tggaggaaga ttgggacagt | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttgag   | 25740 |
| gaggaaaacg aggaggcaga ggaggtggaa gaagtaaccg ccgacaaaca gttatcctcg  | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt  | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcgc ttccaagacc  | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcgggggc ataagaatgc catcatctcc  | 25980 |
| tgcttgcatg agtcggggg caacatatcc ttcacgcggc gctacttgct attccaccat   | 26040 |
| ggggtgaact ttccgcgcaa tgttttgcat tactaccgtc acctccacag cccctactat  | 26100 |
| agccagcaaa tcccggcagt ctcgacagat aaagacagcg gcggcgacct ccaacagaaa  | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac  | 26220 |
| agccaacgag ccagcgcaaa cccgagagtt aagaaatcgg atctttccaa ccctgtatgc  | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| ttcgctcacc agaagttggt tgtatcacaa gagcgaagat caacttcagc gcactctcga   | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac   | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcatcctcga catgagtaaa gaaattccca   | 26520 |
| cgccttacat gtggagttat caacccccaaa tgggattggc ggccaggcgcc tcccaggact | 26580 |
| actccacccg catgaattgg ctcagcgccg ggcccttctat gatttctcga gttaatgata  | 26640 |
| tacgcgccta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc   | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca   | 26760 |
| ccactgtatt acttcctcga gacgcccagg ccgaagtcca aatgactaat gcaggtgcgc   | 26820 |
| agttagctgg cggctccacc ctatgtcgtc acaggcctcg gcataatata aaacgcctga   | 26880 |
| tgatcagagg ccgaggtatc cagctcaacg acgagtcggt gagctctccg cttggtctac   | 26940 |
| gaccagacgg aatctttcag attgccggct gcgggagatc ttccttcacc cctcgtcagg   | 27000 |
| ctgttctgac tttggaaaagt tcgtcttcgc aacccccgtc gggcggaatc gggaccgttc  | 27060 |
| aatttgtgga ggagtttact cctctgtctt acttcaaccc cttctccgga tctcctgggc   | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg   | 27180 |
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg   | 27240 |
| ctttcgtgc tttgccccgg aactcattga gttcatctac ttcgaactcc ccaaggatca    | 27300 |
| ccctcaaggt ccggcccacg gaggcgggat ttctatcgaa ggcaaaatag actctcgcct   | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccaggga acaccacggt    | 27420 |
| ttccatctac tgcatttgta atcaccccg attgcatgaa agcctttgct gtcttatgtg    | 27480 |
| tactgagttt aataaaaaact gaattaagac tctcctacgg actgccgctt cttcaacccg  | 27540 |
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctggt aacttcacct   | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttccta    | 27660 |
| ctaatactac tttcaaaacc ggaggtgagc tccaaggtct tcctacagaa aacccttggg   | 27720 |
| tggaagcggg ccttgtagtg ctaggaattc ttgcgggtgg gcttgtgatt attctttgct   | 27780 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| acctatacac accttgcttc acttttcttag tgggtgtgtg gtattggttt aaaaaatggg | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga  | 27900 |
| tccatgtcta gacttcgacc cagaaaactg cacacttact tttgcacccg acacaagccg  | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aattttacctg | 28020 |
| catgggtggga atcaacccca tagttatcac ccagcaaagt ggagatacta agggttgcat | 28080 |
| tcactgctcc tgcgattcca tcgagtgcac ctacaccctg ctgaagaccc tatgcggcct  | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca  | 28200 |
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttccctc ttcccaactc  | 28260 |
| tgggtattcta aaccccgttc agcggcatac tttctccata ctttaaagggt gatgtcaa  | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt   | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca  | 28440 |
| cccctttata aacccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt  | 28500 |
| tcttacttta aaatgtttta cccactaac aaccacaggc ggatctctac agctaaaagt   | 28560 |
| gggaggggga cttacagtgg atgacaccaa cgggtttttg aaagaaaaca taagtgccac  | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac  | 28680 |
| gaatgaaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aaccccaccg aagccaactg  | 28800 |
| tcaaatacatg aactccagtg aatctaata ttgcaaatta attctaacac tagttaaaac  | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct  | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaattt  | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc  | 29040 |
| tactggtgcc attactaatg ctaaagggtt catgcccagc acgactgcct atcctttcaa  | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tggttactaca cagctagtga | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga  | 29220 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| gacatcatat tgtattcgta taacttgggtc ctggaacaca ggagatgccc cagaggtgca  | 29280 |
| aacctctgct acaaccctag tcacctcccc atttaccttt tactacatca gagaagacga   | 29340 |
| ctgacaaata aagtttgcga tcgccaggcc caccatggga tggagctgta tcatcctctt   | 29400 |
| cttggtagca acagctacag gtgtccactc ccagggtgcag ctgcagcagt ctggggctga  | 29460 |
| actggcaaga cctggggcct cagtgaagat gtcctgcaag gcttctggct acacctttac   | 29520 |
| taggtacacg atgcactggg taaaacagag gcctggacag ggtctggaat ggattggata   | 29580 |
| cattaatcct agccgtgggt atactaatta caatcagaag ttcaaggaca aggccacatt   | 29640 |
| gactacagac aaatcctcca gcacagccta catgcaactg agcagcctga catctgagga   | 29700 |
| ctctgcagtc tattactgtg caagatatta tgatgatcat tactgccttg actactgggg   | 29760 |
| ccaaggcacc actctcacag tctcctcagg tggcgggtggc tcgggcgggtg gtggatctgg | 29820 |
| tggcggcgga tctgatatcg tgctcactca gtctccagca atcatgtctg catctccagg   | 29880 |
| ggagaagggtc accatgacct gcagtgccag ctcaagtgtg agttacatga actggtacca  | 29940 |
| gcagaagtca ggcacctccc caaaaagatg gatttatgac acatccaaac tggcttctgg   | 30000 |
| agtccctgct cacttcaggg gcagtgggtc tgggacctct tactctctca caatcagcgg   | 30060 |
| catggagggt gaagatgctg ccacttatta ctgccagcag tggagtagta acccattcac   | 30120 |
| gttcggctcg gggacaaaagt tggaaataaa ccggggatcc gaacaaaaac tcatctcaga  | 30180 |
| agaggatctg aatgctgtgg gccaggacac gcaggagggtc atcgtgggtgc cacactcctt | 30240 |
| gccctttaag gtggtggtga tctcagccat cctggccctg gtggtgctca ccatcatctc   | 30300 |
| ccttatcatc ctcatcatgc tttggcagaa gaagccacgt ggaagcggag ctactaactt   | 30360 |
| cagcctgctg aagcaggctg gagacgtgga ggagaaccct ggacctggcc acacacggag   | 30420 |
| gcagggaaca tcaccatcca agtgtccata cctcaatttc tttcagctct tgggtgctggc  | 30480 |
| tggcttttct cacttctgtt cagggtgttat ccacgtgacc aagggaagtga aagaagtggc | 30540 |
| aacgctgtcc tgtggtcaca atgtttctgt tgaagagctg gcacaaactc gcatctactg   | 30600 |
| gcaaaaggag aagaaaatgg tgctgactat gatgtctggg gacatgaata tatggccccga  | 30660 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gtacaagaac cggaccatct ttgatatac taataacctc tccattgtga tcctggctct   | 30720 |
| gcgcccatct gacgagggca catacgagtg tgttgttctg aagtatgaaa aagacgcttt  | 30780 |
| caagcgggaa cacctggctg aagtgacgtt atcagtcaaa gctgacttcc ctacacctag  | 30840 |
| tatatctgac tttgaaattc caacttctaa tattagaagg ataatttgct caacctctgg  | 30900 |
| aggttttcca gagcctcacc tctcctgggt ggaaaatgga gaagaattaa atgccatcaa  | 30960 |
| cacaacagtt tcccaagatc ctgaaactga gctctatgct gttagcagca aactggattt  | 31020 |
| caatatgaca accaaccaca gcttcatgtg tctcatcaag tatggacatt taagagtga   | 31080 |
| tcagaccttc aactggaata caaccaagca agagcatttt cctgataacc tgctcccatc  | 31140 |
| ctggggccatt accttaatct cagtaaatgg aatttttgtg atatgctgcc tgacctactg | 31200 |
| ctttgccccca agatgcagag agagaaggag gaatgagaga ttgagaaggg aaagtgtacg | 31260 |
| ccctgtataa gctagcttga ctgactgaga tacagcgtac cttcagctca cagacatgat  | 31320 |
| aagatacatt gatgagtttg gacaaaccac aactagaatg cagtgaaaaa aatgctttat  | 31380 |
| ttgtgaaatt tgtgatgcta ttgctttatt tgtaaccatt ataagctgca ataaacaagt  | 31440 |
| taacaacaac aattgcattc attttatgtt tcaggttcag ggggaggtgt gggaggtttt  | 31500 |
| ttaaagcaag taaaacctct acaaatgtgg tagtcgtcag ctatcctgca ggaacttggt  | 31560 |
| tatttgaaaa tcaattcaca aaatccgagt agttattttg cctccccctt cccatttaac  | 31620 |
| agaatacacc aatctctccc cacgcacagc tttaaacatt tggataccat tagatataga  | 31680 |
| catggtttta gattccacat tccaaacagt ttcagagcga gccaatctgg ggtcagtgat  | 31740 |
| agataaaaaat ccatcgggat agtcttttaa agcgctttca cagtccaact gctgcggatg | 31800 |
| cgactccgga gtctggatca cggatcatctg gaagaagaac gatgggaatc ataatccgaa | 31860 |
| aacggtatcg gacgattgtg tctcatcaaa cccacaagca gccgctgtct gcgtcgctcc  | 31920 |
| gtgcgactgc tgtttatggg atcagggtcc acagtgtcct gaagcatgat tttaatagcc  | 31980 |
| cttaacatca actttctggg gcgatgcgcg cagcaacgca ttctgatttc actcaaactc  | 32040 |
| ttgcagtagg tacaacacat tattacaata ttgtttaata aaccataatt aaaagcgctc  | 32100 |



eolf-seql (2)

|            |             |            |            |             |            |       |
|------------|-------------|------------|------------|-------------|------------|-------|
| cagccaaaac | tcatatctga  | tataatcgcc | cctgcatgac | catcatacca  | aagtttaata | 32160 |
| taaattaaat | gacgttcctt  | caaaaacaca | ctaccacat  | acatgatctc  | ttttggcatg | 32220 |
| tgcatattaa | caatctgtct  | gtaccatgga | caacgttggt | taatcatgca  | acccaatata | 32280 |
| accttccgga | accacactgc  | caacaccgct | ccccagcca  | tgcatgaag   | tgaaccctgc | 32340 |
| tgattacaat | gacaatgaag  | aacccaattc | tctcgaccgt | gaatcacttg  | agaatgaaaa | 32400 |
| atatctatag | tggcacaaca  | tagacataaa | tgcatgcatc | ttctcataat  | ttttaactcc | 32460 |
| tcaggattta | gaaacatatc  | ccagggaata | ggaagctctt | gcagaacagt  | aaagctggca | 32520 |
| gaacaaggaa | gaccacgaac  | acaacttaca | ctatgcatag | tcatagtatc  | acaatctggc | 32580 |
| aacagcgggt | ggtcttcagt  | catagaagct | cgggtttcat | tttcctcaca  | acgtggtaac | 32640 |
| tgggctctgg | tgtaaggggtg | atgtctggcg | catgatgtcg | agcgtgcgcg  | caaccttgtc | 32700 |
| ataatggagt | tgcttcctga  | cattctcgta | ttttgtatag | caaaacgcgg  | ccctggcaga | 32760 |
| acacactctt | cttcgccttc  | tatcctgccg | cttagcgtgt | tccgtgtgat  | agttcaagta | 32820 |
| caaccacact | cttaagttgg  | tcaaaagaat | gctggcttca | gttgtaatca  | aaactccatc | 32880 |
| gcatctaata | gttctgagga  | aatcatccaa | gcaatgcaac | tggattgtgt  | ttcaagcagg | 32940 |
| agaggagagg | gaagagacgg  | aagaaccatg | ttaattttta | ttccaaacga  | tctcgcagta | 33000 |
| cttcaaattg | tagatcgcgc  | agatggcatc | tctcgcccc  | actgtgttgg  | tgaaaaagca | 33060 |
| cagctagatc | aaaagaaatg  | cgattttcaa | ggtgctcaac | ggtggcttcc  | agcaaagcct | 33120 |
| ccacgcgcac | atccaagaac  | aaaagaatac | caaaagaagg | agcattttct  | aactcctcaa | 33180 |
| tcatcatatt | acattcctgc  | accattccca | gataattttc | agctttccag  | ccttgaatta | 33240 |
| ttcgtgtcag | ttcttggtgt  | aaatccaatc | cacacattac | aaacagggtcc | cggagggcgc | 33300 |
| cctccaccac | cattcttaaa  | cacaccctca | taatgacaaa | atatcttgct  | cctgtgtcac | 33360 |
| ctgtagcgaa | ttgagaatgg  | caacatcaat | tgacatgccc | ttggctctaa  | gttcttcttt | 33420 |
| aagttctagt | tgtaaaaaact | ctctcatatt | atcaccaaac | tgcttagcca  | gaagcccccc | 33480 |
| gggaacaaga | gcaggggacg  | ctacagtgca | gtacaagcgc | agacctcccc  | aattggctcc | 33540 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| agcaaaaaca agattggaat aagcatattg ggaaccgcca gtaatatcat cgaagttgct | 33600 |
| ggaaatataa tcaggcagag tttcttgtaa aaattgaata aaagaaaaat ttgccaaaaa | 33660 |
| aacattcaaa acctctggga tgcaaatgca ataggttacc gcgctgcgct ccaacattgt | 33720 |
| tagttttgaa ttagtctgca aaaataaaaa aaaaaacaag cgtcatatca tagtagcctg | 33780 |
| acgaacagat ggataaatca gtctttccat cacaagacaa gccacagggt ctccagctcg | 33840 |
| accctcgtaa aacctgtcat catgattaaa caacagcacc gaaagttcct cgcggtgacc | 33900 |
| agcatgaata attcttgatg aagcatacaa tccagacatg ttagcatcag ttaacgagaa | 33960 |
| aaaacagcca acatagcctt tgggtataat tatgcttaat cgtaagtata gcaaagccac | 34020 |
| ccctcgcgga tacaaagtaa aaggcacagg agaataaaaa atataattat ttctctgctg | 34080 |
| ctgttcaggc aacgtcgccc ccggtccctc taaatacaca tacaaagcct catcagccat | 34140 |
| ggcttaccag acaaagtaca gcgggcacac aaagcacaag ctctaaagtg actctccaac | 34200 |
| ctctccacaa tatatatata cacaagccct aaactgacgt aatgggagta aagtgtaaaa | 34260 |
| aatcccgcca aacccaacac acaccccgaa actgcgtcac cagggaaaag tacagtttca | 34320 |
| cttccgcaat cccaacaggc gtaacttcct ctttctcacg gtacgtgata tcccactaac | 34380 |
| ttgcaacgtc attttcccac ggctgcaccg ccccttttag ccgttaacc cccagccaat  | 34440 |
| caccacacga tccacacttt ttaaaatcac ctcatctaca tattggcacc attccatcta | 34500 |
| taaggatatat tatatagata ga                                         | 34522 |

<210> 101  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> V5 TAG

<400> 101

Ile Pro Asn Pro Leu Leu Gly Leu Asp  
 1 5

eolf-seql (2)

<210> 102  
 <211> 34555  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> NG-348A virus genome sequence comprising the EnAd genome with a transgene cassette that encodes a membrane-anchored chimeric form of the single chain Fv anti-human CD3e with C-terminal V5 tag and the T lymphocyte activation antigen, CD80 inserted in region BY

<400> 102  
 tctatctata taatataacct tatagatgga atgggtgcaa tatgtaaatg aggtgatttt 60  
 aaaaagtgtg gatcgtgtgg tgattggctg tgggggttaac ggctaaaagg ggcggtgcga 120  
 ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt 180  
 gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggg atttaacagg 240  
 aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa 300  
 tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg 360  
 ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt 420  
 ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtg cagctgatcg ctagggtatt 480  
 tatacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc 540  
 tctgcgccgg cagtttaata ataaaaaat gagagatttg cgatttctgc ctgaggaaat 600  
 aatctctgct gagactggaa atgaaatatt ggagcttgtg gtgcacgccc tgatgggaga 660  
 cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt 720  
 agaggtagag ggatcggagg attctaata ggaagctgta aatggctttt ttaccgattc 780  
 tatgctttta gctgctaata aagggttaga attagatccg cctttggaca cttttgatac 840  
 tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt 900  
 ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga 960  
 aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt 1020  
 tcagttggat tgccccggagc ttcctggaca tggctgtaag tcttgtgaat ttcacaggaa 1080

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| aaatactgga gtaaaggaac tggtatgttc gctttgttat atgagaacgc actgccactt   | 1140 |
| tattttacagt aagtgtgttt aagttaaaat tttaaaggaat atgctgtttt tcacatgtat | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc   | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg   | 1320 |
| caagccccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga  | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaaacgtc caagacaata   | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta  | 1500 |
| ataaaaaatat gttaactgtt cactgggtttt tattgctttt tgggcgggga ctcaggtata | 1560 |
| taagtagaag cagacctgtg tggttagctc ataggagctg gctttcatcc atggagggtt   | 1620 |
| gggccattttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag  | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa   | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgccagga ctttttgaag    | 1800 |
| ctcttaattt gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt   | 1860 |
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga   | 1920 |
| tcccgcagac tcatttcagc aggggatacg ttttggattt catagccaca gcattgtgga   | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg   | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc   | 2100 |
| aagaggacaa cccgagagcc ggcctggacc ctccagtgga ggaggcggag tagctgactt   | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt   | 2220 |
| taagagggag agggcatcta gtggtactga tgctagatct gagttggctt taagtttaat   | 2280 |
| gagtcgcaga cgtcctgaaa ccatttggtg gcatgagggt cagaaagagg gaagggatga   | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacagggt aaaacatgtt ggttggagcc   | 2400 |
| tgaggatgat tgggaggtgg ccattaaaaa ttatgccaag atagctttga ggcctgataa   | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg   | 2520 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| ggctgaggtg gtaatagata ctcaagacaa ggcagttatt agatgctgca tgatggatat   | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga   | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt   | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag   | 2760 |
| tttctatgcg tgttggattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa   | 2820 |
| atgcatattt caaagatgta acctgggcat tctgaatgaa ggcgaagcaa ggggtccgcca  | 2880 |
| ctgcgcttct acagatactg gatgttttat ttgattaag ggaaatgcca gcgtaaagca    | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctgggtg   | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt   | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt   | 3120 |
| tatgccttac cagtgtaaaca tgaatcatgt gaaagtgttg ttggaaccag atgccttttc  | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta   | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca   | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac   | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt   | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaaattt gttttttctg tcttgacgct | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtcctca gcccttatct gacagggcgt   | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc   | 3600 |
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagttcttc acctttggac   | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac   | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac   | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct   | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa   | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt   | 3960 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gtttttatatt catttttcgc gcacggatatg ccctagacca ccgatctcta tcattgagaa | 4020 |
| ctcgggtggat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca  | 4080 |
| ttaggccgtc tttgggggtgg agatagctcc attgaaggga ttcatgctcc ggggtagtgt  | 4140 |
| tgtaaatacac ccagtcataa caaggtcgca gtgcatgggtg ttgcacaata tcttttagaa | 4200 |
| gtaggctgat tgccacagat aagcccttgg tgtaggtgtt taaaaaccgg ttgagctggg   | 4260 |
| atgggtgcat tcgggggtgaa attatgtgca ttttggattg gatttttaag ttggcaatat  | 4320 |
| tgccgccaag atcccgctctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg  | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac   | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg   | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagttatgt tcctgagtta   | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg   | 4620 |
| ttccttcggg ccccgagca tagttcccct cacagatttg catttcccaa gctttcagtt    | 4680 |
| ccgagggtgg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg   | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga tttgccacat ccggtggggc   | 4800 |
| cataaatgat tccgattacg ggttgcaggt gtagtttag ggaacggcaa ctgccgtctt    | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca   | 4920 |
| aatccattag gaggcgctct cctcctagtg atagaagttc ttgtagtgag gaaaagtttt   | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttgagag agtttgctgc aaaagttcta    | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga ctcctcgtt    | 5100 |
| tcgcgggttt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag   | 5160 |
| ggttcggctc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaagg    | 5220 |
| gtgtgcgcct gcttgggcgc ttgccagggt gcgcttcaga ctcatcctgc tggtcgaaaa   | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag ttaccatga gttcgtagtt    | 5340 |
| gagcgccctc gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatac   | 5400 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| cgggcagtat aggcatttca gcgcatataa cttgggcgca aggaaaacgg attctgggga  | 5460 |
| gtatgcatct gcgccgcagg aggcgcaaac agtttcacat tccaccagcc aggttaaadc  | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatttt ttgatgcgtt tcttaccttt | 5580 |
| ggctctccatg agttcgtgtc ctcgttgagt gacaaacagg ctgtccgtgt ccccgtagac | 5640 |
| tgattttaca ggcctcttct ccagtggagt gcctcgggtc tcttcgtaca ggaactctga  | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcaciaag gaggctatgt gggaggggta  | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcacctc   | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc   | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact  | 6000 |
| caggttgta gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc   | 6060 |
| tttcatgagg ttttcgtcca tctggtcaga aaacacaatt tttttattgt caagtttggt  | 6120 |
| ggcaaatgat ccatacaggg cggttgataa aagtttgga atggatcgca tggtttggtt   | 6180 |
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag  | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcactctggc acgattctca cttgccaccc | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt  | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag  | 6420 |
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| gctgatggga gtgggggtcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc   | 6720 |
| cggacccaag ttggtgcgat tgggtttttc tgttctgtag acgatctggc gaaagatggc  | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tacagagtct ctgacaaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggg | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctgggtg  | 6960 |
| gtttttcttt tcccacagtt cgcgggtgag aaggatttct tcgcgatcct tccagtactc  | 7020 |
| ttctagcgga aaccctgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac | 7080 |
| tgccttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgc tctgaccatg actttgagga attgggtattt | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat  | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaagggtta ggtctgtggg | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg | 7620 |
| ccgtccgact gccatttttt ctgggggtgac gcaatagaag gtttgggggt cctgccgcca | 7680 |
| gcgatccac ttgagtttta tggcgaggtc ataggcgatg ttgacgagcc gctggtctcc   | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtttcc acatcgtagg tgagaaagag cttttctgtg cgaggatgag agccaatcgg  | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgcacg ggttgatatct cgtgaatgag ttgtacctgg cttcccttga cgagaaattt | 8040 |
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc  | 8100 |
| ctgttcatct tctgtctcga tgggtgtcat gctgacgagc cctcgcgga ggcaagtcca   | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag  | 8220 |
| ggtcctgaga cgctgcggac tcaggtagt aggcagtgtc aggagattaa cttgcatgat   | 8280 |



eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| cttttggagg gcggtgcggga gggtcagata gtacttgatc tcaacgggtc cggttggtgga | 8340 |
| gatgtcgatg gcttgcaggg ttccgtgtcc cttgggcgct accaccgtgc ccttggtttt   | 8400 |
| cattttggac ggcggtggct ctgttgcttc ttgcatgttt agaagcgggtg tcgagggcgc  | 8460 |
| gcaccgggcg gcaggggcgg ctccgggaccc ggcggtcatgg ctggcagtgg tacgtcggcg | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg   | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac   | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt   | 8700 |
| tcttgcacgt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct   | 8760 |
| tcctcttgaa gatctccgcg gcccgctctc tcgacgggtg ccgcgaggtc gttggagatg   | 8820 |
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc   | 8880 |
| acggcccca cgggatctct cgcgcgcatg accacctggg cgaggttgag ctccacgtgg    | 8940 |
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg   | 9000 |
| tgctcggatga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc  | 9060 |
| agagcttcca agcgctccat ggctctgtag aagtccacgg caaaattaaa aaactgggag   | 9120 |
| tttcgcgcgg acacggtcaa ctctcttcc agaagacgga taagttcggc gatggtggtg    | 9180 |
| cgcacctcgc gctcgaaagc ccctgggatt tcttctcaa tctcttcttc ttccactaac    | 9240 |
| atctcttcct cttcaggtgg ggctgcagga ggagggggaa cgcggcgacg ccggcggcgc   | 9300 |
| acgggcagac ggtcgatgaa tctttcaatg acctctccgc ggcggcggcg catggtttca   | 9360 |
| gtgacggcgc ggccgttctc gcgcggtcgc agagtaaaaa caccgccgcg catctcctta   | 9420 |
| aagtggatgac tgggaggttc tccgtttggg agggagaggg cgctgattat acattttatt  | 9480 |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa   | 9540 |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct   | 9600 |
| tgtgggcggg ggtggttatg tggtcgtct gggtcttctg tttcttcttc atctcgggaa    | 9660 |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatggtg   | 9720 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gcgaggagca ccaggtcttt ggggtccggct tgctggatac gcaggcgatt ggccattccc | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg  | 9840  |
| ggcacttctt cctcaccgt tctgccatgc atacgtgtga gtccaaatcc gcgcattgggt  | 9900  |
| tgtaccagt ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta   | 9960  |
| agggtggctt gaaagtcac aaaatccaca aagcgggtgt aagctcctgt attaatgggtg  | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctgggt gaccagggcg cacgagctcg | 10080 |
| gtgtatttaa ggcgcgaata ggcgcgggtg tcaaagatgt aatcgttgca ggtgcgcacc  | 10140 |
| agatactgggt accctataag aaaatgcggc ggtgggtggc ggtagagagg ccatcgttct | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac  | 10260 |
| ctggacatcc aggtgattcc tgcggcggtg gtagaagccc gaggaaactc gcgtacgcgg  | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgtag gcacggtttg accagtgagg   | 10380 |
| cgcgcgagc cattgatgct ctatagacac ggagaaaatg aaagcgttca gcgactcgac   | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcgggtg taccggtt cgagacttgt   | 10500 |
| actcgagccg gccggagccg cggctaactg ggtattggca ctcccgtctc gaccagcct   | 10560 |
| acaaaaatcc aggatacga atcgagtcgt tttgctggtt tccgaatggc agggaaagtga  | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa  | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact  | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc  | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa  | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag  | 10920 |
| gagccggagg agatgcgagc ttcccgtttt aacgcgggtc gtgagctgcg tcacggtttg  | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagtgt atgaaatgac agggatcagt  | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag  | 11100 |
| gaagagcgta acttccaaaa gtcttttaaat aatcatgtgc gaaccctgat tgcccgcgaa | 11160 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| gaagttaccc ttggtttgat gcattttgtgg gattttgatgg aagctatcat tcagaaccct | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtggtgc aacacagcag agacaatgag   | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt   | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg  | 11400 |
| gctgccatca attactcgggt tttgagcttg ggaaaatatt acgctcgcaa aatctacaag  | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg  | 11520 |
| ctcaaggctt tgacctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc    | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa   | 11640 |
| agagctctga ctggagctgg aaccgagggt gagaattact tcgacatggg agctgacttg   | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac   | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac   | 11820 |
| aacccgtgtt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct   | 11880 |
| gcagagccag cagtccggca ttaactcctc ggacgatttg acccaggcca tgcaacgtat   | 11940 |
| catggcgctg acgactcgca acccgaagc ctttagacag caaccccagg ccaaccgtct    | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggtcct  | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa agctattcgt ccagatgagg ccggactgggt  | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaattt   | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagg tccagcgtga    | 12240 |
| tgccaacctg ggctcgctgg tggcgtaaaa tgctttcttg agtactcagc ctgctaattg   | 12300 |
| gccgcgtgggt caacaggatt atactaactt tttaagtgtt ttgagactga tggatcaga   | 12360 |
| agtacctcag agcgaagtgt atcagtccgg tcctgattac ttctttcaga ctagcagaca   | 12420 |
| gggcttgacg acggtaaatc tgagccaagc ttttaaaaac cttaaagggt tgtggggagt   | 12480 |
| gcatgccccg gtaggagaaaa gagcaaccgt gtctagcttg ttaactccga actccgcct   | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctattt   | 12600 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gggttaccta ctaaacctgt atcgcgaagc catagggcaa agtcaggtgg acgagcagac  | 12660 |
| ctatcaagaa attacccaag tcagtcgcgc tttgggacag gaagacactg gcagtttgga  | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaag atccctcctc aatatgctct  | 12780 |
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat  | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag  | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc  | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgcactggc tgccccacc   | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaata gacggatttc tgtgggacga | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg  | 13140 |
| cgatagaatg cattcttctg catcgctgtc cgggggtcatg ggtgctaccg cggctgagcc | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga  | 13260 |
| agtgggtaga ataagtcgcc cgagtttaata gggcgaagag gagtatctaa acgattcctt | 13320 |
| gctcagaccg gcaagagaaa aaaatttccc aaacaatgga atagaaagtt tgggtggataa | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat  | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga  | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa  | 13560 |
| cccgtttgct catttgcgcc ctgccttggg tggatatgtt taaaaaaaaa taaaaaaaaa  | 13620 |
| actcaccaag gccatggcga cgagcgtagc ttcgttcttc tttattatct gtgtctagta  | 13680 |
| taatgaggcg agtcgtgcta ggcgagcgg tgggttatcc ggagggtcct cctccttcgt   | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcggtgat gcaatcccca ctggaggctc  | 13800 |
| cctttgtgcc tccgcgatac ctggcaccta cggagggcag aaacagcatt cgttattcgg  | 13860 |
| aactggcacc tcagtacgat accaccaggt tgtatctggt ggacaacaag tcggcggaca  | 13920 |
| ttgcttctct gaactatcag aatgaccaca gcaacttctt gaccacggtg gtgcaaaaaca | 13980 |
| atgactttac ccctacggaa gccagcacc agaccattaa ctttgatgaa cgatcgcggt   | 14040 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ggggcgggtca gctaaagacc atcatgcata ctaacatgcc aaacgtgaac gagtatatgt | 14100 |
| ttagtaacaa gttcaaagcg cgtgtgatgg tgtccagaaa acctcccgac ggtgctgcag  | 14160 |
| ttggggatac ttatgatcac aagcaggata ttttgaaata tgagtggttc gagtttactt  | 14220 |
| tgccagaagg caacttttca gttactatga ctattgattt gatgaacaat gccatcatag  | 14280 |
| ataattactt gaaagtgggt agacagaatg gagtgcttga aagtgacatt ggtgttaagt  | 14340 |
| tcgacaccag gaacttcaag ctgggatggg atcccgaaac caagttgatc atgcctggag  | 14400 |
| tgtatacgta tgaagccttc catcctgaca ttgtcttact gcctggctgc ggagtggatt  | 14460 |
| ttaccgagag tcgtttgagc aaccttcttg gtatcagaaa aaaacagcca tttcaagagg  | 14520 |
| gttttaagat tttgtatgaa gatttagaag gtggtaatat tccggccctc ttggatgtag  | 14580 |
| atgcctatga gaacagtaag aaagaacaaa aagccaaaat agaagctgct acagctgctg  | 14640 |
| cagaagctaa ggcaaacata gttgccagcg actctacaag ggttgctaac gctggagagg  | 14700 |
| tcagaggaga caattttgcg ccaacacctg ttccgactgc agaatacatta ttggccgatg | 14760 |
| tgtctgaagg aacggacgtg aaactcacta ttcaacctgt agaaaaagat agtaagaata  | 14820 |
| gaagctataa tgtgttgga gacaaaatca acacagccta tcgcagttgg tatctttcgt   | 14880 |
| acaattatgg cgatcccgaa aaaggagtgc gttcctggac attgctcacc acctcagatg  | 14940 |
| tcacctgcgg agcagagcag gtctactggg cgcttccaga catgatgaag gatcctgtca  | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggg ggggtgcagag cttatgcccg | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca  | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg  | 15180 |
| cgcccaccat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc  | 15240 |
| cgttgcgag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca   | 15300 |
| cctgtcccta cgtgtacaag gactgggca tagtcgcacc gcgcgtcctt tcaagccgca   | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg  | 15420 |
| tctgcgcgct ccaagcaaga tgtacggagg cgcacgcaaa cgttctaccc aacatcctgt  | 15480 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg  | 15540 |
| aaccaccgtc gatgatgtaa tcgatcaggt ggttgccgac gcccgtaatt atactcctac  | 15600 |
| tgcgcctaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta  | 15660 |
| tgctcgacgt aagagccggc gaaggcgc atgccagacgc caccgagcta ccactgccat   | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag  | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag cgccggcagg tcccgcaggc aagcagccgc  | 15840 |
| tgtcgcagcg gcgactattg ccgacatggc ccaatcgcga agaggcaatg tatactgggt  | 15900 |
| gcgtgacgt gccaccggc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa    | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa  | 16020 |
| ggaagaaatg ctgcaggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa  | 16080 |
| aaaacccgc aaaatcaagc ggggttaaaaa ggacaaaaaa gaagaggaag atggcgatga  | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga cgcgtgcaat ggcggtggcg  | 16200 |
| caaagttcga catgtgttga gacctggaac ttcgggtggtc ttacacccg gcgagcggtc  | 16260 |
| aagcgctact tttaagcgtt cctatgatga ggtgtacggg gatgatgata ttcttgagca  | 16320 |
| ggcggctgac cgattaggcg agtttgctta tggcaagcgt agtagaataa cttccaagga  | 16380 |
| tgagacagtg tcgataccct tggatcatgg aaatcccacc ctagtctta aaccggtcac   | 16440 |
| tttgagcaa gtgttaccg taactccgcg aacagggtgt aaacgcgaag gtgaagattt    | 16500 |
| gtatcccact atgcaactga tggtaaccaa acgccagaag ttggaggacg ttttgagaa   | 16560 |
| agtaaaagt gatccagata ttcaacctga ggttaaagt agaccatta agcaggtagc     | 16620 |
| gcctggctctg ggggtacaaa ctgtagacat taagattccc actgaaagta tggaagtgca | 16680 |
| aactgaacc gcaaagccta ctgccacct cactgaagt caaacggatc catggatgcc     | 16740 |
| catgcctatt acaactgacg ccgccgtcc cactcgaaga tcccgcgaa agtacgggtcc   | 16800 |
| agcaagtctg ttgatgcca attatgttgt acacccatct attattccta ctctgggtta   | 16860 |
| ccgaggcact cgctactatc gcagccgaaa cagtacctcc cgccgtcgcc gcaagacacc  | 16920 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tgcaaatcgc agtcgtcgcc gtagacgcac aagcaaaccg actcccggcg ccctgggtgcg  | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc tttgacactg ccgcgtgcgc gttaccatcc   | 17040 |
| gagtatcatc acttaatcaa tgttgccgct gcctccttgc agatatggcc ctcacttgtc   | 17100 |
| gccttcgcgt tcccatcact ggttaccgag gaagaaactc gcgccgtaga agagggatgt   | 17160 |
| tgggacgcgg aatgcgacgc tacaggcgac ggcggtgctat ccgcaagcaa ttgcgggggtg | 17220 |
| gttttttacc agccttaatt ccaattatcg ctgctgcaat tggcgcgata ccaggcatag   | 17280 |
| cttccgtggc ggttcaggcc tcgcaacgac attgacattg gaaaaaaacg tataaataaa   | 17340 |
| aaaaaaaaaa tacaatggac tctgacactc ctggtcctgt gactatgttt tcttagagat   | 17400 |
| ggaagacatc aatttttcat ccttggctcc gcgacacggc acgaagccgt acatgggcac   | 17460 |
| ctggagcgac atcggcacga gccaaactgaa cggggggcgcc ttcaattgga gcagtatctg | 17520 |
| gagcgggctt aaaaattttg gctcaaccat aaaaacatac gggaacaaag cttggaacag   | 17580 |
| cagtacagga caggcgctta gaaataaaact taaagaccag aacttccaac aaaaagtagt  | 17640 |
| cgatgggata gcttccggca tcaatggagt ggtagatttg gctaaccagg ctgtgcagaa   | 17700 |
| aaagataaac agtcgtttgg acccgccgcc agcaaccca ggtgaaatgc aagtggagga    | 17760 |
| agaaaattcct ccgccagaaa aacgaggcga caagcgccg cgtcccgatt tggaagagac   | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc   | 17880 |
| caccactaga ccgatagccc caatggccac cgggggtgatg aaaccttctc agttgcatcg  | 17940 |
| acccgtcacc ttggatttgc cccctcccc tgctgtact gctgtacccg cttctaagcc     | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccggggggcg ctcctcgtcc  | 18060 |
| aaatgcgcac tggcaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa   | 18120 |
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgcctat ctgtgtatat   | 18180 |
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct   | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc atgggcatac atgcacatcg    | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctggt gcagttcgcc cgcgccacag   | 18360 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| acacctactt caatctggga aataagttta gaaatccac cgtagcgccg acccacgatg   | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca  | 18480 |
| atacatactc ttacaaagtg cggtagaccc tggccgtggg cgacaacaga gtgctggata  | 18540 |
| tggccagcac gttctttgac attaggggtg tgttggacag aggtcccagt ttcaaaccct  | 18600 |
| attctggtag ggcttacaac tccctggctc cttaaaggcg tccaaatata tctcagtgga  | 18660 |
| ttgcagaagg tgtaaaaaat acaactgggtg aggaacacgt aacagaagag gaaaccaata | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag  | 18780 |
| gactcccagt aggtttggaa gtttcagatg aagaaaagtaa accgatttat gctgataaaa | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg  | 18900 |
| aaaagtatgg aggcagggct ctcaaaccg atactaagat gaaacatgc tacgggtcct    | 18960 |
| ttgccaaacc tactaatgtg aaaggcggtc aggcaaaaca aaaaacaacg gagcagccaa  | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc  | 19140 |
| atgtagtgtg caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat  | 19200 |
| ctatgccccaa cagacccaac tacattggct tcagagataa ctttattgga cttatgtact | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctggtcaagc gtctcagtta aatgcagtgg  | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg  | 19380 |
| acagaaccag atacttttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac | 19440 |
| gtgttattga aaatcatggg gtggaagatg aacttcccaa ctactgtttt ccactggacg  | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgcta   | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca  | 19620 |
| tggaaattaa cttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat   | 19680 |
| atctcccaga ctctgacaaa tacaccccg ccaatgtcac tcttccagaa aacaaaaaca   | 19740 |
| cctacgacta catgaacggg cgggtggtgc cgccatctct agtagacacc tatgtgaaca  | 19800 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta  | 19860 |
| acgctggcctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca  | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt  | 20100 |
| tcccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg   | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg   | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctggcat   | 20280 |
| ttaccagact gaaaaccaa gaaactccct ctttggggtc tggatttgac ccctactttg   | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |
| ctaacgaatt tgaaataaag cgactgtgg atggcgaagg ctacaacgta gcccaatgca   | 20520 |
| acatgaccaa agactgggtc ttggtacaga tgctcgccaa ctacaacatc ggctatcagg  | 20580 |
| gcttctacat tccagaagga tacaagatc gcatgtattc atttttcaga aacttccagc   | 20640 |
| ccatgagcag gcaggtggtt gatgaggtca attacaaaga cttcaaggcc gtcgccatac  | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccttatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcat accgttctcg agcaacttca  | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg  | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct  | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct   | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc  | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca  | 21180 |
| gagccattgt ccaagacctg ggttgcggac cctatTTTTT gggaacctac gataagcgct  | 21240 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tccccggggtt catggccccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg  | 21300 |
| agacggggggg agagcactgg ttggcttttcg gttggaaccc acgttctaac acctgctacc | 21360 |
| tttttgatcc ttttggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg   | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat   | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcatgttcc    | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaaccccacc atgaaattgc   | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca    | 21660 |
| atcaaaaagc actctaccat tttcttaata cccattcgcc ttattttctgc tcccatcgta  | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa   | 21780 |
| caacgtgttc aataaacatc actttatttt ttacatgta tcaaggctct gcattactta    | 21840 |
| tttatttaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg   | 21900 |
| ttgcggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt   | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca  | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgcctt gagcgcgaga gttgcggtac   | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacggtg   | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cgggggtcatc  | 22200 |
| ttgcaggctc gcctacccat ggccgggcacc caattaggct tgtggttgca atcgcagtc   | 22260 |
| agggggatca gtatcatctt ggccctgatcc tgtctgattc ctggatacac ggctctcatg  | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcggtata aaacatccc    | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcgggcg   | 22440 |
| tcattgttag ctatttgcac cacacttctg cccagcgggt tttgggtgat tttggttcgc   | 22500 |
| tcgggattct cctttaaggc tcgttgtccg ttctcgctgg ccacatccat ctcgataatc   | 22560 |
| tgctccttct gaatcataat attgccatgc aggcacttca gcttgccctc ataattattg   | 22620 |
| cagccatgag gccacaacgc acagcctgta cattcccaat tatggtgggc gatctgagaa   | 22680 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| aaagaatgta tcattccctg cagaaatctt cccatcatcg tgctcagtgt cttgtgacta  | 22740 |
| gtgaaagtta actggatgcc tcggtgctcc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtt taagttcgtt atccagcctg  | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc  | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcactttta | 22980 |
| gcgatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg  | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgtttggg cttccttggc ttctttttgg ggggtatcgg aggaggagga  | 23160 |
| ctgtcgctcc gttccggaga caggaggat tgtgacgttt cgctcaccat taccaactga   | 23220 |
| ctgtcggtag aagaacctga cccacacagg cgacagggtg ttctcttcgg gggcagaggt  | 23280 |
| ggaggcgatt gcgaagggt cgggtccgac ctggaaggcg gatgactggc agaaccctt    | 23340 |
| ccgcgttcgg ggggtgtgct cctgtggcgg tcgcttaact gatttccttc gcggctggcc  | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |
| cgccacgagt gccatcacat ctgctcctca gcgacgagga aaaggagcag agcttaagca  | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gaccgggct   | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa  | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca  | 23760 |
| ccgactacct catagggtt gacggggaag acgcgctcct taaacatcta gcaagacagt   | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccacatcgt gtggaagagc | 23880 |
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tcccccaaa cgtcagccaa   | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag  | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta  | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag  | 24120 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cttccttggga agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg | 24180 |
| caaatgctct gcaaaaaggga gaaaatggca tggatgagca tcacagcggt ctggtggaat  | 24240 |
| tggaaggcga taatgccaga ctgcagtagc tcaagcgaag catcgagggt acacacttcg   | 24300 |
| catatcccg cgtcaacctg cccctaaag tcatgacggc ggtcatggac cagttactca     | 24360 |
| ttaagcgcgc aagtccccct tcagaagaca tgcattgaccc agatgcctgt gatgagggtg  | 24420 |
| aaccagtggg cagtgatgag cagctaaccg gatggctggg caccgactct cccagggtat   | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tgggtgctggg taccgtagaa ctagagtgtc  | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaacg cgaagagaat ctgcactaca   | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatata taactgtgaa ctcaccaacc   | 24660 |
| tggtttccta catgggtatt ctgcattgaa atcgccatgg acaaagcgtg ctgcacagca   | 24720 |
| ccctgaaggg ggaagcccg cgtgattaca tccgcgattg tgtctatctg tacctgtgcc    | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag   | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca   | 24900 |
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa   | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcattctgg   | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca   | 25080 |
| cctaccgcga gtgccccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact   | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc   | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga   | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt   | 25320 |
| cttctcctgg gcaaagttaa aaactgaccc cgggactgtg gacctccgcc tacttgcgca   | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc    | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcaccagggt ggcaattctg gcccaattgc   | 25500 |
| aagccatcca aaaatcccg caagaatttc tactgaaaaa gggtaagggg gtctaccttg    | 25560 |

eolf-seql (2)

|             |             |            |            |            |            |       |
|-------------|-------------|------------|------------|------------|------------|-------|
| acccccagac  | cggcgaggaa  | ctcaacacaa | ggttccctca | ggatgtccca | acgacgagaa | 25620 |
| aacaagaagt  | tgaagggtgca | gccgccgccc | ccagaagata | tggaggaaga | ttgggacagt | 25680 |
| caggcagagg  | aggcggagga  | ggacagtctg | gaggacagtc | tggaggaaga | cagtttggag | 25740 |
| gaggaaaaacg | aggaggcaga  | ggaggtggaa | gaagtaaccg | ccgacaaaca | gttatcctcg | 25800 |
| gctgcggaga  | caagcaacag  | cgctaccatc | tccgctccga | gtcgaggaac | ccggcggcgt | 25860 |
| cccagcagta  | gatgggacga  | gaccggacgc | ttcccgaacc | caaccagcgc | ttccaagacc | 25920 |
| ggtaagaagg  | atcggcaggg  | atacaagtcc | tggcgggggc | ataagaatgc | catcatctcc | 25980 |
| tgcttgcattg | agtgcggggg  | caacatatcc | ttcacgcggc | gctacttgct | attccaccat | 26040 |
| ggggtgaact  | ttccgcgcaa  | tgttttgcat | tactaccgtc | acctccacag | cccctactat | 26100 |
| agccagcaaa  | tcccggcagt  | ctcgacagat | aaagacagcg | gcggcgacct | ccaacagaaa | 26160 |
| accagcagcg  | gcagtttagaa | aatacacaac | aagtgcagca | acaggaggat | taaagattac | 26220 |
| agccaacgag  | ccagcgcaaa  | cccgagagtt | aagaaatcgg | atctttccaa | ccctgtatgc | 26280 |
| catcttccag  | cagagtcggg  | gtcaagagca | ggaactgaaa | ataaaaaacc | gatctctgcg | 26340 |
| ttcgctcacc  | agaagttggt  | tgtatcacia | gagcgaagat | caacttcagc | gcactctcga | 26400 |
| ggacgccgag  | gctctcttca  | acaagtactg | cgcgctgact | cttaaagagt | aggcagcgac | 26460 |
| cgcgcttatt  | caaaaaaggc  | gggaattaca | tcacctctga | catgagtaaa | gaaattccca | 26520 |
| cgccttacat  | gtggagttat  | caacccccaa | tgggattggc | ggcaggcgcc | tcccaggact | 26580 |
| actccacccg  | catgaattgg  | ctcagcgccg | ggccttctat | gatttctcga | gttaatgata | 26640 |
| tacgcgccta  | ccgaaaccaa  | atacttttgg | aacagtcagc | tcttaccacc | acgccccgcc | 26700 |
| aacaccttaa  | tcccagaaat  | tggcccgccg | ccctagtgtg | ccaggaaagt | cccgtccca  | 26760 |
| ccactgtatt  | acttctcga   | gacgcccagg | ccgaagtcca | aatgactaat | gcaggtgcgc | 26820 |
| agttagctgg  | cggctccacc  | ctatgtcgtc | acaggcctcg | gcataatata | aaacgcctga | 26880 |
| tgatcagagg  | ccgaggtatc  | cagctcaacg | acgagtcggt | gagctctccg | cttggtctac | 26940 |
| gaccagacgg  | aatctttcag  | attgccggct | gcgggagatc | ttccttcacc | cctcgtcagg | 27000 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ctgttctgac tttggaaaagt tcgtcttcgc aaccccgtc gggcggaatc gggaccgttc  | 27060 |
| aatttgtgga ggagtttact ccctctgtct acttcaaccc cttctccgga tctcctgggc  | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg  | 27180 |
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg  | 27240 |
| ctttcgctgc tttgcccggg aactcattga gttcatctac ttcgaactcc ccaaggatca  | 27300 |
| ccctcaaggt ccggcccacg gagtgcggat ttctatcgaa ggcaaaatag actctcgcct  | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccagggaa acaccacggt  | 27420 |
| ttccatctac tgcatttgta atcaccccg attgcatgaa agcctttgct gtcttatgtg   | 27480 |
| tactgagttt aataaaaact gaattaagac tctcctacgg actgccgctt cttcaacccg  | 27540 |
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctgtt aacttcacct  | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttcccta  | 27660 |
| ctaatactac tttcaaaacc ggaggtgagc tccaaggtct tcctacagaa aacccttggg  | 27720 |
| tggaagcggg ccttgtagtg ctaggaattc ttgcgggtgg gcttgtgatt attctttgct  | 27780 |
| acctatacac accttgcttc actttcttag tgggtgttggt gtattggttt aaaaaatggg | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga  | 27900 |
| tccatgtcta gacttcgacc cagaaaactg cacacttact tttgcacccg acacaagccg  | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aatttacctg  | 28020 |
| catggtggga atcaaccca tagttatcac ccagcaaagt ggagatacta agggttgcat   | 28080 |
| tcactgctcc tgcgattcca tcgagtgcac ctacaccctg ctgaagaccc tatgcggcct  | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca  | 28200 |
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttcctc ttcccaactc   | 28260 |
| tggatttcta aaccccggtc agcggcatac tttctccata ctttaaaggg gatgtcaa    | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt   | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca  | 28440 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| ccccctttata aacccagggt ttattttcccc aaatggcttc acacaaagcc caaacggagt | 28500 |
| tcttacttta aaatgtttta cccactaac aaccacaggc ggatctctac agctaaaagt    | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac   | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac   | 28680 |
| gaatgaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat   | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aacccaccg aagccaactg    | 28800 |
| tcaaatcatg aactccagt aatctaata ttgcaaatta attctaacac tagttaaaac     | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct   | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaattt   | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc   | 29040 |
| tactggtgcc attactaatg ctaaaggttt catgcccagc acgactgcct atcctttcaa   | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga   | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga   | 29220 |
| gacatcatat tgtattcgta taacttggtc ctggaacaca ggagatgccc cagagggtgca  | 29280 |
| aacctctgct acaaccctag tcacctcccc atttaccttt tactacatca gagaagacga   | 29340 |
| ctgacaaata aagtttgcga tcgccaggcc caccatggga tggagctgta tcatcctctt   | 29400 |
| cttggtagca acagctacag gtgtccactc ccagggtgcag ctgcagcagt ctggggctga  | 29460 |
| actggcaaga cctggggcct cagtgaagat gtcctgcaag gcttctggct acacctttac   | 29520 |
| taggtacacg atgcactggg taaaacagag gcctggacag ggtctggaat ggattggata   | 29580 |
| cattaatcct agccgtgggt atactaatta caatcagaag ttcaaggaca aggccacatt   | 29640 |
| gactacagac aaatcctcca gcacagccta catgcaactg agcagcctga catctgagga   | 29700 |
| ctctgcagtc tattactgtg caagatatta tgatgatcat tactgccttg actactgggg   | 29760 |
| ccaaggcacc actctcacag tctctcagg tggcgggtggc tcgggcggtg gtggatctgg   | 29820 |
| tggcggcgga tctgatatcg tgctcactca gtctccagca atcatgtctg catctccagg   | 29880 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ggagaaggct accatgacct gcagtgccag ctcaagtgtg agttacatga actggtacca  | 29940 |
| gcagaagtca ggcacctccc ccaaaagatg gatttatgac acatccaaac tggcttctgg  | 30000 |
| agtccttgct cacttcaggg gcagtgggtc tgggacctct tactctctca caatcagcgg  | 30060 |
| catggaggct gaagatgctg ccacttatta ctgccagcag tggagtagta acccattcac  | 30120 |
| gttcggctcg gggacaaaagt tggaaataaa ccggggatcc gaacaaaaac tcatctcaga | 30180 |
| agaggatctg aatgctgtgg gccaggacac gcaggaggct atcgtggtgc cacactcctt  | 30240 |
| gccctttaag gtggtggtga tctcagccat cctggccctg gtggtgctca ccatcatctc  | 30300 |
| ccttatcatc ctcatcatgc tttggcagaa gaagccacgt ggttcaatcc ctaaccctct  | 30360 |
| cctcggctct gatggaagcg gagctactaa cttcagcctg ctgaagcagg ctggagacgt  | 30420 |
| ggaggagaac cctggacctg gccacacacg gaggcaggga acatcaccat ccaagtgtcc  | 30480 |
| atacctcaat ttctttcagc tcttggtgct ggctggctct tctcacttct gttcaggtgt  | 30540 |
| tatccacgtg accaaggaag tgaaagaagt ggcaacgctg tcctgtggtc acaatgtttc  | 30600 |
| tggtgaagag ctggcacaaa ctgcgcatcta ctggcaaaag gagaagaaaa tgggtctgac | 30660 |
| tatgatgtct ggggacatga atatatggcc cgagtacaag aaccggacca tctttgatat  | 30720 |
| cactaataac ctctccattg tgatcctggc tctgcgcca tctgacgagg gcacatacga   | 30780 |
| gtgtgttggt ctgaagtatg aaaaagacgc tttcaagcgg gaacacctgg ctgaagtgac  | 30840 |
| gttatcagtc aaagctgact tccctacacc tagtatatct gactttgaaa ttccaacttc  | 30900 |
| taatattaga aggataattt gctcaacctc tggaggtttt ccagagcctc acctctcctg  | 30960 |
| gttggaataat ggagaagaat taaatgccat caacacaaca gtttcccaag atcctgaaac | 31020 |
| tgagctctat gctgttagca gcaaactgga tttcaatatg acaaccaacc acagcttcat  | 31080 |
| gtgtctcatc aagtatggac atttaagagt gaatcagacc ttcaactgga atacaaccaa  | 31140 |
| gcaagagcat tttcctgata acctgctccc atcctgggcc attaccttaa tctcagtaaa  | 31200 |
| tggaattttt gtgatatgct gcctgacctg ctgctttgcc ccaagatgca gagagagaag  | 31260 |
| gaggaatgag agattgagaa gggaaagtgt acgccctgta taagctagct tgactgactg  | 31320 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| agatacagcg taccttcagc tcacagacat gataagatac attgatgagt ttggacaaac   | 31380 |
| cacaactaga atgcagtgaa aaaaatgctt tatttgtgaa atttgtgatg ctattgcttt   | 31440 |
| atttghtaacc attataagct gcaataaaca agttaacaac aacaattgca ttcattttat  | 31500 |
| gtttcagggt cagggggagg tgtgggagggt tttttaaaagc aagtaaaacc tctacaaatg | 31560 |
| tggtagtcgt cagctatcct gcaggaactt gtttatttga aaatcaattc aaaaaatccg   | 31620 |
| agtagttatt ttgcctcccc cttcccattt aacagaatac accaatctct cccacgcac    | 31680 |
| agctttaaac atttggatac cattagatat agacatgggt ttagattcca cattccaaac   | 31740 |
| agtttcagag cgagccaatc tggggtcagt gatagataaa aatccatcgg gatagtcttt   | 31800 |
| taaagcgctt tcacagtcca actgctgcgg atgcgactcc ggagtctgga tcacggtcac   | 31860 |
| ctggaagaag aacgatggga atcataatcc gaaaacggta tcggacgatt gtgtctcatc   | 31920 |
| aaaccacaa gcagccgctg tctgcgtcgc tccgtgcgac tgctgtttat gggatcaggg    | 31980 |
| tccacagtgt cctgaagcat gattttaata gcccttaaca tcaactttct ggtgcatgc    | 32040 |
| gcgcagcaac gcattctgat ttcactcaaa tctttgcagt aggtacaaca cattattaca   | 32100 |
| atattgttta ataaaccata attaaaagcg ctccagccaa aactcatatc tgatataatc   | 32160 |
| gccccgcat gaccatcata ccaaagtta atataaatta aatgacgttc cctcaaaaac     | 32220 |
| acactacca catacatgat ctcttttggc atgtgcatat taacaatctg tctgtaccat    | 32280 |
| ggacaacgtt ggtaaatcat gcaacccaat ataaccttcc ggaaccacac tgccaacacc   | 32340 |
| gctccccag ccatgcattg aagtgaaccc tgctgattac aatgacaatg aagaacccaa    | 32400 |
| ttctctcgac cgtgaatcac ttgagaatga aaaatatcta tagtggcaca acatagacat   | 32460 |
| aaatgcatgc atcttctcat aatttttaac tcctcaggat ttagaaacat atcccaggga   | 32520 |
| ataggaagct cttgcagaac agtaaagctg gcagaacaag gaagaccacg aacacaactt   | 32580 |
| acactatgca tagtcatagt atcacaatct ggcaacagcg ggtggtcttc agtcatagaa   | 32640 |
| gctcgggttt cattttcctc acaacgtgggt aactgggctc tgggtgaagg gtgatgtctg  | 32700 |
| gcgcatgatg tcgagcgtgc gcgcaacctt gtcataatgg agttgcttcc tgacattctc   | 32760 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| gtatttttagta tagcaaaacg cggccctggc agaacacact cttcttcgcc ttctatcctg | 32820 |
| ccgcttagcg tgttccgtgt gatagttcaa gtacaaccac actcttaagt tgggtcaaaag  | 32880 |
| aatgctggct tcagttgtaa tcaaaactcc atcgcatcta atcgttctga ggaaatcatc   | 32940 |
| caagcaatgc aactggattg tgtttcaagc aggagaggag aggggaagaga cggaagaacc  | 33000 |
| atgttaattt ttattccaaa cgatctcgca gtacttcaaa ttgtagatcg cgcagatggc   | 33060 |
| atctctcgcc ccactgtgt tgggtgaaaa gcacagctag atcaaaagaa atgcgatttt    | 33120 |
| caaggtgctc aacgggtggct tccagcaaag cctccacgcg cacatccaag aaaaaagaa   | 33180 |
| tacaaaaaga aggagcattt tctaactcct caatcatcat attacattcc tgcaccattc   | 33240 |
| ccagataatt ttcagctttc cagccttgaa ttattcgtgt cagttcttgt ggtaaatcca   | 33300 |
| atccacacat taaaaacagg tcccggaggg cgccctccac caccattctt aaacacaccc   | 33360 |
| tcataatgac aaaatatctt gtcctgtgt cacctgtagc gaattgagaa tggcaacatc    | 33420 |
| aattgacatg cccttggctc taagttcttc ttttaagttct agttgtaaaa actctctcat  | 33480 |
| attatcacca aactgcttag ccagaagccc cccgggaaca agagcagggg acgctacagt   | 33540 |
| gcagtacaag cgcagacctc cccaattggc tccagcaaaa acaagattgg aataagcata   | 33600 |
| ttgggaaccg ccagtaatat catcgaagtt gctggaaata taatcaggca gagtttcttg   | 33660 |
| taaaaattga ataaaaagaaa aatttgccaa aaaaacattc aaaacctctg ggatgcaa    | 33720 |
| gcaatagggt accgcgctgc gtcacaacat tgtagtttt gaattagtct gcaaaaataa    | 33780 |
| aaaaaaaaaac aagcgtcata tcatagtagc ctgacgaaca gatggataaa tcagtctttc  | 33840 |
| catcacaaga caagccacag ggtctccagc tcgaccctcg taaaacctgt catcatgatt   | 33900 |
| aaacaacagc accgaaagtt cctcgcggtg accagcatga ataattcttg atgaagcata   | 33960 |
| caatccagac atgttagcat cagttaacga gaaaaaacag ccaacatagc ctttgggtat   | 34020 |
| aattatgctt aatcgtaagt atagcaaagc caccctcgc ggatacaaag taaaaggcac    | 34080 |
| aggagaataa aaaatataat tatttctctg ctgctgttca ggcaacgtcg ccccggtcc    | 34140 |
| ctctaaatac acatacaaag cctcatcagc catggcttac cagacaaagt acagcgggca   | 34200 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| cacaaagcac aagctctaaa gtgactctcc aacctctcca caatatatat atacacaagc | 34260 |
| cctaaactga cgtaatggga gtaaagtgtg aaaaatcccg ccaaaccxaa cacacacccc | 34320 |
| gaaactgcgt caccagggaa aagtacagtt tcacttccgc aatcccaaca ggcgtaactt | 34380 |
| cctctttctc acggtacgtg atatcccact aacttgcaac gtcattttcc cacggtcgca | 34440 |
| ccgccccctt tagccgttaa cccacagcc aatcaccaca cgatccacac tttttaaaat  | 34500 |
| cacctcattt acatattggc accattccat ctataaggta tattatatag ataga      | 34555 |

<210> 103

<211> 33595

<212> DNA

<213> Artificial Sequence

<220>

<223> NG-420 virus genome sequence comprising the EnAd genome with a transgene cassette that encodes a membrane-anchored chimeric form of the single chain Fv anti-human CD3e inserted in the region BY.

<400> 103

|                                                                     |     |
|---------------------------------------------------------------------|-----|
| tctatctata taatataacct tatagatgga atgggtgcaa tatgtaaatg aggtgatttt  | 60  |
| aaaaagtgtg gatcgtgtgg tgattggctg tgggggttaac ggctaaaagg ggcgggtgcga | 120 |
| ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt   | 180 |
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggg atttaacagg   | 240 |
| aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa   | 300 |
| tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg   | 360 |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt   | 420 |
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtgt cagctgatcg ctaggggtatt | 480 |
| tatacctcag ggtttggtgc aagaggccac tcttgagtgc cagcgagaag agttttctcc   | 540 |
| tctgcgccgg cagtttaata ataaaaaaat gagagatttg cgatttctgc ctcaggaaat   | 600 |
| aatctctgct gagactggaa atgaaatatt ggagcttggt gtgcacgccc tgatgggaga   | 660 |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt   | 720 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| agaggtagag ggatcggagg attctaata ga ggaagctgta aatggctttt ttaccgattc | 780  |
| tatgctttta gctgctaata gagggttaga attagatccg cctttggaca cttttgatac   | 840  |
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt   | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga   | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt   | 1020 |
| tcagttggat tgcccgagc ttcctggaca tggctgtaag tcttgtgaat ttcacaggaa    | 1080 |
| aaatactgga gtaaaggaac tgttatgttc gctttgttat atgagaacgc actgccactt   | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat   | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc   | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg   | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga   | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaacgct caagacaata    | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta  | 1500 |
| ataaaaaatat gttaactgtt cactggtttt tattgctttt tgggcgggga ctcaggtata  | 1560 |
| taagtagaag cagacctgtg tggtagctc ataggagctg gctttcatcc atggaggttt    | 1620 |
| gggccatttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag   | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa   | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgccagga ctttttgaag    | 1800 |
| ctcttaattt gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt   | 1860 |
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga   | 1920 |
| tccgcagac tcatttcagc aggggatacg ttttggttt catagccaca gcattgtgga     | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg   | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc   | 2100 |
| aagaggacaa cccgagagcc ggcctggacc ctccagtgga ggaggcggag tagctgactt   | 2160 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt   | 2220 |
| taagaggggag agggcatcta gtggtactga tgctagatct gagttggctt taagtttaat  | 2280 |
| gagtcgcaga cgtcctgaaa ccatttggtg gcatgagggt cagaaagagg gaagggatga   | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacagggt aaaacatgtt ggttggagcc   | 2400 |
| tgaggatgat tgggagggtg ccattaataaa ttatgccaaag atagctttga ggcctgataa | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg   | 2520 |
| ggctgagggtg gtaatagata ctcaagacaa ggagtttatt agatgctgca tgatggatat  | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga   | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt   | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag   | 2760 |
| tttctatgcg tgttggattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa   | 2820 |
| atgcatattht caaagatgta acctgggcat tctgaatgaa ggcaagcaa ggggtccgcca  | 2880 |
| ctgcgcttct acagatactg gatgttttat ttgattaag ggaaatgcca gcgtaaagca    | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctgggtg   | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt   | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggagta gaggaatgtt   | 3120 |
| tatgccttac cagtgtaca tgaatcatgt gaaagtgtt ttggaaccag atgccttttc     | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta   | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca   | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac   | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt   | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaaattt gtttttctg tcttgagct   | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtcttca gcccttatct gacagggcgt   | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc   | 3600 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagttcttc acctttggac   | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac   | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac   | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct   | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa   | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt   | 3960 |
| gtttttatatt catttttcgc gcacggatatg ccctagacca ccgatctcta tcattgagaa | 4020 |
| ctcgggtgat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca   | 4080 |
| ttaggccgtc tttgggggtg agatagctcc attgaaggga ttcattgctcc ggggtagtgt  | 4140 |
| tgtaaatacac ccagtcataa caaggtcgca gtgcatgggtg ttgcacaata tcttttagaa | 4200 |
| gtaggctgat tgccacagat aagcccttgg tgtaggtgtt tacaacccgg ttgagctggg   | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttggattg gatttttaag ttggcaatat   | 4320 |
| tgccgccaag atcccgctctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg  | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac   | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg   | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagtattgt tcctgagtta   | 4560 |
| aatcatcata agccatttta atgaatttgg ggcgagagt accagattgg ggtatgaatg    | 4620 |
| ttccttcggg ccccgagca tagttcccct cacagatttg catttccaa gctttcagtt     | 4680 |
| ccgagggtgg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg   | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga tttgccacat ccggtggggc   | 4800 |
| cataaatgat tccgattacg gggtgcaggt ggtagtttag ggaacggcaa ctgccgtctt   | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca   | 4920 |
| aatccattag gaggcgtct cctcctagt atagaagttc ttgtagtgag gaaaagtttt     | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttggagag agtttgctgc aaaagttcta   | 5040 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt   | 5100 |
| tcgcggggttt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag  | 5160 |
| ggttcgggtcc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaaggg  | 5220 |
| gtgtgcgctt gcttgggcgc ttgccagggt gcgcttcaga ctcatcctgc tggtcgaaaa   | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag tttaccatga gttcgtagtt   | 5340 |
| gagcgcctcg gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatac   | 5400 |
| cgggcagtat aggcatttca gcgcatacaa cttgggcgca aggaaaacgg attctgggga   | 5460 |
| gtatgcatct gcgccgcagg aggcgcaaac agtttcacat tccaccagcc aggttaaadc   | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatttt ttgatgcgtt tcttaccttt  | 5580 |
| ggctctccatg agttcgtgtc ctggttgagt gacaaacagg ctgtccgtgt ccccgtagac  | 5640 |
| tgattttaca ggctctttct ccagtggagt gcctcggctt tcttcgtaca ggaactctga   | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcacaaag gaggctatgt gggaggggta   | 5760 |
| gcgatcgttg tcaaccagggt ggtccacctt ttccaaagta tgcaaacaca tgtcacccctc | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc  | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc    | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact   | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc   | 6060 |
| tttcatgagg ttttcgtcca tctggtcaga aaacacaatt tttttattgt caagtttggt   | 6120 |
| ggcaaatgat ccatacagggt cggttgataa aagtttggca atggatcgca tggtttggtt  | 6180 |
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag   | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcattctggc acgattctca cttgccaccc  | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt   | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag   | 6420 |
| ttcatcggga gggctctgcat ccatggtaaa gattcccga agtaaactct tatcaaaata   | 6480 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| gctgatggga gtggggcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc   | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc   | 6720 |
| cggacccaag ttggtgcgat tgggtttttc tgttctgtag acgatctggc gaaagatggc  | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggt  | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg  | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggtattct tcgcatcct tccagtactc   | 7020 |
| ttctagcgga aaccgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac   | 7080 |
| tgccttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgc tctgaccatg actttgagga attggtatth  | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat  | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaaggtta ggtctgtggg  | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg | 7620 |
| ccgtccgact gccatthttt ctgggggtgac gcaatagaag gtttgggggt cctgccgcca | 7680 |
| gcgatccac ttgagthtta tggcgaggtc ataggcgatg ttgacgagcc gctggtctcc   | 7740 |
| agagagthtc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtthcc acatcgtagg tgagaaaagag cthttctgtg cgaggatgag agccaatcgg | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |



eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgccacg gggtgtatct cgtgaatgag ttgtacctgg cttcccttga cgagaaatth | 8040 |
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc  | 8100 |
| ctgttcatct tctgtctcga tgggtggtcat gctgacgagc cctcgcggga ggcaagtcca | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag  | 8220 |
| ggtcctgaga cgctcgggac tcaggttagt aggcagtgtc aggagattaa cttgcatgat  | 8280 |
| cttttgaggg gcgtgcggga gggtcagata gtacttgatc tcaacgggtc cgttggtgga  | 8340 |
| gatgtcgatg gcttgccaggg ttccgtgtcc cttgggcgct accaccgtgc cttgttttt  | 8400 |
| cattttggac ggccgttggt ctgttgcttc ttgcatgttt agaagcgggtg tcgaggcgcg | 8460 |
| gcaccgggcg gcaggggcgg ctcgggaccc ggccggcatgg ctggcagtgg tacgtcggcg | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg  | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac  | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt  | 8700 |
| tcttgccagt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct  | 8760 |
| tcctcttgaa gatctccgcg gcccgtctc tcgacgggtg ccgcgaggtc gttggagatg   | 8820 |
| cgcccaatga gttgagagaa tgcatctcatg cccgcctcgt tccagacgcg gctgtagacc | 8880 |
| acggccccca cgggatctct cgcgcgcgatg accacctggg cgaggttgag ctccacgtgg | 8940 |
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg  | 9000 |
| tgctcgggtga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc | 9060 |
| agagcttcca agcgctccat ggccctcgtag aagtccacgg caaaattaaa aaactgggag | 9120 |
| tttcgcgcgg acacggtcaa ctctcttcc agaagacgga taagtccggc gatggtggtg   | 9180 |
| cgcacctcgc gctcgaaaagc ccctgggatt tcttctcaa tctcttctt ttccactaac   | 9240 |
| atctcttctt cttcagggtg ggctgcagga ggagggggaa cgcggcgacg ccggcggcgc  | 9300 |
| acgggcagac ggctgatgaa tctttcaatg acctctccgc ggccggcgcg catggtttca  | 9360 |

eolf-seql (2)

|                                                                       |       |
|-----------------------------------------------------------------------|-------|
| gtgacggcgc ggccgttctc gcgcggtcgc agagtaaaaa caccgccgcg catctcctta     | 9420  |
| aagtgggtgac tgggagggttc tccgttttggg agggagaggg cgctgattat acatttttatt | 9480  |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa     | 9540  |
| aaccttttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct    | 9600  |
| tgtgggcggg ggtggttatg tggtcggctc gggctttctg tttcttcttc atctcgggaa     | 9660  |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatgggtg    | 9720  |
| gcgaggagca ccaggctctt gggctccggct tgctggatac gcaggcgatt ggccattccc    | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg     | 9840  |
| ggcacttctt cctcaccctg tctgccatgc atacgtgtga gtccaaatcc gcgcattgggt    | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta     | 9960  |
| agggtggctt gaaagtcatc aaaatccaca aagcggtggt aagctcctgt attaatgggtg    | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggt gaccagggcg cacgagctcg     | 10080 |
| gtgtatttaa ggcgcgaaata ggcgcggggtg tcaaagatgt aatcgttgca ggtgcgcacc   | 10140 |
| agatactggt accctataag aaaatgcggc ggtggttggc ggtagagagg ccatcgttct     | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac     | 10260 |
| ctggacatcc aggtgattcc tgcggcggtg gtagaagccc gaggaaactc gcgtacgcgg     | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgttag gcacggtttg accagtgagg     | 10380 |
| cgcgcgcagt cattgatgct ctatagacac ggagaaaatg aaagcgttca gcgactcgac     | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcgggtg taccctgggt cgagacttgt    | 10500 |
| actcgagccg gccggagccg cggctaactg ggtattggca ctcccgtctc gaccagcct      | 10560 |
| acaaaaatcc aggatacggg atcgagtcgt tttgctggtt tccgaatggc agggaagtga     | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa     | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact     | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc     | 10800 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa   | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag   | 10920 |
| gagccggagg agatgcgagc ttcccgcctt aacgcgggtc gtgagctgcg tcacggtttg   | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagttg atgaaatgac agggatcagt   | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag   | 11100 |
| gaagagcgta acttccaaaa gtcttttaat aatcatgtgc gaaccctgat tgcccgcgaa   | 11160 |
| gaagttaccc ttggtttgat gcatttgtgg gatttggatgg aagctatcat tcagaaccct  | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtgggtc aacacagcag agacaatgag   | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt   | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg  | 11400 |
| gctgccatca attactcggg tttgagcttg ggaaaatatt acgctcgcaa aatctacaag   | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg gggttctacat gcgcatgacg | 11520 |
| ctcaagggtc tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc   | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa   | 11640 |
| agagctctga ctggagctgg aaccgagggt gagaattact tcgacatggg agctgacttg   | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac   | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac   | 11820 |
| aaccctgtgt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct   | 11880 |
| gcagagccag cagtccggca ttaactcctc ggacgattgg acccaggcca tgcaacgtat   | 11940 |
| catggcgttg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct   | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggctcct | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa agctattcgt ccagatgagg ccggactggg   | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaattt   | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagggt tccagcgtga  | 12240 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tgccaacctg ggttcgctgg tggcgtaaaa tgctttcttg agtactcagc ctgctaattgt  | 12300 |
| gccgcgtggg caacaggatt atactaactt ttttaagtgt ttgagactga tggatatcaga  | 12360 |
| agtacctcag agcgaagtgt atcagtcagg tcctgattac ttctttcaga ctagcagaca   | 12420 |
| gggcttgtag acggtaaatc tgagccaagc ttttaaaaaac cttaaagggt tgtggggagt  | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actccccgct   | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctatctt  | 12600 |
| gggttaccta ctaaacctgt atcgcaagc catagggcaa agtcagggtgg acgagcagac   | 12660 |
| ctatcaagaa attacccaag tcagtcgctc tttgggacag gaagacactg gcagtttgga   | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaaag atccctcctc aatatgctct  | 12780 |
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat   | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag   | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc   | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgcactggc tgccccacc    | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaag gacggatttc tgtgggacga   | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg   | 13140 |
| cgatagaatg cattcttctg catcgctgtc cgggggtcatg ggtgctaccg cggctgagcc  | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga   | 13260 |
| agtgggtaga ataagtcgcc cgagtttaat gggcgaagag gagtatctaa acgattcctt   | 13320 |
| gctcagaccg gcaagagaaa aaaattttccc aaacaatgga atagaaaagt tgggtggataa | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat   | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga   | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa   | 13560 |
| cccgtttgct catttgcgcc ctgcgttggg tggatatgtt taaaaaaaaa taaaaaaaaa   | 13620 |
| actcaccaag gccatggcga cgagcgtacg ttcgttcttc tttattatct gtgtctagta   | 13680 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| taatgaggcg agtcgtgcta ggcggagcgg tgggtgtatcc ggagggtcct cctccttcgt | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcgggtgat gcaatcccca ctggaggctc | 13800 |
| cctttgtgcc tccgcgatac ctggcaccta cggagggcag aaacagcatt cgttattcgg  | 13860 |
| aactggcacc tcagtacgat accaccaggt tgtatctggt ggacaacaag tcggcggaca  | 13920 |
| ttgcttctct gaactatcag aatgaccaca gcaacttctt gaccacgggtg gtgcaaaaca | 13980 |
| atgactttac ccctacggaa gccagcacc agaccattaa ctttgatgaa cgatcgcggt   | 14040 |
| ggggcgggtca gctaaagacc atcatgcata ctaacatgcc aaacgtgaac gagtatatgt | 14100 |
| ttagtaacaa gttcaaagcg cgtgtgatgg tgtccagaaa acctcccgaac ggtgctgcag | 14160 |
| ttggggatac ttatgatcac aagcaggata ttttgaaata tgagtgggtc gagtttactt  | 14220 |
| tgccagaagg caacttttca gttactatga ctattgattt gatgaacaat gccatcatag  | 14280 |
| ataattactt gaaagtgggt agacagaatg gagtgcttga aagtgaacatt ggtgttaagt | 14340 |
| tcgacaccag gaacttcaag ctgggatggg atcccgaac caagttgatc atgcctggag   | 14400 |
| tgtatacgta tgaagccttc catcctgaca ttgtcttact gcctggctgc ggagtggatt  | 14460 |
| ttaccgagag tcgtttgagc aaccttcttg gtatcagaaa aaaacagcca tttcaagagg  | 14520 |
| gttttaagat tttgtatgaa gatttagaag gtggtaatat tccggccctc ttggatgtag  | 14580 |
| atgcctatga gaacagtaag aaagaacaaa aagccaaaat agaagctgct acagctgctg  | 14640 |
| cagaagctaa ggcaaacata gttgccagcg actctacaag ggttgctaac gctggagagg  | 14700 |
| tcagaggaga caattttgcg ccaacacctg ttccgactgc agaatacatta ttggccgatg | 14760 |
| tgtctgaagg aacggacgtg aaactcacta ttcaacctgt agaaaaagat agtaagaata  | 14820 |
| gaagctataa tgtgttgga gacaaaatca acacagccta tcgcagttgg tatctttcgt   | 14880 |
| acaattatgg cgatcccga aaaggagtg gttcctggac attgctcacc acctcagatg    | 14940 |
| tcacctgcgg agcagagcag gtctactggt cgcttcaga catgatgaag gatcctgtca   | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggt ggggtgcagag cttatgcccg | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca  | 15120 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg  | 15180 |
| cgcccacccat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc | 15240 |
| cgttgcgag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca   | 15300 |
| cctgtcccta cgtgtacaag gcactgggca tagtcgcacc gcgcgtcctt tcaagccgca  | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg  | 15420 |
| tctgcgcgct ccaagcaaga tgtacggagg cgacgcaaa cgttctaccc aacatcctgt   | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg  | 15540 |
| aaccaccgtc gatgatgtaa tcgatcaggt ggttgccgac gcccgtaatt atactcctac  | 15600 |
| tgcgcctaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta  | 15660 |
| tgctcgacgt aagagccggc gaaggcgcat tgccagacgc caccgagcta ccactgccat  | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag  | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag cgccggcagg tcccgcaggc aagcagccgc  | 15840 |
| tgctgcagcg gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt   | 15900 |
| gcgtgacgct gccaccggc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa   | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa  | 16020 |
| ggaagaaatg ctgcaggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa  | 16080 |
| aaaacccgc aaaatcaagc gggttaaaaa ggacaaaaaa gaagaggaag atggcgatga   | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga cgcgtgcaat ggcgtgggcg  | 16200 |
| caaagtgcga catgtgttga gacctggaac ttcggtggtc ttacacccg gcgagcggtc   | 16260 |
| aagcgctact tttaagcgtt cctatgatga ggtgtacggg gatgatgata ttcttgagca  | 16320 |
| ggcggctgac cgattaggcg agtttgctta tggcaagcgt agtagaataa cttccaagga  | 16380 |
| tgagacagtg tcgataccct tggatcatgg aaatcccacc ctagtctta aaccggtcac   | 16440 |
| tttgagcaa gtgttaccg taactccgcg aacaggtgtt aaacgcgaag gtgaagattt    | 16500 |
| gtatcccact atgcaactga tggtagccaa acgccagaag ttggaggacg ttttgagaa   | 16560 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| agtaaaaagtg gatccagata ttcaacctga ggttaaaagtg agacccatta agcaggtagc | 16620 |
| gcctgggtctg ggggtacaaa ctgtagacat taagattccc actgaaagta tggaagtgca  | 16680 |
| aactgaaccc gcaaagccta ctgccacctc cactgaagtg caaacggatc catggatgcc   | 16740 |
| catgcctatt acaactgacg ccgccgggtcc cactcgaaga tcccgaagaa agtacgggtcc | 16800 |
| agcaagtctg ttgatgcccc attatgttgt acacccatct attattccta ctcctgggtta  | 16860 |
| ccgaggcact cgctactatc gcagccgaaa cagtacctcc cgccgtcgcc gcaagacacc   | 16920 |
| tgcaaatcgc agtcgtcgcc gtagacgcac aagcaaaccg actcccggcg ccctgggtgcg  | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc tttgacactg ccgctgtcgcc gttaccatcc  | 17040 |
| gagtatcatc acttaataca tggtgccgct gcctccttgc agatatggcc ctcacttgtc   | 17100 |
| gccttcgcgt tcccatcact ggttaccgag gaagaaactc gcgccgtaga agagggatgt   | 17160 |
| tgggacgcgg aatgcgacgc tacaggcgac ggctgtctat ccgcaagcaa ttgcgggggtg  | 17220 |
| gttttttacc agccttaatt ccaattatcg ctgctgcaat tggcgcgata ccaggcatag   | 17280 |
| cttccgtggc gggttcaggcc tcgcaacgac attgacattg gaaaaaacg tataaataaa   | 17340 |
| aaaaaaaaaa tacaatggac tctgacactc ctggctctgt gactatgttt tcttagagat   | 17400 |
| ggaagacatc aatttttcat ccttggctcc gcgacacggc acgaagccgt acatgggcac   | 17460 |
| ctggagcgac atcggcacga gccaaactgaa cggggggcgcc ttcaattgga gcagtatctg | 17520 |
| gagcgggctt aaaaattttg gctcaaccat aaaaacatac gggaacaaag cttggaacag   | 17580 |
| cagtacagga caggcgctta gaaataaact taaagaccag aacttccaac aaaaagtagt   | 17640 |
| cgatgggata gcttccggca tcaatggagt ggtagatttg gctaaccagg ctgtgcagaa   | 17700 |
| aaagataaac agtcgttttg acccgccgcc agcaacccca ggtgaaatgc aagtggagga   | 17760 |
| agaaattcct ccgccagaaa aacgaggcga caagcgtccg cgtcccgatt tggaagagac   | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc   | 17880 |
| caccactaga ccgatagccc caatggccac cgggggtgatg aaaccttctc agttgcatcg  | 17940 |
| acccgtcacc ttggatttgc cccctcccc tgctgtctact gctgtacccg cttctaagcc   | 18000 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccgggggcg ctcctcgtcc   | 18060 |
| aaatgcgcac tggcaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa   | 18120 |
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgccctat ctgtgtatat  | 18180 |
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct   | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc aatgggcatac atgcacatcg   | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctgggt gcagttcgcc cgcgccacag  | 18360 |
| acacctactt caatctggga aataagttta gaaatccac cgtagcgccg acccacgatg    | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca   | 18480 |
| atacatactc ttacaaagtgc cgggtacaccc tggccgtggg cgacaacaga gtgctggata | 18540 |
| tggccagcac gttctttgac attaggggtg tgttggacag aggtcccagt ttcaaaccct   | 18600 |
| attctggtac ggcttacaac tccctggctc ctaaaggcgc tccaaataca tctcagtgga   | 18660 |
| ttgcagaagg tgtaaaaaat acaactgggtg aggaacacgt aacagaagag gaaaccaata  | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag   | 18780 |
| gactcccagt aggtttggaa gtttcagatg aagaaagtaa accgatttat gctgataaaa   | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg   | 18900 |
| aaaagtatgg aggcagggtc ctcaaaccgc atactaagat gaaacctatgc tacgggtcct  | 18960 |
| ttgccaaacc tactaatgtg aaaggcggtc aggcaaaaca aaaaacaacg gagcagccaa   | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa  | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc   | 19140 |
| atgtagtgta caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat   | 19200 |
| ctatgcccac cagacccaac tacattggct tcagagataa ctttattgga cttatgtact   | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctggtcaagc gtctcagtta aatgcagtgg   | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg   | 19380 |
| acagaaccag atacttttagc atgtggaatc aggtctgtgga cagttatgat cctgatgtac | 19440 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gtgttattga aaatcatggg gtggaagatg aacttcccaa ctactgtttt ccactggacg  | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgccta  | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca  | 19620 |
| tggaaattaa ctttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat  | 19680 |
| atctcccaga ctctacaaa tacaccccggt ccaatgtcac tcttccagaa aacaaaaaca  | 19740 |
| cctacgacta catgaacggg cgggtgggtgc cgccatctct agtagacacc tatgtgaaca | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta  | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca  | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca  | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt  | 20100 |
| tcccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg   | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg   | 20220 |
| caaccaatat tccattttcc attccttctc gcaactgggc ggctttcaga ggctggcat   | 20280 |
| ttaccagact gaaaacaaaa gaaactccct ctttggggtc tggatttgac ccctactttg  | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |
| ctaacgaatt tgaaataaag cgcactgtgg atggcgaagg ctacaacgta gcccaatgca  | 20520 |
| acatgaccaa agactgggtc ttggtacaga tgctcgccaa ctacaacatc ggctatcagg  | 20580 |
| gcttctacat tccagaagga tacaagatc gcatgtattc atttttcaga aacttccagc   | 20640 |
| ccatgagcag gcagggtggt gatgagggtca attacaaaga cttcaaggcc gtcgccatac | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccttatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcat accgttctcg agcaacttca  | 20880 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg   | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct   | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct    | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc   | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca   | 21180 |
| gagccattgt ccaagacctg ggttgccgac cctatTTTTT gggaacctac gataagcgct   | 21240 |
| tcccggggtt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg    | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc   | 21360 |
| tttttgatcc ttttggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg   | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat   | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcatgttcc    | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaaccccacc atgaaattgc   | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca    | 21660 |
| atcaaaaagc actctaccat tttcttaata cccattcgcc ttatTTTcgc tcccatcgta   | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa   | 21780 |
| caacgtgttc aataaacatc actttatttt ttacatgta tcaaggctct gcattactta    | 21840 |
| tttatttaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg   | 21900 |
| ttgcggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt   | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca  | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgcttt gagcgcgaga gttgcggtac   | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacggtg   | 22140 |
| ggatctgcaa tcatgccac atccagatct tcagcattgg caatgctgaa cggggtcatc    | 22200 |
| ttgcaggctc gcctacccat ggccgggcacc caattaggct tgtggttgca atcgcagtg   | 22260 |
| aggggggatca gtatcatctt ggccctgatcc tgtctgattc ctggatacac ggctctcatg | 22320 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcgggtata aaacatccccg | 22380 |
| caggacctgc tcgaaaactg gtttagctgca cagccggcat cattcacaca gcagcgggcg  | 22440 |
| tcattgttag ctatttgcac cacacttctg ccccagcggg tttgggtgat tttggttcgc   | 22500 |
| tcgggattct cctttaaggc tcgttgctccg ttctcgtggt ccacatccat ctcgataatc  | 22560 |
| tgctccttct gaatcataat attgccatgc aggcaattca gcttgccctc ataattcattg  | 22620 |
| cagccatgag gccacaacgc acagcctgta cattcccaat tatggtgggc gatctgagaa   | 22680 |
| aaagaatgta tcattccctg cagaaatctt cccatcatcg tgctcagtgt cttgtgacta   | 22740 |
| gtgaaagtta actggatgcc tcgggtgctcc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtc taagtctggt atccagcctg   | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc   | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcattctta  | 22980 |
| gcgatcttct caatgcttct ttgccatcc ttctcaacga tgcgcacggg cgggtagctg    | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct    | 23100 |
| tgcatgggga tatgtttggt cttccttggc ttctttttgg ggggtatcgg aggaggagga   | 23160 |
| ctgtcgtcc gttccggaga caggaggat tgtgacgtt cgctcaccat taccaactga      | 23220 |
| ctgtcggtag aagaacctga cccacacagg cgacagggtg ttctcttcgg gggcagagg    | 23280 |
| ggaggcgatt gcgaagggt gcggtccgac ctggaaggcg gatgactggc agaaccctt     | 23340 |
| ccgcgttcgg ggggtgtgct cctgtggcgg tcgcttaact gatttccttc gcggctggcc   | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat   | 23460 |
| cgccacgagt gccatcacat ctcgtcctca gcgacgagga aaaggagcag agcttaagca   | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc   | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gaccgggct    | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa   | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca   | 23760 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| ccgactacct catagggctt gacggggaag acgcgctcct taaacatcta gcaagacagt   | 23820 |
| cgctcatagt caaggatgca ttatttgaca gaactgaagt gcccacagc gtggaagagc    | 23880 |
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tcccccaaa cgtcagccaa    | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag   | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta   | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag   | 24120 |
| cttccttgga agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg  | 24180 |
| caaatgctct gcaaaaaggga gaaaatggca tggatgagca tcacagcgtt ctggtggaat  | 24240 |
| tggaaggcga taatgccaga ctgcagtac tcaagcgaag catcgaggtc acacacttcg    | 24300 |
| catatccgc tgtcaacctg cccctaaag tcatgacggc ggtcatggac cagttactca     | 24360 |
| ttaagcgcgc aagtccccctt tcagaagaca tgcatgaccc agatgcctgt gatgagggtta | 24420 |
| aaccagtggc cagtgatgag cagctaaccg gatggctggg caccgactct cccagggtt    | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tggctgctggc taccgtagaa ctagagtgtc  | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca   | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatc taacgtggaa ctcaccaacc     | 24660 |
| tggtttccta catgggtatt ctgcatgaga atcgccctagg acaaagcgtg ctgcacagca  | 24720 |
| ccctgaaggg ggaagccgc cgtgattaca tccgcgattg tgtctatctg tacctgtgcc    | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag   | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca   | 24900 |
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa   | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcaccttg    | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca   | 25080 |
| cctaccgcga gtgcccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact    | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc   | 25200 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga  | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt  | 25320 |
| cttctcctgg gcaaagttaa aaactgaccc cgggactgtg gacctccgcc tacttgcgca  | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc   | 25440 |
| ctccaaaggc cgaactttcg gcctgctca tccccaggg ggcaattctg gcccaattgc    | 25500 |
| aagccatcca aaaatcccg caagaatttc tactgaaaaa gggtaagggg gtctaccttg   | 25560 |
| acccccagac cggcgaggaa ctcaacacaa ggttcctca ggatgtccca acgacgagaa   | 25620 |
| aacaagaagt tgaagggtga gccgccgccc ccagaagata tggaggaaga ttgggacagt  | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttgag   | 25740 |
| gaggaaaacg aggaggcaga ggaggtggaa gaagtaaccg ccgacaaaca gttatcctcg  | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt  | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcgc ttccaagacc  | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcgggggc ataagaatgc catcatctcc  | 25980 |
| tgcttgcatg agtgcggggg caacatatcc ttcacgcggc gctacttgct attccaccat  | 26040 |
| ggggtgaact ttccgcgcaa tgttttgcatt tactaccgtc acctccacag cccctactat | 26100 |
| agccagcaaa tcccggcagt ctgcacagat aaagacagcg gcggcgacct ccaacagaaa  | 26160 |
| accagcagcg gcagttagaa aatacacaa aagtgcagca acaggaggat taaagattac   | 26220 |
| agccaacgag ccagcgcaaa ccgagagtt aagaaatcgg atctttccaa ccctgtatgc   | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |
| ttcgctcacc agaagttggt tgtatcacia gagcgaagat caacttcagc gcactctcga  | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac  | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcacctcga catgagtaaa gaaattccca   | 26520 |
| cgccttacat gtggagttat caaccccaaa tgggattggc ggcaggcgcc tcccaggact  | 26580 |
| actccacccg catgaattgg ctacgcgccg ggcttctat gatttctcga gttaatgata   | 26640 |

eolf-seql (2)

|            |            |             |             |            |             |       |
|------------|------------|-------------|-------------|------------|-------------|-------|
| tacgcgcta  | ccgaaaccaa | atacttttgg  | aacagtcagc  | tcttaccacc | acgccccgcc  | 26700 |
| aacaccttaa | tcccagaaat | tggcccgccg  | ccctagtgtg  | ccaggaaagt | cccgctccca  | 26760 |
| ccactgtatt | acttcctcga | gacgcccagg  | ccgaagtcca  | aatgactaat | gcagggtgcgc | 26820 |
| agttagctgg | cggctccacc | ctatgtcgtc  | acaggcctcg  | gcataatata | aaacgcctga  | 26880 |
| tgatcagagg | ccgaggatc  | cagctcaacg  | acgagtcggt  | gagctctccg | cttggtctac  | 26940 |
| gaccagacgg | aatctttcag | attgccggct  | gcgggagatc  | ttccttcacc | cctcgtcagg  | 27000 |
| ctgttctgac | tttgaaagt  | tcgtcttcgc  | aaccccgctc  | gggcggaatc | gggaccgttc  | 27060 |
| aatttgtgga | ggagtttact | ccctctgtct  | acttcaaccc  | cttctccgga | tctcctgggc  | 27120 |
| attacccgga | cgagttcata | ccgaacttcg  | acgcgattag  | cgagtcagtg | gacggctacg  | 27180 |
| attgatgtct | ggtgacgcgg | ctgagctatc  | tcggctgcga  | catctagacc | actgccgccg  | 27240 |
| ctttcgctgc | tttgccggg  | aactcattga  | gttcatctac  | ttcgaactcc | ccaaggatca  | 27300 |
| ccctcaaggt | ccggcccacg | gagtgcggat  | ttctatcgaa  | ggcaaaatag | actctcgctt  | 27360 |
| gcaacgaatt | ttctcccagc | ggcccgtgct  | gatcgagcga  | gaccaggga  | acaccacggt  | 27420 |
| ttccatctac | tgcatttgta | atcaccccg   | attgcatgaa  | agcctttgct | gtcttatgtg  | 27480 |
| tactgagttt | aataaaaact | gaattaagac  | tctcctacgg  | actgccgctt | cttcaaccgc  | 27540 |
| gattttacaa | ccagaagaac | gaaacttttc  | ctgtcgtcca  | ggactctggt | aacttcacct  | 27600 |
| ttcctactca | caaactagaa | gctcaacgac  | tacaccgctt  | ttccagaagc | attttcccta  | 27660 |
| ctaatactac | tttcaaaacc | ggagggtgagc | tccaaggtct  | tcctacagaa | aacccttggg  | 27720 |
| tggaagcggg | ccttgtagtg | ctaggaattc  | ttgcgggtgg  | gcttgtgatt | attctttgct  | 27780 |
| acctatacac | accttgcttc | actttcttag  | tggtgttggtg | gtattgggtt | aaaaaatggg  | 27840 |
| gcccatacta | gtcttgcttg | ttttactttc  | gcttttggaa  | ccgggttctg | ccaattacga  | 27900 |
| tccatgtcta | gacttcgacc | cagaaaactg  | cacacttact  | tttgaccccg | acacaagccg  | 27960 |
| catctgtgga | gttcatcgcc | tctcttacga  | acttggcccc  | caacgacaaa | aatttacctg  | 28020 |
| catggtggga | atcaacccca | tagttatcac  | ccagcaaagt  | ggagatacta | agggttgcac  | 28080 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tcactgctcc tgcgattcca tcgagtgcac ctacaccctg ctgaagaccc tatgcggcct  | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca  | 28200 |
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttcctc ttcccaactc   | 28260 |
| tggatttcta aaccccggtc agcggcatac tttctccata ctttaaaggg gatgtcaa    | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt   | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca  | 28440 |
| cccctttata aaccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt   | 28500 |
| tcttacttta aaatgttta cccactaac aaccacaggc ggatctctac agctaaaagt    | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac  | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac  | 28680 |
| gaatgaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat  | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aacccaccg aagccaactg   | 28800 |
| tcaaatcatg aactccagt aatctaataa ttgcaaatta attctaacac tagttaaac    | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct  | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaattt  | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc  | 29040 |
| tactggtgcc attactaatg ctaaagggtt catgcccagc acgactgcct atcctttcaa  | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga  | 29160 |
| tcgcactgct tttcccatg acatatctgt catgcttaac cgaagagcaa taaatgacga   | 29220 |
| gacatcatat tgtattcgta taacttggtc ctggaacaca ggagatgccc cagaggtgca  | 29280 |
| aacctctgct acaaccctag tcacctcccc atttaccttt tactacatca gagaagacga  | 29340 |
| ctgacaaata aagtttgcga tcgccaggcc caccatggga tggagctgta tcacctctt   | 29400 |
| cttggtagca acagctacag gtgtccactc ccagggtgcag ctgcagcagt ctggggctga | 29460 |
| actggcaaga cctggggcct cagtgaagat gtcctgcaag gcttctggct acacctttac  | 29520 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| taggtacacg atgcactggg taaaacagag gcctggacag ggtctggaat ggattggata   | 29580 |
| cattaatcct agccgtgggt atactaatta caatcagaag ttcaaggaca aggccacatt   | 29640 |
| gactacagac aaatcctcca gcacagccta catgcaactg agcagcctga catctgagga   | 29700 |
| ctctgcagtc tattactgtg caagatatta tgatgatcat tactgccttg actactgggg   | 29760 |
| ccaaggcacc actctcacag tctcctcagg tggcgggtggc tcgggcgggtg gtggatctgg | 29820 |
| tggcggcgga tctgatatcg tgctcactca gtctccagca atcatgtctg catctccagg   | 29880 |
| ggagaaggtc accatgacct gcagtgccag ctcaagtgtg agttacatga actggtacca   | 29940 |
| gcagaagtca ggcacctccc ccaaaagatg gatttatgac acatccaaac tggcttctgg   | 30000 |
| agtccctgct cacttcaggg gcagtgggtc tgggacctct tactctctca caatcagcgg   | 30060 |
| catggaggct gaagatgctg ccacttatta ctgccagcag tggagtagta acccattcac   | 30120 |
| gttcggctcg gggacaaagt tggaaataaa ccgggggatcc gaacaaaaac tcatctcaga  | 30180 |
| agaggatctg aatgctgtgg gccaggacac gcaggaggct atcgtgggtgc cacactcctt  | 30240 |
| gccctttaag gtggtggtga tctcagccat cctggccctg gtggtgctca ccatcatctc   | 30300 |
| ccttatcatc ctcatcatgc tttggcagaa gaagccacgt taagctagct tgactgactg   | 30360 |
| agatacagcg taccttcagc tcacagacat gataagatac attgatgagt ttggacaaac   | 30420 |
| cacaactaga atgcagtga aaaaatgctt tatttgtgaa atttgtgatg ctattgcttt    | 30480 |
| atttghtaacc attataagct gcaataaaca agttaacaac aacaattgca ttcattttat  | 30540 |
| gtttcagggt cagggggagg tgtgggagggt tttttaagc aagtaaaacc tctacaaatg   | 30600 |
| tggtagtcgt cagctatcct gcaggaactt gtttatttga aaatcaattc aaaaaatccg   | 30660 |
| agtagttatt ttgcctcccc cttcccattt aacagaatac accaatctct cccacgcac    | 30720 |
| agctttaaac atttggatac cattagatat agacatggtt ttagattcca cattccaaac   | 30780 |
| agtttcagag cgagccaatc tggggtcagt gatagataaa aatccatcgg gatagtcttt   | 30840 |
| taaagcgctt tcacagtcca actgctgcgg atgcgactcc ggagtctgga tcacggtcac   | 30900 |
| ctggaagaag aacgatggga atcataatcc gaaaacggta tcggacgatt gtgtctcatc   | 30960 |



eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| aaacccacaa gcagccgctg tctgcgtcgc tccgtgcgac tgctgtttat gggatcaggg | 31020 |
| tccacagtgt cctgaagcat gattttaata gcccttaaca tcaactttct ggtgcgatgc | 31080 |
| gcgcagcaac gcattctgat ttcactcaaa tctttgcagt aggtacaaca cattattaca | 31140 |
| atattgttta ataaaccata attaaaagcg ctccagccaa aactcatatc tgatataatc | 31200 |
| gcccctgcat gaccatcata ccaaagttta atataaatta aatgacgttc cctcaaaaac | 31260 |
| acactaccca catacatgat ctcttttggc atgtgcatat taacaatctg tctgtaccat | 31320 |
| ggacaacgtt ggttaatcat gcaacccaat ataaccttcc ggaaccacac tgccaacacc | 31380 |
| gctccccag ccatgcattg aagtgaaccc tgctgattac aatgacaatg aagaacccaa  | 31440 |
| ttctctcgac cgtgaatcac ttgagaatga aaaatatcta tagtggcaca acatagacat | 31500 |
| aaatgcatgc atcttctcat aatttttaac tcctcaggat ttagaaacat atcccaggga | 31560 |
| ataggaagct cttgcagaac agtaaagctg gcagaacaag gaagaccacg aacacaactt | 31620 |
| acactatgca tagtcatagt atcacaatct ggcaacagcg ggtggtcttc agtcatagaa | 31680 |
| gctcgggttt cattttcctc acaacgtggc aactgggctc tgggtgaagg gtgatgtctg | 31740 |
| gcgcatgatg tcgagcgtgc gcgcaacctt gtcataatgg agttgcttcc tgacattctc | 31800 |
| gtattttgta tagcaaaacg cggccctggc agaacacact cttcttcgcc ttctatcctg | 31860 |
| ccgcttagcg tgttccgtgt gatagttcaa gtacaaccac actcttaagt tggcaaaaag | 31920 |
| aatgctggct tcagttgtaa tcaaaactcc atcgcatcta atcgttctga ggaaatcatc | 31980 |
| caagcaatgc aactggattg tgtttcaagc aggagaggag agggaagaga cggaagaacc | 32040 |
| atgttaatth ttattccaaa cgatctcgca gtacttcaaa ttgtagatcg cgcagatggc | 32100 |
| atctctcgcc ccactgtgt tgggtgaaaa gcacagctag atcaaaagaa atgcatthtt  | 32160 |
| caaggtgctc aacggtggct tccagcaaag cctccacgcg cacatccaag aacaaaagaa | 32220 |
| tacaaaaaga aggagcatth tctaactcct caatcatcat attacattcc tgcaccattc | 32280 |
| ccagataatt ttcagctthc cagccttgaa ttattcgtgt cagttcttgt ggtaaatcca | 32340 |
| atccacacat taaaaacagg tcccggaggg cgccctccac caccattctt aaacacaccc | 32400 |

eolf-seql (2)

|            |            |             |            |            |            |       |
|------------|------------|-------------|------------|------------|------------|-------|
| tcataatgac | aaaatatctt | gctcctgtgt  | cacctgtagc | gaattgagaa | tggaacatc  | 32460 |
| aattgacatg | cccttggctc | taagttcttc  | tttaagttct | agttgtaaaa | actctctcat | 32520 |
| attatcacca | aactgcttag | ccagaagccc  | cccgggaaca | agagcagggg | acgctacagt | 32580 |
| gcagtacaag | cgcagacctc | cccaattggc  | tccagcaaaa | acaagattgg | aataagcata | 32640 |
| ttgggaaccg | ccagtaatat | catcgaagtt  | gctggaaata | taatcaggca | gagtttcttg | 32700 |
| taaaaattga | ataaaagaaa | aatttgccaa  | aaaaacattc | aaaacctctg | ggatgcaa   | 32760 |
| gcaatagggt | accgcgctgc | gctccaacat  | tgtagttttt | gaattagtct | gcaaaaataa | 32820 |
| aaaaaaaaac | aagcgtcata | tcatagtagc  | ctgacgaaca | gatggataaa | tcagtctttc | 32880 |
| catcacaaga | caagccacag | ggctctccagc | tcgaccctcg | taaaacctgt | catcatgatt | 32940 |
| aaacaacagc | accgaaagtt | cctcgcggtg  | accagcatga | ataattcttg | atgaagcata | 33000 |
| caatccagac | atgttagcat | cagttaacga  | gaaaaaacag | ccaacatagc | ctttgggtat | 33060 |
| aattatgctt | aatcgtaagt | atagcaaagc  | caccctctgc | ggatacaaag | taaaaggcac | 33120 |
| aggagaataa | aaaatataat | tatttctctg  | ctgctgttca | ggcaacgtcg | cccccggtcc | 33180 |
| ctctaaatac | acatacaaag | cctcatcagc  | catggcttac | cagacaaagt | acagcgggca | 33240 |
| cacaaagcac | aagctctaaa | gtgactctcc  | aacctctcca | caatatatat | atacacaagc | 33300 |
| cctaaactga | cgtaatggga | gtaaagtgt   | aaaaatcccc | ccaaacccaa | cacacacccc | 33360 |
| gaaactgcgt | caccagggaa | aagtacagtt  | tcacttccgc | aatcccaaca | ggcgtaactt | 33420 |
| cctctttctc | acggtacgtg | atatcccact  | aacttgcaac | gtcattttcc | cacggtcgca | 33480 |
| ccgccccctt | tagccgttaa | ccccacagcc  | aatcaccaca | cgatccacac | tttttaaaat | 33540 |
| cacctcattt | acatatgggc | accattccat  | ctataaggta | tattatatag | ataga      | 33595 |

<210> 104

<211> 33628

<212> DNA

<213> Artificial Sequence

<220>

eolf-seql (2)

<223> NG-420A virus genome sequence comprising the EnAd genome with a transgene cassette that encodes a membrane-anchored chimeric form of the single chain Fv anti-human CD3e and a C-terminal V5 tag, inserted in the region BY

<400> 104

|                                                                      |      |
|----------------------------------------------------------------------|------|
| tctatctata taatataacct tatagatgga atggtgccaa tatgtaaatg aggtgatttt   | 60   |
| aaaaagtgtg gatcgtgtgg tgattggctg tgggggtaac ggctaaaagg ggcgggtgcga   | 120  |
| ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt    | 180  |
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggt atttaacagg    | 240  |
| aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa    | 300  |
| tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg    | 360  |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt    | 420  |
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtg cagctgatcg ctagggattt    | 480  |
| tatacctcag ggtttggtgc aagaggccac tcttgagtgc cagcgagaag agttttctcc    | 540  |
| tctgcgccgg cagtttaata ataaaaaaaaat gagagatttg cgattttctgc ctcaggaaat | 600  |
| aatctctgct gagactggaa atgaaatatt ggagcttggtg gtgcacgccc tgatgggaga   | 660  |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt    | 720  |
| agaggtagag ggatcggagg attctaataa ggaagctgta aatggctttt ttaccgattc    | 780  |
| tatgctttta gctgctaata aagggtaga attagatccg cttttggaca cttttgatac     | 840  |
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt    | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga    | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt    | 1020 |
| tcagttggat tgccccgagc ttcctggaca tggctgtaag tcttgatgaat ttcacaggaa   | 1080 |
| aaatactgga gtaaaggaa tgttatgttc gctttgttat atgagaacgc actgccactt     | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat    | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc    | 1260 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg  | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga  | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaaacgtc caagacaata  | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta | 1500 |
| ataaaaaatat gttaactgtt cactgggtttt tattgctttt tgggcgggga ctcaggata | 1560 |
| taagtagaag cagacctgtg tggtttagctc ataggagctg gctttcatcc atggagggtt | 1620 |
| gggccattttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa  | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgccagga ctttttgaag   | 1800 |
| ctcttaattt gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt  | 1860 |
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga  | 1920 |
| tcccgagac tcatttcagc aggggatacg ttttggttt catagccaca gcattgtgga    | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg  | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc  | 2100 |
| aagaggacaa cccgagagcc ggcctggacc ctccagtgga ggaggcggag tagctgactt  | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt  | 2220 |
| taagaggggag agggcatcta gtggtactga tgctagatct gagttggctt taagtttaat | 2280 |
| gagtcgcaga cgtcctgaaa ccatttggtg gcatgagggt cagaaagagg gaagggatga  | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacagggtg aaaacatgtt ggttggagcc | 2400 |
| tgaggatgat tgggaggtgg ccattaaaaa ttatgccaag atagctttga ggcctgataa  | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg  | 2520 |
| ggctgagggtg gtaatagata ctcaagacaa ggcagttatt agatgctgca tgatggatat | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga  | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt  | 2700 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag   | 2760 |
| tttctatgcg tgttggattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa   | 2820 |
| atgcatatTTT caaagatgta acctgggcat tctgaatgaa ggcgaagcaa ggggtccgcca | 2880 |
| ctgcgcttct acagatactg gatgttttat tttgattaag ggaaatgcca gcgtaaagca   | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctggtgg   | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt   | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt   | 3120 |
| tatgccttac cagtgtaaaca tgaatcatgt gaaagtgttg ttggaaccag atgccttttc  | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta   | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca   | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac   | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt   | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaaattt gttttttctg tcttgcagct | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtcttca gcccttatct gacagggcgt   | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc   | 3600 |
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagtcttc acctttggac    | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac   | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac   | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct   | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa   | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt   | 3960 |
| gtttttatTTT catTTTTcgc gcacggtatg ccctagacca ccgatctcta tcattgagaa  | 4020 |
| ctcgggtggat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca  | 4080 |
| ttaggccgtc tttgggggtgg agatagctcc attgaaggga ttcatgctcc ggggtagtgt  | 4140 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| tgtaaatacac ccagtcataa caaggtcgca gtgcatgggtg ttgcacaata tcttttagaa | 4200 |
| gtaggctgat tgccacagat aagcccttgg tgtaggtgtt taaaaaccgg ttgagctggg   | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttggattg gatttttaag ttggcaatat   | 4320 |
| tgccgccaag atcccgctctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg  | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac   | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg   | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagttagtgc tcctgagtta  | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg   | 4620 |
| ttccttcggg ccccgaggca tagttccctt cacagatttg catttcccaa gctttcagtt   | 4680 |
| ccgaggggtg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg   | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga ttgcccacat ccggtggggc   | 4800 |
| cataaatgat tccgattacg ggttgcagggt ggtagtttag ggaacggcaa ctgccgtctt  | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca   | 4920 |
| aatccattag gaggcgctct cctcctagtgc atagaagttc ttgtagtgag gaaaagtttt  | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttggagag agtttgctgc aaaagttcta   | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt   | 5100 |
| tcgcggggtt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag   | 5160 |
| ggttcggtcc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaaggg   | 5220 |
| gtgtgcgctt gcttgggcgc ttgccagggt gcgcttcaga ctcatcctgc tggtcgaaaa   | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag ttaccatga gttcgtagtt    | 5340 |
| gagcgcctcg gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatatc  | 5400 |
| cgggcagtat aggcatttca gcgcatacaa cttgggcgca aggaaaacgg attctgggga   | 5460 |
| gtatgcatct gcgccgagg aggcgcaaac agtttcacat tccaccagcc aggttaaatc    | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatttt ttgatgcgtt tcttaccttt  | 5580 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| ggctctccatg agttcgtgtc ctcgttgagt gacaaacagg ctgtccgtgt ccccgtagac  | 5640 |
| tgatttttaca ggctctttct ccagtggagt gcctcgggtct tcttcgtaca ggaactctga | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcacaaag gaggctatgt gggaggggta   | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcacccctc  | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc  | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc    | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact   | 6000 |
| caggttgatca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc  | 6060 |
| tttcatgagg ttttcgtcca tctggtcaga aaacacaatt tttttattgt caagtttggt   | 6120 |
| ggcaaatgat ccatacaggg cgttggataa aagtttggca atggatcgca tggtttggtt   | 6180 |
| cttttccttg tccgcgcgt ctttggcggc gatgttgagt tggacatact cgcgtgccag    | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcattctggc acgattctca cttgccaccc  | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt   | 6360 |
| ggtccaacag agcctacct ctttcctaga acagaaaggg ggaagtgggt ctagcataag    | 6420 |
| ttcatcggga gggctctgcat ccatggtaaa gattcccga agtaaactct tatcaaaata   | 6480 |
| gctgatggga gtggggcat ctaaggccat ttgccattct cgagctgcca gtgcgcgtc     | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc   | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg   | 6660 |
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc    | 6720 |
| cggacccaag ttggtgcat tgggtttttc tgttctgtag acgatctggc gaaagatggc    | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc   | 6840 |
| tacagagtct ctgacaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggt   | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg   | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggtattct tcgcgatcct tccagtactc   | 7020 |

eolf-seql (2)

|            |             |             |            |             |             |      |
|------------|-------------|-------------|------------|-------------|-------------|------|
| ttctagcggg | aacccgtctt  | tgtctgcacg  | gtaagatcct | agcatgtaga  | actgattaac  | 7080 |
| tgccttgtaa | gggcagcagc  | ccttctctac  | gggtagagag | tatgcttgag  | cagcttttcg  | 7140 |
| tagcgaagcg | tgagtaaggg  | caaaggtgtc  | tctgaccatg | actttgagga  | attggtat    | 7200 |
| gaagtcgatg | tcgtcacagg  | ctccctgttc  | ccagagttgg | aagtctaccc  | gtttcttgta  | 7260 |
| ggcgggggtg | ggcaaagcga  | aagtaacatc  | attgaagaga | atcttgccgg  | ccctgggcat  | 7320 |
| gaaattgcga | gtgatgcgaa  | aaggctgtgg  | tacttccgct | cggttattga  | taacctgggc  | 7380 |
| agctaggacg | atctcgtcga  | aaccgttgat  | gttgtgtcct | acgatgtata  | attctatgaa  | 7440 |
| acgcggcgtg | cctctgacgt  | gaggtagctt  | actgagctca | tcaaaggtta  | ggtctgtggg  | 7500 |
| gtcagataag | gcgtagtggt  | cgagagccca  | ttcgtgcagg | tgaggattcg  | ctttaaggaa  | 7560 |
| ggaggaccag | aggtccactg  | ccagtgtgtg  | ttgtaactgg | tcccgggtact | gacgaaaatg  | 7620 |
| ccgtccgact | gccatTTTTT  | ctgggggtgac | gcaatagaag | gtttgggggt  | cctgccgcca  | 7680 |
| gcgatcccac | ttgagtttta  | tggcgaggtc  | ataggcgatg | ttgacgagcc  | gctgggtctcc | 7740 |
| agagagtttc | atgaccagca  | tgaaggggat  | tagctgcttg | ccaaaggacc  | ccatccaggt  | 7800 |
| gtaggtttcc | acatcgtagg  | tgagaaagag  | cctttctgtg | cgaggatgag  | agccaatcgg  | 7860 |
| gaagaactgg | atctcctgcc  | accagttgga  | ggaatggctg | ttgatgtgat  | ggaagtagaa  | 7920 |
| ctccctgcga | cgcgccgagc  | attcatgctt  | gtgcttgtag | agacggccgc  | agtagtcgca  | 7980 |
| gcgttgcacg | ggttgtatct  | cgtgaatgag  | ttgtacctgg | cttcccttga  | cgagaaattt  | 8040 |
| cagtgggaag | ccgaggcctg  | gcgattgtat  | ctcgtgcttt | actatgttgt  | ctgcatcggc  | 8100 |
| ctgttcatct | tctgtctcga  | tggtgggtcat | gctgacgagc | cctcgcggga  | ggcaagtcca  | 8160 |
| gacctcggcg | cggcaggggc  | ggagctcgag  | gacgagagcg | cgcaggctgg  | agctgtccag  | 8220 |
| ggtcctgaga | cgctgcggac  | tcaggttagt  | aggcagtgtc | aggagattaa  | cttgcgatgat | 8280 |
| cttttgaggg | gcgtgcggga  | ggttcagata  | gtacttgatc | tcaacgggtc  | cgttggtgga  | 8340 |
| gatgtcgatg | gcttgacagg  | ttccgtgtcc  | cttgggcgct | accaccgtgc  | ccttgTTTTT  | 8400 |
| cattttggac | ggcgggtggct | ctgttgcttc  | ttgcatgttt | agaagcgggtg | tcgagggcgc  | 8460 |



eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gcaccgggcg gcaggggagg ctcgggaccc ggcgcatgg ctggcagtgg tacgtcggcg    | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg   | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac   | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt   | 8700 |
| tcttgacgt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct    | 8760 |
| tcctcttgaa gatctccgcg gcccgctctc tcgacgggtg ccgcgaggtc gttggagatg   | 8820 |
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc   | 8880 |
| acggccccca cgggatctct cgcgcgcgcatg accacctggg cgaggttgag ctccacgtgg | 8940 |
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg   | 9000 |
| tgctcgggtga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc  | 9060 |
| agagcttcca agcgctccat ggcctcgtag aagtccacgg caaaattaaa aaactgggag   | 9120 |
| tttcgcgcgg acacgggtcaa ctctctttcc agaagacgga taagttcggc gatggtggtg  | 9180 |
| cgcacctcgc gctcgaaagc ccctgggatt tcttcctcaa tctcttcttc ttccactaac   | 9240 |
| atctcttcct cttcagggtgg ggctgcagga ggagggggaa cgcggcgacg ccggcggcgc  | 9300 |
| acgggcagac ggtcgatgaa tctttcaatg acctctccgc ggcggcggcg catggtttca   | 9360 |
| gtgacggcgc ggccgttctc gcgcggctgc agagtaaaaa caccgccgcg catctcctta   | 9420 |
| aagtgggtgac tgggaggttc tccgtttggg agggagaggg cgctgattat acattttatt  | 9480 |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa   | 9540 |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct   | 9600 |
| tgtgggcggg ggtggttatg tggtcggctt gggtcttctg tttcttcttc atctcgggaa   | 9660 |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatggtg   | 9720 |
| gcgaggagca ccaggctttt gggctccggct tgctggatac gcaggcgatt ggccattccc  | 9780 |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg   | 9840 |
| ggcacttctt cctcaccgct tctgccatgc atacgtgtga gtccaaatcc gcgcattggt   | 9900 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta  | 9960  |
| agggtggctt gaaagtcacg aaaatccaca aagcgggtgg aagctcctgt attaatgggtg | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggg gaccagggcg cacgagctcg  | 10080 |
| gtgtatttaa ggcggaata ggcgcggggtg tcaaagatgt aatcgttgca ggtgcgcacc  | 10140 |
| agatactggg accctataag aaaatgcggc ggtgggtggc ggtagagagg ccatcgttct  | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac  | 10260 |
| ctggacatcc aggtgattcc tgcggcggtg gtagaagccc gaggaactc gcgtacgcgg   | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgttag gcacggtttg accagtgagg  | 10380 |
| cgcgcgagc cattgatgct ctatagacac ggagaaaaatg aaagcggttca gcgactcgac | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcggtg taccgccggtt cgagacttgt | 10500 |
| actcgagccg gccggagccg cggctaacgt ggtattggca ctcccgtctc gaccagcct   | 10560 |
| acaaaaatcc aggatacggg atcgagtcgt tttgctgggt tccgaatggc aggggaagtga | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa  | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact  | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc  | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa  | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag  | 10920 |
| gagccggagg agatgcgagc ttcccgtttt aacgcgggtc gtgagctgcg tcacggtttg  | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagttg atgaaatgac agggatcagt  | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag  | 11100 |
| gaagagcgta acttccaaaa gtcttttaaat aatcatgtgc gaaccctgat tgcccgcgaa | 11160 |
| gaagttaccc ttggtttgat gcatttgtgg gatttgatgg aagctatcat tcagaaccct  | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtgggtgc aacacagcag agacaatgag | 11280 |
| gctttcagag aggcgtgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt   | 11340 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg  | 11400 |
| gctgccatca attactcgggt tttagacttg ggaaaatatt acgctcgcaa aatctacaag  | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg  | 11520 |
| ctcaagggtct tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc  | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa   | 11640 |
| agagctctga ctggagctgg aaccgaggggt gagaattact tcgacatggg agctgacttg  | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac   | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac   | 11820 |
| aacccgtgtt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct   | 11880 |
| gcagagccag ccgtccggca ttaactcctc ggacgattgg acccaggcca tgcaacgtat   | 11940 |
| catggcgttg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct   | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggctct  | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa agctattcgt ccagatgagg ccggactgggt  | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaatth   | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagggt tccagcgtga  | 12240 |
| tgccaacctg ggctcgctgg tggcgtaaaa tgctttcttg agtactcagc ctgctaattg   | 12300 |
| gccgcgtgggt caacaggatt atactaactt ttttaagtgt ttgagactga tggatatcaga | 12360 |
| agtacctcag agcgaagtgt atcagtccgg tcctgattac ttctttcaga ctagcagaca   | 12420 |
| gggcttgtag acggtaaatc tgagccaagc ttttaaaaac cttaaagggt tgtggggagt   | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actccgcct    | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctatth   | 12600 |
| gggttaccta ctaaacctgt atcgcgaagc catagggcaa agtcagggtgg acgagcagac  | 12660 |
| ctatcaagaa attacccaag tcagtcgcgc tttgggacag gaagacactg gcagtttgga   | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaag atccctcctc aatatgctct   | 12780 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat  | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag  | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc  | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgcactggc tgccccacc   | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaata gacggatttc tgtgggacga | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg  | 13140 |
| cgatagaatg cattcttctg catcgctgtc cggggctcatg ggtgctaccg cggctgagcc | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga  | 13260 |
| agtgggtaga ataagtcgcc cgagttaaat gggcgaagag gagtatctaa acgattcctt  | 13320 |
| gctcagaccg gcaagagaaa aaaatttccc aaacaatgga atagaaagt tgggtggataa  | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat  | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga  | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa  | 13560 |
| cccgtttgct catttgcgcc ctgccttggg tggatatgtt taaaaaaaaa taaaaaaaaa  | 13620 |
| actcaccaag gccatggcga cgagcgtacg ttcgttcttc tttattatct gtgtctagta  | 13680 |
| taatgaggcg agtcgtgcta ggcggagcgg tgggtgatcc ggagggtcct cctccttcgt  | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcggatgat gcaatcccca ctggaggctc | 13800 |
| cctttgtgcc tccgcgatac ctggcaccta cggagggcag aaacagcatt cgttattcgg  | 13860 |
| aactggcacc tcagtacgat accaccaggt tgtatctggt ggacaacaag tcggcggaca  | 13920 |
| ttgcttctct gaactatcag aatgaccaca gcaacttctt gaccacggtg gtgcaaaaca  | 13980 |
| atgactttac ccctacggaa gccagcacc agaccattaa ctttgatgaa cgatcgcggt   | 14040 |
| ggggcgggtca gctaaagacc atcatgcata ctaacatgcc aaacgtgaac gagtatatgt | 14100 |
| ttagtaacaa gttcaaagcg cgtgtgatgg tgtccagaaa acctcccgac ggtgctgcag  | 14160 |
| ttgggggatac ttatgatcac aagcaggata ttttgaaata tgagtgggtc gagtttactt | 14220 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tgccagaagg caacttttca gttactatga ctattgattt gatgaacaat gccatcatag  | 14280 |
| ataattactt gaaagtgggt agacagaatg gagtgcttga aagtgacatt ggtgttaagt  | 14340 |
| tcgacaccag gaacttcaag ctgggatggg atcccgaac caagttgatc atgcctggag   | 14400 |
| tgtatacgta tgaagccttc catcctgaca ttgtcttact gcctggctgc ggagtggatt  | 14460 |
| ttaccgagag tcgtttgagc aaccttcttg gtatcagaaa aaaacagcca tttcaagagg  | 14520 |
| gttttaagat tttgtatgaa gatttagaag gtggtaatat tccggccctc ttggatgtag  | 14580 |
| atgcctatga gaacagtaag aaagaacaaa aagccaaaat agaagctgct acagctgctg  | 14640 |
| cagaagctaa ggcaaacata gttgccagcg actctacaag ggttgctaac gctggagagg  | 14700 |
| tcagaggaga caattttgcg ccaacacctg ttccgactgc agaatcatta ttggccgatg  | 14760 |
| tgtctgaagg aacggacgtg aaactcacta ttcaacctgt agaaaaagat agtaagaata  | 14820 |
| gaagctataa tgtgttgga gacaaaatca acacagccta tcgcagttgg tatctttcgt   | 14880 |
| acaattatgg cgatcccgaa aaaggagtg gttcctggac attgctcacc acctcagatg   | 14940 |
| tcacctgcgg agcagagcag gtctactggg cgcttccaga catgatgaag gatcctgtca  | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggg gggcgcagag cttatgccc   | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca  | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg  | 15180 |
| cgcccaccat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc  | 15240 |
| cggtgcgcag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca  | 15300 |
| cctgtcccta cgtgtacaag gactgggca tagtcgcacc gcgcgtcctt tcaagccgca   | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg  | 15420 |
| tctgcgcgct ccaagcaaga tgtacggagg cgacgcgaaa cgcttctacc aacatcctgt  | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg  | 15540 |
| aaccaccgtc gatgatgtaa tcgatcaggt ggttgccgac gcccgttaatt atactcctac | 15600 |
| tgcgcctaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta  | 15660 |

eolf-seql (2)

|                                   |                                    |       |
|-----------------------------------|------------------------------------|-------|
| tgctcgacgt aagagccggc gaaggcgcgt  | tgccagacgc caccgagcta ccactgccat   | 15720 |
| gcgagccgca agagctctgc tacgaagagc  | tagacgcgtg gggcgaagag ccatgcttag   | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag  | cgccggcagg tcccgcaggc aagcagccgc   | 15840 |
| tgctgcagcg gcgactattg ccgacatggc  | ccaatcgcga agaggcaatg tatactgggt   | 15900 |
| gcgtgacgct gccaccggtc aacgtgtacc  | cgtgcgcacc cgtccccctc gcacttagaa   | 15960 |
| gatactgagc agtctccgat gttgtgtccc  | agcggcgagg atgtccaagc gcaaatacaa   | 16020 |
| ggaagaaatg ctgcaggtta tcgcacctga  | agtctacggc caaccgttga aggatgaaaa   | 16080 |
| aaaaccccgc aaaatcaagc gggttaaaaa  | ggacaaaaaa gaagaggaag atggcgatga   | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc  | cccacggcga cgcggtgcaat ggcgtagggcg | 16200 |
| caaagttcga catgtgttga gacctggaac  | ttcgggtggtc ttacaccccg gcgagcgttc  | 16260 |
| aagcgctact ttttaagcgtt cctatgatga | ggtgtacggg gatgatgata ttcttgagca   | 16320 |
| ggcggctgac cgattaggcg agtttgctta  | tggcaagcgt agtagaataa cttccaagga   | 16380 |
| tgagacagtg tcgataccct tggatcatgg  | aaatcccacc cctagtctta aaccggtcac   | 16440 |
| tttgcagcaa gtgttaccg taactccgcg   | aacaggtgtt aaacgcgaag gtgaagattt   | 16500 |
| gtatcccact atgcaactga tggtaaccaa  | acgccagaag ttggaggacg ttttggagaa   | 16560 |
| agtaaaaagt gatccagata ttcaacctga  | ggttaaagt agacccatta agcaggtagc    | 16620 |
| gcctggctctg ggggtacaaa ctgtagacat | taagattccc actgaaagta tgggaagtga   | 16680 |
| aactgaacct gcaaagccta ctgccacctc  | cactgaagtg caaacggatc catggatgcc   | 16740 |
| catgcctatt acaactgacg ccgccggtcc  | cactcgaaga tcccgcgaa agtacggtcc    | 16800 |
| agcaagtctg ttgatgcca attatgttgt   | acacccatct attattccta ctcttggtta   | 16860 |
| ccgaggcact cgctactatc gcagccgaaa  | cagtacctcc cgccgtcgcc gcaagacacc   | 16920 |
| tgcaaatacgc agtcgtcgcc gtagacgcac | aagcaaaccg actcccggcg ccctgggtgcg  | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc  | tttgacactg ccgcgtgcgc gttaccatcc   | 17040 |
| gagtatcatc acttaataca tgttgccgct  | gcctccttgc agatatggcc ctacttgtc    | 17100 |

eolf-seql (2)

|             |             |             |             |             |             |       |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| gccttcgcgt  | tcccatcact  | ggttacccgag | gaagaaactc  | gcgccgtaga  | agagggatgt  | 17160 |
| tgggacgcgg  | aatgcgacgc  | tacaggcgac  | ggcgtgctat  | ccgcaagcaa  | ttgcgggggtg | 17220 |
| gttttttacc  | agccttaatt  | ccaattatcg  | ctgctgcaat  | tggcgcgata  | ccaggcatag  | 17280 |
| cttccgtggc  | ggttcaggcc  | tcgcaacgac  | attgacattg  | gaaaaaaacg  | tataaataaa  | 17340 |
| aaaaaaaaaa  | tacaatggac  | tctgacactc  | ctggtcctgt  | gactatgttt  | tcttagagat  | 17400 |
| ggaagacatc  | aatttttcat  | ccttggctcc  | gcgacacggc  | acgaagccgt  | acatgggcac  | 17460 |
| ctggagcgac  | atcggcacga  | gccaactgaa  | cggggggcgcc | ttcaattgga  | gcagtatctg  | 17520 |
| gagcgggctt  | aaaaattttg  | gctcaaccat  | aaaaacatac  | gggaacaaag  | cttggaacag  | 17580 |
| cagtacagga  | caggcgctta  | gaaataaaact | taaagaccag  | aacttccaac  | aaaaagtagt  | 17640 |
| cgatgggata  | gcttccggca  | tcaatggagt  | ggtagatttg  | gctaaccagg  | ctgtgcagaa  | 17700 |
| aaagataaac  | agtcgttttg  | acccgccgcc  | agcaacccca  | ggtgaaatgc  | aagtggagga  | 17760 |
| agaaaattcct | ccgccagaaa  | aacgaggcga  | caagcgtccg  | cgtcccgatt  | tggaagagac  | 17820 |
| gctggtgacg  | cgcgtagatg  | aaccgccttc  | ttatgaggaa  | gcaacgaagc  | ttggaatgcc  | 17880 |
| caccactaga  | ccgatagccc  | caatggccac  | cgggggtgatg | aaaccttctc  | agttgcatcg  | 17940 |
| acccgtcacc  | ttggatttgc  | cccctcccc   | tgctgctact  | gctgtacccg  | cttctaagcc  | 18000 |
| tgctgctgcc  | ccgaaaccag  | tcgccgtagc  | caggtcacgt  | cccggggggcg | ctcctcgtcc  | 18060 |
| aaatgcgcac  | tggcaaaaata | ctctgaacag  | catcgtgggt  | ctaggcgtgc  | aaagtgtaaa  | 18120 |
| acgccgtcgc  | tgcttttaat  | taaatatgga  | gtagcgctta  | acttgccat   | ctgtgtatat  | 18180 |
| gtgtcattac  | acgccgtcac  | agcagcagag  | gaaaaaagga  | agaggtcgtg  | cgtcgacgct  | 18240 |
| gagttacttt  | caagatggcc  | accccatcga  | tgctgcccc   | atgggcatac  | atgcacatcg  | 18300 |
| ccggacagga  | tgcttcggag  | tacctgagtc  | cgggtctgggt | gcagttcgcc  | cgcgccacag  | 18360 |
| acacctactt  | caatctggga  | aataagttta  | gaaatcccac  | cgtagcgccg  | acccacgatg  | 18420 |
| tgaccaccga  | ccgtagccag  | cggctcatgt  | tgcgcttcgt  | gcccgttgac  | cgggaggaca  | 18480 |
| atacatactc  | ttacaaagtg  | cgggtacaccc | tggccgtggg  | cgacaacaga  | gtgctggata  | 18540 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tggccagcac gttctttgac attaggggtg tgttggacag aggtcccagt ttcaaaccct  | 18600 |
| attctggtac ggcttacaac tccctggctc cttaaaggcg tccaaataca tctcagtgga  | 18660 |
| ttgcagaagg tgtaaaaaat acaactggtg aggaacacgt aacagaagag gaaaccaata  | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag  | 18780 |
| gactcccagt aggtttggaa gtttcagatg aagaaagtaa accgatttat gctgataaaa  | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg  | 18900 |
| aaaagtatgg aggcagggtc ctcaaaccgc atactaagat gaaacatgc tacgggtcct   | 18960 |
| ttgccaacc tactaatgtg aaaggcggtc aggcaaaaca aaaaacaacg gagcagccaa   | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc  | 19140 |
| atgtagtgt caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat   | 19200 |
| ctatgccccaa cagacccaac tacattggct tcagagataa ctttattgga cttatgtact | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctggtcaagc gtctcagtta aatgcagtgg  | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg  | 19380 |
| acagaaccag atacttttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac | 19440 |
| gtgttattga aaatcatggt gtggaagatg aacttcccaa ctactgtttt ccactggacg  | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgccta  | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca  | 19620 |
| tggaaattaa ctttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat  | 19680 |
| atctcccaga ctcgtacaaa tacaccccg ccaatgtcac tcttccagaa aacaaaaaca   | 19740 |
| cctacgacta catgaacggg cgggtggtgc cgccatctct agtagacacc tatgtgaaca  | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta  | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca  | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca  | 19980 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt  | 20100 |
| tcccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg   | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg   | 20220 |
| caaccaatat tccattttcc attccttctc gcaactgggc ggctttcaga ggctggcat   | 20280 |
| ttaccagact gaaaaccaa gaaactccct ctttggggtc tggatttgac ccctactttg   | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |
| ctaacgaatt tgaaataaag cgactgtgg atggcgaagg ctacaacgta gcccaatgca   | 20520 |
| acatgaccaa agactgggtt ttggtacaga tgctcgccaa ctacaacatc ggctatcagg  | 20580 |
| gcttctacat tccagaagga taaaagatc gcatgtattc atttttcaga aacttccagc   | 20640 |
| ccatgagcag gcaggtggtt gatgagggtca attacaaaga cttcaaggcc gtcgccatac | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccctatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcat accgttctcg agcaacttca  | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg  | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct  | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct   | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc  | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca  | 21180 |
| gagccattgt ccaagacctg ggttgcggac cctatTTTTT gggaacctac gataagcgct  | 21240 |
| tccgggggtt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg   | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc  | 21360 |
| TTTTTgatcc TTTTggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg  | 21420 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat  | 21480 |
| ctacccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcattgttcc | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaaccccacc atgaaattgc  | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca   | 21660 |
| atcaaaaagc actctaccat tttcttaata cccattcgcc ttattttctgc tcccatcgta | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa  | 21780 |
| caacgtgttc aataaacatc actttatttt ttacatgta tcaaggctct gcattactta   | 21840 |
| tttatttaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg  | 21900 |
| ttgcgggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgttt gagcgcgaga gttgcggtac   | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacgggtg | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cggggtcatc  | 22200 |
| ttgcagggtct gcctacccat ggcgggcacc caattaggct tgtggttgca atcgcagtg  | 22260 |
| aggggggatca gtatcatctt ggctgatcc tgtctgattc ctggatacac ggctctcatg  | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcgggtata aaacatccc  | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcgggcg  | 22440 |
| tcattgttag ctatttgcac cacacttctg cccagcgggt tttgggtgat tttggttcgc  | 22500 |
| tcgggattct cctttaaggc tcgttgtccg ttctcgctgg ccacatccat ctcgataatc  | 22560 |
| tgctccttct gaatcataat attgccatgc aggcacttca gcttgccctc ataattcattg | 22620 |
| cagccatgag gccacaacgc acagcctgta cattcccaat tatggtgggc gatctgagaa  | 22680 |
| aaagaatgta tcattcccctg cagaaatctt cccatcatcg tgctcagtg cttgtgacta  | 22740 |
| gtgaaagtta actggatgcc tcgggtgctc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtc taagttcggt atccagcctg  | 22860 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tactttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcacattta | 22980 |
| gcgatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg  | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgtttggt cttccttggc ttcttttttg ggggtatcgg aggaggagga  | 23160 |
| ctgtcgctcc gttccggaga caggaggagat tgtgacgttt cgctcaccat taccaactga | 23220 |
| ctgtcggtag aagaacctga cccacacagg cgacagggtgt ttctcttcgg gggcagaggt | 23280 |
| ggaggcgatt gcgaagggtc gcggtccgac ctggaaggcg gatgactggc agaaccctt   | 23340 |
| ccgcgttcgg ggggtgtgctc cctgtggcgg tcgcttaact gatttccttc gcggctggcc | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |
| cgccacgagt gccatcacat ctgctcctca gcgacgagga aaaggagcag agcttaagca  | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gaccgggct   | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa  | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca  | 23760 |
| ccgactacct catagggtct gacgggggaag acgcgtcctt taaacatcta gcaagacagt | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccatcagt gtggaagagc  | 23880 |
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tcccccaaa cgtcagccaa   | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag  | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta  | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag  | 24120 |
| cttccttggg agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg | 24180 |
| caaatgctct gcaaaaaggga gaaaatggca tggatgagca tcacagcgtt ctggtggaat | 24240 |
| tggaaggcga taatgccaga ctgcagctac tcaagcgaag catcgagggtc acacacttcg | 24300 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| catatccccgc tgtcaacctg cccctaaag tcatgacggc ggtcatggac cagttactca | 24360 |
| ttaagcgcg aagtccccctt tcagaagaca tgcatgaccc agatgcctgt gatgagggta | 24420 |
| aaccagtggc cagtgatgag cagctaacc gatggctggg caccgactct cccagggatt  | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tggctgctgt taccgtagaa ctagagtgtc | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatatc taacgtggaa ctcaccaacc | 24660 |
| tggtttccta catgggtatt ctgcatgaga atcgctagg acaaagcgtg ctgcacagca  | 24720 |
| ccctgaagg ggaagccgc cgtgattaca tccgcgattg tgtctatctg tacctgtgcc   | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca | 24900 |
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcacctgg  | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca | 25080 |
| cctaccgca gtgcccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact   | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt | 25320 |
| cttctcctgg gcaaagtta aaactgaccc cgggactgtg gacctccgcc tacttgcgca  | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc  | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcaccagg ggaattctg gcccaattgc    | 25500 |
| aagccatcca aaaatccgc caagaatttc tactgaaaaa gggtaagggg gtctaccttg  | 25560 |
| accccagac cggcgaggaa ctcaacacaa ggttcctca ggatgtcca acgacgagaa    | 25620 |
| aacaagaagt tgaagggtga gccgccgccc ccagaagata tggaggaaga ttgggacagt | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttgag  | 25740 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gaggaaaaacg aggaggcaga ggaggtggaa gaagtaaccg ccgacaaaca gttatcctcg | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt  | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcgc ttccaagacc  | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcgggggc ataagaatgc catcatctcc  | 25980 |
| tgcttgcag agtgcggggg caacatatcc ttcacgcggc gctacttgct attccaccat   | 26040 |
| ggggtgaact ttccgcgcaa tgttttgcat tactaccgtc acctccacag cccctactat  | 26100 |
| agccagcaaa tcccggcagt ctcgacagat aaagacagcg gcggcgacct ccaacagaaa  | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac  | 26220 |
| agccaacgag ccagcgcaaa cccgagagtt aagaaatcgg atctttccaa ccctgtatgc  | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |
| ttcgctcacc agaagttggt tgtatcacia gagcgaagat caacttcagc gcactctcga  | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac  | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcatcctcga catgagtaaa gaaattccca  | 26520 |
| cgctttacat gtggagttat caaccccaaa tgggattggc ggcaggcgcc tcccaggact  | 26580 |
| actccacccg catgaattgg ctcagcgccg ggctttctat gatttctcga gttaatgata  | 26640 |
| tacgcgccta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc  | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca  | 26760 |
| ccactgtatt acttcctcga gacgcccagg ccgaagtcca aatgactaat gcaggtgcgc  | 26820 |
| agttagctgg cggctccacc ctatgtcgtc acaggcctcg gcataatata aaacgcctga  | 26880 |
| tgatcagagg ccgaggtatc cagctcaacg acgagtcggt gagctctccg cttggtctac  | 26940 |
| gaccagacgg aatctttcag attgccggct gcgggagatc ttccttcacc cctcgtcagg  | 27000 |
| ctgttctgac tttggaaagt tcgtcttcgc aaccccgctc gggcggaatc gggaccgttc  | 27060 |
| aatttgtgga ggagtttact ccctctgtct atttcaaccc cttctccgga tctcctgggc  | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg  | 27180 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg  | 27240 |
| ctttcgctgc tttgcccggg aactcattga gttcatctac ttcgaactcc ccaaggatca  | 27300 |
| ccctcaaggt ccggcccacg gaggcgcatg ttctatcgaa ggcaaaatag actctcgcct  | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccagggaac acaccacggt | 27420 |
| ttccatctac tgcatttgta atcaccccg attgcatgaa agcctttgct gtcttatgtg   | 27480 |
| tactgagttt aataaaaact gaattaagac tctcctacgg actgccgctt cttcaaccgc  | 27540 |
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctggt aacttcacct  | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttccta   | 27660 |
| ctaatactac tttcaaaacc ggaggtagc tccaagggtc tcctacagaa aacccttggg   | 27720 |
| tggaagcggg ccttgtagtg ctaggaattc ttgcggttg gcttggtgatt attctttgct  | 27780 |
| acctatacac accttgcttc actttcttag tgggtgtgtg gtattgggtt aaaaaatggg  | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga  | 27900 |
| tccatgtcta gacttcgacc cagaaaactg cacacttact ttgacacccg acacaagccg  | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aatttacctg  | 28020 |
| catggtggga atcaacccca tagttatcac ccagcaaagt ggagatacta agggttgcat  | 28080 |
| tactgtctcc tgcgattcca tcgagtgac ctacaccctg ctgaagaccc tatgcggcct   | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca  | 28200 |
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttcctc ttcccaactc   | 28260 |
| tggatttcta aaccccgctc agcggcatac tttctccata ctttaaaggg gatgtcaaat  | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt   | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca  | 28440 |
| cccctttata aaccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt   | 28500 |
| tcttacttta aaatgttta cccactaac aaccacaggc ggatctctac agctaaaagt    | 28560 |
| gggaggggga cttacagtgg atgacaccaa cgggtttttg aaagaaaaca taagtgccac  | 28620 |

eolf-seql (2)

|             |            |             |             |             |             |       |
|-------------|------------|-------------|-------------|-------------|-------------|-------|
| cacaccactc  | gttaagactg | gtcactctat  | aggtttacca  | ctaggagccg  | gattgggaac  | 28680 |
| gaatgaaaat  | aaactttgta | tcaaattagg  | acaaggactt  | acattcaatt  | caaacaacat  | 28740 |
| ttgcattgat  | gacaatatta | acaccttatg  | gacaggagtc  | aaccccaccg  | aagccaactg  | 28800 |
| tcaaatcatg  | aactccagtg | aatctaata   | ttgcaaatta  | attctaacac  | tagttaaaac  | 28860 |
| tggagcacta  | gtcactgcat | ttgtttatgt  | tataggagta  | tctaacaatt  | ttaatatgct  | 28920 |
| aactacacac  | agaaatataa | atctttactgc | agagctgttt  | ttcgattcta  | ctggtaattt  | 28980 |
| actaactaga  | ctctcatccc | tcaaaactcc  | acttaatcat  | aaatcaggac  | aaaacatggc  | 29040 |
| tactggtgcc  | attactaatg | ctaaaggttt  | catgcccagc  | acgactgcct  | atcctttcaa  | 29100 |
| tgataattct  | agagaaaaag | aaaactacat  | ttacggaact  | tggttactaca | cagctagtga  | 29160 |
| tcgcactgct  | tttcccattg | acatatctgt  | catgcttaac  | cgaagagcaa  | taaatgacga  | 29220 |
| gacatcatat  | tgtattcgta | taacttggtc  | ctggaacaca  | ggagatgccc  | cagaggtgca  | 29280 |
| aacctctgct  | acaaccctag | tcacctcccc  | atttaccttt  | tactacatca  | gagaagacga  | 29340 |
| ctgacaaaata | aagtttgcca | tcgccaggcc  | caccatggga  | tggagctgta  | tcacccctctt | 29400 |
| cttggttagca | acagctacag | gtgtccactc  | ccagggtgcag | ctgcagcagt  | ctggggctga  | 29460 |
| actggcaaga  | cctggggcct | cagtgaagat  | gtcctgcaag  | gcttctggct  | acacctttac  | 29520 |
| taggtacacg  | atgcactggg | taaaacagag  | gcctggacag  | ggctctggaat | ggattggata  | 29580 |
| cattaatcct  | agccgtgggt | atactaatta  | caatcagaag  | ttcaaggaca  | aggccacatt  | 29640 |
| gactacagac  | aaatcctcca | gcacagccta  | catgcaactg  | agcagcctga  | catctgagga  | 29700 |
| ctctgcagtc  | tattactgtg | caagatatta  | tgatgatcat  | tactgccttg  | actactgggg  | 29760 |
| ccaaggcacc  | actctcacag | tctcctcagg  | tggcggtggc  | tcgggcggtg  | gtggatctgg  | 29820 |
| tggcggcgga  | tctgatatcg | tgctcactca  | gtctccagca  | atcatgtctg  | catctccagg  | 29880 |
| ggagaaggtc  | accatgacct | gcagtgccag  | ctcaagtgta  | agttacatga  | actggtacca  | 29940 |
| gcagaagtca  | ggcacctccc | ccaaaagatg  | gatttatgac  | acatccaaac  | tggcttctgg  | 30000 |
| agtccttgct  | cacttcaggg | gcagtgggtc  | tgggacctct  | tactctctca  | caatcagcgg  | 30060 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| catggaggct gaagatgctg ccacttatta ctgccagcag tggagtagta acccattcac    | 30120 |
| gttcgggctcg gggacaaaagt tggaaataaa ccgggggatcc gaacaaaaac tcatctcaga | 30180 |
| agaggatctg aatgctgtgg gccaggacac gcaggagggtc atcgtgggtgc cacactcctt  | 30240 |
| gccctttaag gtgggtggga tctcagccat cctggccctg gtgggtgctca ccatcatctc   | 30300 |
| ccttatcatc ctcacatgc tttggcagaa gaagccacgt ggttcaatcc ctaaccctct     | 30360 |
| cctcgggtctc gattaagcta gcttgactga ctgagataca gcgtaccttc agctcacaga   | 30420 |
| catgataaga tacattgatg agtttggaca aaccacaact agaatgcagt gaaaaaaatg    | 30480 |
| ctttatttgt gaaatttgtg atgctattgc tttatttcta accattataa gctgcaataa    | 30540 |
| acaagttaac aacaacaatt gcattcattt tatgtttcag gttcaggggg aggtgtggga    | 30600 |
| ggttttttta agcaagtaaa acctctacaa atgtggtagt cgtcagctat cctgcaggaa    | 30660 |
| cttgtttatt tgaaaatcaa ttcacaaaat ccgagtagtt attttgcctc ccccttccca    | 30720 |
| tttaacagaa tacaccaatc tctccccacg cacagcttta aacatttga taccattaga     | 30780 |
| tatagacatg gtttttagatt ccacattcca aacagtttca gagcgagcca atctgggggtc  | 30840 |
| agtgatagat aaaaatccat cgggatagtc ttttaaagcg ctttcacagt ccaactgctg    | 30900 |
| cggatgcgac tccggagtct ggatcacggt catctggaag aagaacgatg ggaatcataa    | 30960 |
| tccgaaaacg gtatcggacg attgtgtctc atcaaacca caagcagccg ctgtctgcgt     | 31020 |
| cgctccgtgc gactgctgtt tatgggatca ggggtccacag tgtcctgaag catgatttta   | 31080 |
| atagccctta acatcaactt tctgggtgcga tgcgcgcagc aacgcattct gatttcactc   | 31140 |
| aaatctttgc agtaggtaca acacattatt acaatattgt ttaataaacc ataattaaaa    | 31200 |
| gcgctccagc caaaaactcat atctgatata atcgcccctg catgaccatc ataccaaagt   | 31260 |
| ttaatataaa ttaaatacag ttccctcaaa aacacactac ccacatacat gatctctttt    | 31320 |
| ggcatgtgca tattaacaat ctgtctgtac catggacaac gttgggttaat catgcaaccc   | 31380 |
| aatataacct tccggaacca cactgccaac accgctcccc cagccatgca ttgaagtga     | 31440 |
| ccctgctgat tacaatgaca atgaagaacc caattctctc gaccgtgaat cacttgagaa    | 31500 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tgaaaaatat ctatagtggc acaacataga cataaatgca tgcattcttct cataatTTTT  | 31560 |
| aactcctcag gatttagaaa catatcccag ggaataggaa gctcttgagc aacagtaaag   | 31620 |
| ctggcagaac aaggaagacc acgaacacaa cttacactat gcatagtcac agtatcacia   | 31680 |
| tctggcaaca gcgggtgggc ttccagtcata gaagctcggg tttcattttc ctcacaacgt  | 31740 |
| ggtaactggg ctctgggtga aggggtgatgt ctggcgcatg atgtcgagcg tgcgcgcaac  | 31800 |
| cttgtcataa tggagttgct tcctgacatt ctcgtatttt gtatagcaaa acgcggccct   | 31860 |
| ggcagaacac actcttcttc gccttctatc ctgccgctta gcgtgttccg tgtgatagtt   | 31920 |
| caagtacaac cacactctta agttgggtcaa aagaatgctg gcttcagttg taatcaaaac  | 31980 |
| tccatcgcat ctaatcggtc tgaggaaatc atccaagcaa tgcaactgga ttgtgtttca   | 32040 |
| agcaggagag gagagggaag agacggaaga accatgttaa tttttattcc aaacgatctc   | 32100 |
| gcagtacttc aaattgtaga tcgcgcagat ggcatctctc gccccactg tgttggtgaa    | 32160 |
| aaagcacagc tagatcaaaa gaaatgcgat tttcaagggtg ctcaacgggtg gcttccagca | 32220 |
| aagcctccac gcgcacatcc aagaacaaaa gaatacaaaa agaaggagca ttttctaact   | 32280 |
| cctcaatcat catattacat tcctgcacca ttcccagata attttcagct ttccagcctt   | 32340 |
| gaattattcg tgtcagttct tgtggtaaata ccaatccaca cattacaaac aggtcccgga  | 32400 |
| gggcgcccctc caccaccatt cttaaacaca ccctcataat gacaaaaatat cttgctcctg | 32460 |
| tgtcacctgt agcgaattga gaatggcaac atcaattgac atgcccttgg ctctaagttc   | 32520 |
| ttctttaagt tctagttgta aaaactctct catattatca ccaaactgct tagccagaag   | 32580 |
| cccccgga acaagagcag gggacgtac agtgcagtac aagcgagac ctccccatt        | 32640 |
| ggctccagca aaaacaagat tggaataagc atattgggaa ccgccagtaa tatcatcgaa   | 32700 |
| gttgctggaa atataatcag gcagagtttc ttgtaaaaat tgaataaaag aaaaatttgc   | 32760 |
| caaaaaaaca ttcaaaacct ctgggatgca aatgcaatag gttaccgcgc tgcgctcaa    | 32820 |
| cattgttagt tttgaattag tctgcaaaaa taataaaaaa aacaagcgtc atatcatagt   | 32880 |
| agcctgacga acagatggat aaatcagttc ttccatcaca agacaagcca cagggtctcc   | 32940 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| agctcgaccc tcgtaaaacc tgtcatcatg attaaacaac agcaccgaaa gttcctcgcg | 33000 |
| gtgaccagca tgaataattc ttgatgaagc atacaatcca gacatgttag catcagttaa | 33060 |
| cgagaaaaaa cagccaacat agcctttggg tataattatg cttaatcgta agtatagcaa | 33120 |
| agccacccct cgcggatata aagtaaaagg cacaggagaa taaaaaatat aattatttct | 33180 |
| ctgctgctgt tcaggcaacg tcgcccccg tccctctaaa tacacataca aagcctcatc  | 33240 |
| agccatggct taccagacaa agtacagcgg gcacacaaag cacaagctct aaagtgactc | 33300 |
| tccaacctct ccacaatata tatatacaca agccctaaac tgacgtaatg ggagtaaagt | 33360 |
| gtaaaaaatc ccgccaacc caacacacac cccgaaactg cgtcaccagg gaaaagtaca  | 33420 |
| gtttcacttc cgcaatccca acaggcgtaa cttcctcttt ctcacggtag gtgatatccc | 33480 |
| actaacttgc aacgtcattt tcccacggtc gcaccgcccc ttttagccgt taaccccaca | 33540 |
| gccaatcacc acacgatcca cactttttaa aatcacctca tttacatatt ggcaccattc | 33600 |
| catctataag gtatattata tagataga                                    | 33628 |

<210> 105

<211> 5431

<212> DNA

<213> Artificial Sequence

<220>

<223> NG-444-R in pUC57-Kan plasmid

<400> 105

|                                                                     |     |
|---------------------------------------------------------------------|-----|
| tcgcgcgttt cggatgatgac ggtgaaaacc tctgacacat gcagctcccc gagacgggtca | 60  |
| cagcttgtct gtaagcggat gccgggagca gacaagcccc tcagggcgcg tcagcgggtg   | 120 |
| ttggcgggtg tcggggctgg cttactatg cggcatcaga gcagattgta ctgagagtgc    | 180 |
| accatatgcg gtgtgaaata ccgcacagat gcgtaaggag aaaataccgc atcaggcgcc   | 240 |
| attcgccatt caggctgcgc aactgttggg aaggcgatc ggtgcgggcc tcttcgctat    | 300 |
| tacgccagct ggcgaaagg ggatgtgctg caaggcgatt aagttgggta acgccagggt    | 360 |
| tttcccagtc acgacgttgt aaaacgacgg ccagtgaatt gacgcgtatt gggatgaatt   | 420 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| cacattgatt attgactagt tattaatagt aatcaattac ggggtcatta gttcatagcc   | 480  |
| catatatgga gttccgcgtt acataactta cggtaaattgg cccgcctggc tgaccgcca   | 540  |
| acgacccccg cccattgacg tcaataatga cgtatgttcc catagtaacg ccaataggga   | 600  |
| ctttccattg acgtcaatgg gtggagtatt tacggtaaac tgcccacttg gcagtacatc   | 660  |
| aagtgtatca tatgccaagt acgcccccta ttgacgtcaa tgacggtaaa tggcccgct    | 720  |
| ggcattatgc ccagtacatg accttatggg actttcctac ttggcagtac atctacgtat   | 780  |
| tagtcatcgc tattaccatg gtgatgcggt tttggcagta catcaatggg cgtggatagc   | 840  |
| ggtttgactc acggggattt ccaagtctcc accccattga cgtcaatggg agtttgtttt   | 900  |
| ggcaccaaaa tcaacgggac tttccaaaat gtcgtaacaa ctccgccccca ttgacgcaaa  | 960  |
| tgggcggtag gcgtgtacgg tgggaggtct atataagcag agctctctgg ctaactagag   | 1020 |
| aaccactgc ttactggccc caccatggga tggagctgta tcatcctctt cttggtagca    | 1080 |
| acagctacag gtgtccactc ccagggtgcag ctgcagcagt ctggggctga actggcaaga  | 1140 |
| cctggggcct cagtgaagat gtcctgcaag gcttctggct acacctttac taggtacacg   | 1200 |
| atgcactggg taaaacagag gcctggacag ggtctggaat ggattggata cattaatcct   | 1260 |
| agccgtgggt atactaatta caatcagaag ttcaaggaca aggccacatt gactacagac   | 1320 |
| aaatcctcca gcacagccta catgcaactg agcagcctga catctgagga ctctgcagtc   | 1380 |
| tattactgtg caagatatta tgatgatcat tactgccttg actactgggg ccaaggcacc   | 1440 |
| actctcacag tctcctcagg tggcgggtggc tcgggcgggtg gtggatctgg tggcggcgga | 1500 |
| tctgatatcg tgctcactca gtctccagca atcatgtctg catctccagg ggagaaggtc   | 1560 |
| accatgacct gcagtgccag ctcaagtgta agttacatga actggtacca gcagaagtca   | 1620 |
| ggcacctccc ccaaagatg gatttatgac acatccaaac tggcttcttg agtccctgct    | 1680 |
| cacttcaggg gcagtgggtc tgggacctct tactctctca caatcagcgg catggaggct   | 1740 |
| gaagatgctg ccacttatta ctgccagcag tggagtagta acccattcac gttcggctcg   | 1800 |
| gggacaaagt tggaaataaa ccggggatcc gaacaaaaac tcatctcaga agaggatctg   | 1860 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| aatgctgtgg gccaggacac gcaggaggtc atcgtgggtgc cacactcctt gccctttaag  | 1920 |
| gtgggtgggtga tctcagccat cctggccctg gtgggtgctca ccatcatctc cttatcatc | 1980 |
| ctcatcatgc tttggcagaa gaagccacgt ggaagcggag ctactaactt cagcctgctg   | 2040 |
| aagcaggctg gagacgtgga ggagaaccct ggacctggcc acacacggag gcagggaaca   | 2100 |
| tcaccatcca agtgtccata cctcaatttc tttcagctct tgggtgctggc tggcttttct  | 2160 |
| cacttctgtt caggtgttat ccacgtgacc aaggaagtga aagaagtggc aacgctgtcc   | 2220 |
| tgtggtcaca atgtttctgt tgaagagctg gcacaaactc gcatctactg gcaaaaggag   | 2280 |
| aagaaaatgg tgctgactat gatgtctggg gacatgaata tatggcccga gtacaagaac   | 2340 |
| cggaccatct ttgatatcac taataacctc tccattgtga tcctggctct gcgcccctct   | 2400 |
| gacgagggca catacgagtg tgttgttctg aagtatgaaa aagacgcttt caagcgggaa   | 2460 |
| cacctggctg aagtgacgtt atcagtcaaa gctgacttcc ctacacctag tatacttgac   | 2520 |
| tttgaaattc caacttctaa tattagaagg ataatttgct caacctctgg aggttttcca   | 2580 |
| gagcctcacc tctcctgggt ggaaaatgga gaagaattaa atgccatcaa cacaacagtt   | 2640 |
| tccaagatc ctgaaactga gctctatgct gttagcagca aactggattt caatatgaca    | 2700 |
| accaaccaca gcttcatgtg tctcatcaag tatggacatt taagagtga tcagaccttc    | 2760 |
| aactggaata caaccaagca agagcatttt cctgataacc tgctcccatc ctgggccatt   | 2820 |
| accttaatct cagtaaattg aatttttgtg atatgctgcc tgacctactg ctttgcccca   | 2880 |
| agatgcagag agagaaggag gaatgagaga ttgagaaggg aaagtgtacg ccctgtataa   | 2940 |
| gctagcttga ctgactgaga tacagcgtac cttcagctca cagacatgat aagatacatt   | 3000 |
| gatgagtttg gacaaaccac aactagaatg cagtgaaaaa aatgctttat ttgtgaaatt   | 3060 |
| tgtgatgcta ttgctttatt tgtaaccatt ataagctgca ataaacaagt taacaacaac   | 3120 |
| aattgcattc attttatgtt tcaggttcag ggggaggtgt gggagggttt ttaaagcaag   | 3180 |
| taaaacctct acaaattgtg tagtcgtcag ctatcccggt atcccaatgg cgcgccgagc   | 3240 |
| ttggctcgag catggtcata gctgtttcct gtgtgaaatt gttatccgct cacaattcca   | 3300 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| cacaacatac gagccggaag cataaagtgt aaagcctggg gtgcctaatag agtgagctaa | 3360 |
| ctcacattaa ttgcgttgcg ctactgccc gctttccagt cgggaaacct gtcgtgccag   | 3420 |
| ctgcattaat gaatcggcca acgcgcgggg agaggcgggt tgcgtattgg gcgctcttcc  | 3480 |
| gcttcctcgc tactgactc gctgcgctcg gtcgttcggc tgcggcgagc ggtatcagct   | 3540 |
| cactcaaagg cggtaatagc gttatccaca gaatcagggg ataacgcagg aaagaacatg  | 3600 |
| tgagcaaaaag gccagcaaaa ggccaggaac cgtaaaaagg ccgcgttgct ggcgtttttc | 3660 |
| cataggctcc gccccctga cgagcatcac aaaaatcgac gctcaagtca gaggtggcga   | 3720 |
| aacccgacag gactataaag ataccaggcg tttccccctg gaagctccct cgtgcgctct  | 3780 |
| cctgttccga ccctgccgct taccggatac ctgtccgcct ttctcccttc ggggaagcgtg | 3840 |
| gcgctttctc atagctcacg ctgtaggtat ctgagttcgg tgtaggtcgt tcgctccaag  | 3900 |
| ctgggctgtg tgcacgaacc ccccgttcag ccgaccgct gcgccttatc cggtaaactat  | 3960 |
| cgtcttgagt ccaacccggt aagacacgac ttatcgccac tggcagcagc cactggtaac  | 4020 |
| aggattagca gagcgaggta tgtaggcggc gctacagagt tcttgaagtg gtggcctaac  | 4080 |
| tacggctaca ctagaagaac agtatttggc atctgcgctc tgctgaagcc agttaccttc  | 4140 |
| ggaaaaagag ttggtagctc ttgatccggc aaacaaacca ccgctggtag cggtggtttt  | 4200 |
| tttgtttgca agcagcagat tacgcgcaga aaaaaaggat ctcaagaaga tcctttgatc  | 4260 |
| ttttctacgg ggtctgacgc tcagtggaac gaaaactcac gttaagggat tttggtcatg  | 4320 |
| agattatcaa aaaggatcct cacctagatc cttttaaat aaaaatgaag ttttaaatca   | 4380 |
| atctaaaagta tatatgagta aacttggctc gacagttaga aaaactcatc gagcatcaaa | 4440 |
| tgaaactgca atttattcat atcaggatta tcaataccat atttttgaaa aagccgtttc  | 4500 |
| tgtaatgaag gagaaaaactc accgaggcag ttccatagga tggcaagatc ctggtatcgg | 4560 |
| tctgcgattc cgactcgtcc aacatcaata caacctatta atttcccctc gtcaaaaata  | 4620 |
| aggttatcaa gtgagaaaac accatgagtg acgactgaat ccggtgagaa tggcaaaaagt | 4680 |
| ttatgcattt ctttccagac ttgttcaaca ggccagccat tacgctcgtc atcaaaaatca | 4740 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ctcgcacaa ccaaaccgtt attcattcgt gattgcgcct gagcgagacg aaatacgca    | 4800 |
| tcgctgttaa aaggacaatt acaaacagga atcgaatgca accggcgagc gaacactgcc  | 4860 |
| agcgcatcaa caatattttc acctgaatca ggatattcctt ctaatacctg gaatgctgtt | 4920 |
| ttcccaggga tcgcagtggg gagtaaccat gcatcatcag gagtacggat aaaatgcttg  | 4980 |
| atggtcggaa gaggcataaa ttccgtcagc cagtttagtc tgaccatctc atctgtaaca  | 5040 |
| tcattggcaa cgctaccttt gccatgtttc agaaacaact ctggcgcatc gggcttccca  | 5100 |
| tacaatcgat agattgtcgc acctgattgc ccgacattat cgcgagccca tttataccca  | 5160 |
| tataaatcag catccatgtt ggaatttaat cgcggcctag agcaagacgt ttcccgttga  | 5220 |
| atatggctca tactcttcct ttttcaatat tattgaagca tttatcaggg ttattgtctc  | 5280 |
| atgagcggat acatatttga atgtatttag aaaaataaac aaataggggt tccgcgcaca  | 5340 |
| tttccccgaa aagtgccacc tgacgtctaa gaaaccatta ttatcatgac attaacctat  | 5400 |
| aaaaataggc gtatcacgag gccctttcgt c                                 | 5431 |

<210> 106  
 <211> 7915  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> 434-MVA-GFP+transgene

|                                                                   |     |
|-------------------------------------------------------------------|-----|
| <400> 106                                                         |     |
| gcgccaata cgcaaaccgc ctctccccgc gcgttggccg attcattaat gcagctggca  | 60  |
| cgacaggttt cccgactgga aagcgggcag tgagcgcaac gcaattaatg tgagttagct | 120 |
| cactcattag gcaccccagg ctttacactt tatgcttccg gtcgtatgt tgtgtggaat  | 180 |
| tgtgagcgga taacaatttc acacaggaaa cagctatgac catgattacg ccaagcttgc | 240 |
| atgcatctgg aaacgggcat ctccatttaa gactagatgc cacggggttt aaaatactaa | 300 |
| tcatgacatt ttgtagagcg taattactta gttaaaccgc cgtactaggt tcatttcctc | 360 |
| ctcgttttga tctcacatca gaaattaaaa taatcttaga aggatgcagt tgttttttga | 420 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| tggatcgtag atattcctca tcaacgaacc gagtcactag agtcacatca cgcaatccat   | 480  |
| ttaaaatagg atcatgatgg cggccgtcaa ttagcatcca tttgatgatc actcctaaat   | 540  |
| tatagaaatg atctctcaaa taacgtatat gtgtaccggg agcagatcct atatacacta   | 600  |
| cggtaggcacc atctaataata ccgtgtcgct gtaacttact aagaaaaaat aattctccta | 660  |
| gtaatagttt taactgtcct tgatacggta gtttttttgc gacctcattt gcactttctg   | 720  |
| gttcgtaatc taactcatta tcaatttcct caaaatacat aaacgggttta tctaacgaca  | 780  |
| caacatccat ttttaagtat tatattaaaa tttaatcaat gtttattttt agtttttttag  | 840  |
| ataaaaaata taatattatg agtcgatgta acactttcta cacaccgatt gatacatatc   | 900  |
| attacctcct attatctcta tctcgggtttc ctcacccaat cgtttagaaa aggaagcctc  | 960  |
| cttaaagcat ttcatacaca cagcagttag ttttaccacc atttcagata atggaataag   | 1020 |
| attcaaaata ttattaaacg gtttacgttg aaatgtcca tcgagtgcgg ctactataac    | 1080 |
| tatttttcct tcgtttgcca tacagatcct acgtactcga gcccgggata gctgacgact   | 1140 |
| accacatttg tagaggtttt acttgcttta aaaaacctcc cacacctccc cctgaacctg   | 1200 |
| aaacataaaa tgaatgcaat tggtgttggt aacttgttta ttgcagctta taatggttac   | 1260 |
| aaataaagca atagcatcac aaatttcaca aataaagcat ttttttact gcattctagt    | 1320 |
| tgtggtttgt ccaaactcat caatgtatct tatcatgtct gtgagctgaa ggtacgctgt   | 1380 |
| atctcagtca gtcaagctag cttatacagg gcgtacactt tcccttctca atctctcatt   | 1440 |
| cctccttctc tctctgcatc ttggggcaaa gcagtaggtc aggcagcata tcacaaaaat   | 1500 |
| tccatttact gagattaagg taatggccca ggatgggagc aggttatcag gaaaatgctc   | 1560 |
| ttgcttggtt gtattccagt tgaaggctctg attcactctt aaatgtccat acttgatgag  | 1620 |
| acacatgaag ctgtggttgg ttgtcatatt gaaatccagt ttgctgctaa cagcatagag   | 1680 |
| ctcagtttca ggatcttggg aaactgttgt gttgatggca tttaattctt ctccattttc   | 1740 |
| caaccaggag aggtgaggct ctggaaaacc tccagagggt gagcaaatta tccttctaata  | 1800 |
| attagaagtt ggaatttcaa agtcagatat actagggtgta gggaagtcag ctttgactga  | 1860 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| taacgtcact tcagccaggt gttcccgtt gaaagcgtct ttttcatact tcagaacaac    | 1920 |
| acactcgtat gtgccctcgt cagatgggcg cagagccagg atcacaatgg agaggttatt   | 1980 |
| agtgatatca aagatgggtcc ggttcttgta ctcgggccat atattcatgt ccccagacat  | 2040 |
| catagtcagc accatthttct tctccttttg ccagtagatg cgagtttggtg ccagctcttc | 2100 |
| aacagaaaaca ttgtgaccac aggacagcgt tgccacttct ttcacttcct tggtcacgtg  | 2160 |
| gataacacct gaacagaagt gagaaagacc agccagcacc aagagctgaa agaaattgag   | 2220 |
| gtatggacac ttggatgggtg atgttccctg cctccgtgtg tggccagggtc cagggttctc | 2280 |
| ctccacgtct ccagcctgct tcagcaggct gaagttagta gctccgcttc cacgtggctt   | 2340 |
| cttctgcaa agcatgatga ggatgataag ggagatgatg gtgagcacca ccagggccag    | 2400 |
| gatggctgag atcaccacca ccttaaaggg caaggagtgt ggcaccacga tgacctcctg   | 2460 |
| cgtgtcctgg cccacagcat tcagatcctc ttctgagatg agtttttggt cggatccccg   | 2520 |
| gtttatthtc aactthgtcc ccgagccgaa cgtgaatggg ttactactcc actgctggca   | 2580 |
| gtaataagtg gcagcatctt cagcctccat gccgctgatt gtgagagagt aagagggtccc  | 2640 |
| agaccactg cccctgaagt gagcagggac tccagaagcc agtttggtatg tgtcataaat   | 2700 |
| ccatctthtg ggggaggtgc ctgacttctg ctggtaccag ttcattgtaac ttacacttga  | 2760 |
| gctggcactg caggctcatgg tgaccttctc ccctggagat gcagacatga ttgctggaga  | 2820 |
| ctgagtgagc acgatatcag atccgccgcc accagatcca ccaccgccc agccaccgcc    | 2880 |
| acctgaggag actgtgagag tgggtgccttg gccccagtag tcaaggcagt aatgatcatc  | 2940 |
| ataatatctt gcacagtaat agactgcaga gtcctcagat gtcaggctgc tcagttgcat   | 3000 |
| gtaggctgtg ctggaggatt tgtctgtagt caatgtggcc ttgtccttga acttctgatt   | 3060 |
| gtaattagta taaccacggc taggattaat gtatccaatc cattccagac cctgtccagg   | 3120 |
| cctctgttht acccagtgc tcgtgtacct agtaaagggtg tagccagaag ccttgcagga   | 3180 |
| catcttctact gaggccccag gtcttgccag ttcagcccca gactgctgca gctgcacctg  | 3240 |
| ggagtggaca cctgtagctg ttgctaccaa gaagaggatg atacagctcc atcccatggt   | 3300 |



eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| gggctcgagg gtaccggatc tagatgggga tccgtcactg ttctttatga ttctacttcc  | 3360 |
| ttaccgtgca ataaattaga atatattttc tactttttacg agaaattaat tattgtat   | 3420 |
| attatttatg ggtgaaaaac ttactataaa aagcgggtgg gtttggaatt agtgatcagt  | 3480 |
| ttatgtatat cgcaactacc gggcatatgg ctatcgacat cgagaacatt acccacatga  | 3540 |
| taagagattg tatcagtttc gtagtcttga gtattggtat tactatatag tatatagatg  | 3600 |
| tcgacctgca ggtcgacgaa gttcctatac tttctagaga ataggaactt cgcagccaag  | 3660 |
| ctggaattca tccactttgg ataagaaatc tgcatgataa atatatgat atcctaccac   | 3720 |
| ctattaaagt accattatct aatagcaata agatagataa acaaatgttt tttgatgaag  | 3780 |
| ttattacgtg gataaatata tatcttcagg aaaagggtat tatgttacca gatgatataa  | 3840 |
| gagaactcag agatgctatt attccttaac tagttacgtc tctttaggta cttattttga  | 3900 |
| tacgttacia gtaaaaaact atcaaatata aatggaatct gattctaata tagcgattga  | 3960 |
| agaggatcca ccggtcgcca ccatggtgag caagggcgag gagctgttca ccggggtggt  | 4020 |
| gccccatcctg gtcgagctgg acggcgacgt aaacggccac aagttcagcg tgtccggcga | 4080 |
| gggcgagggc gatgccacct acggcaagct gaccctgaag ttcatctgca ccaccggcaa  | 4140 |
| gctgcccgtg ccctggccca ccctcgtgac caccctgacc tacggcgtgc agtgcttcag  | 4200 |
| ccgctacccc gaccacatga agcagcacga cttcttcaag tccgcatgc ccgaaggcta   | 4260 |
| cgtccaggag cgcaccatct tcttcaagga cgacggcaac tacaagacc gcgccgaggt   | 4320 |
| gaagttcgag ggcgacaccc tggatgaaccg catcgagctg aagggcacg acttcaagga  | 4380 |
| ggacggcaac atcctggggc acaagctgga gtacaactac aacagccaca acgtctatat  | 4440 |
| catggccgac aagcagaaga acggcatcaa ggtgaacttc aagatccgcc acaacatcga  | 4500 |
| ggacggcagc gtgcagctcg ccgaccacta ccagcagaac acccccatcg gcgacggccc  | 4560 |
| cgtgctgctg cccgacaacc actacctgag caccagctcc gccctgagca aagaccccaa  | 4620 |
| cgagaagcgc gatcacatgg tcctgctgga gttcgtgacc gccgccggga tcactctcgg  | 4680 |
| catggacgag ctgtacaagt aaagcggccg cgaagttcct atactttcta gagaatagga  | 4740 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| acttcaacaa tgtctggaaa gaactgtcct tcatcgatac ctatcacgga gaaatctgta   | 4800 |
| attgattcca agacatcaca tagtttagtt gcttccaatg cttcaaaatt attcttatca   | 4860 |
| tgcgtccata gtcccgttcc gtatctatta tcgttagaat attttatagt cacgcattta   | 4920 |
| tattgagcta tttgataacg tctaactcgt ctaattaatt ctgtactttt acctgaaaac   | 4980 |
| atggggccga ttatcaactg aatatgtccg ccgttcatga tgacaataaa gaattaatta   | 5040 |
| ttgttcactt tattcgactt taatatatcc atcacgttag aaaatgcat atcgcgacga    | 5100 |
| ggatctatgt atctaacagg atctattgcg gtggtagcta gagctgattc ttttttgaat   | 5160 |
| cgcacaaac taatcacaaa gtcgaacaaa tatcctttat taagtttgac ctttccatct    | 5220 |
| gtaacaatag ggaccttggt aaacagtttt ttaaaatctt gagagtctgt gaattttgtc   | 5280 |
| aattgtctgt attcctctga aagagattca taacaatgac ccacggcttc taatttattt   | 5340 |
| tttgattgga tcaataataa taacagaaaag tctagatatt gagtgatttg caatatatca  | 5400 |
| gataatgaag attcatcatc ttgactagcc aaataactta aaaatgaatc atcatctgcg   | 5460 |
| aagaacatcg ttaagagata ctggttggtga tccattttatg agctcgcgaa agcttggcac | 5520 |
| tggccgtcgt tttaacaacgt cgtgactggg aaaaccctgg cgttacccaa cttaatcgcc  | 5580 |
| ttgcagcaca tccccctttc gccagctggc gtaatagcga agaggccgc accgatcgcc    | 5640 |
| cttcccaaca gttgcgcagc ctgaatggcg aatggcgccct gatgcggtat tttctccta   | 5700 |
| cgcacatctgt cggtatttca caccgcatat ggtgcactct cagtacaatc tgctctgatg  | 5760 |
| ccgcatagtt aagccagccc cgacacccgc caacacccgc tgacgcgccc tgacgggctt   | 5820 |
| gtctgctccc ggcatccgct tacagacaag ctgtgaccgt ctccgggagc tgcatgtgtc   | 5880 |
| agaggttttc accgtcatca ccgaaacgcg cgagacgaaa gggcctcgtg atacgcctat   | 5940 |
| ttttataggt taatgtcatg ataataatgg tttcttagac gtcagggtggc acttttcggg  | 6000 |
| gaaatgtgcg cggaaccctt atttgtttat ttttctaaat acattcaaat atgtatccgc   | 6060 |
| tcatgagaca ataaccctga taaatgcttc aataatattg aaaaaggaag agtatgagta   | 6120 |
| ttcaacattt ccgtgtcgcc cttattccct tttttgcggc attttgcctt cctgtttttg   | 6180 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ctcaccaga aacgctggtg aaagtaaaag atgctgaaga tcagttgggt gcacgagtgg   | 6240 |
| gttacatcga actggatctc aacagcggta agatccttga gagttttcgc cccgaagaac  | 6300 |
| gttttccaat gatgagcact tttaaagtgc tgctatgtgg cgcgggtatta tcccgtattg | 6360 |
| acgccgggca agagcaactc ggtcgccgca tacactattc tcagaatgac ttggttgagt  | 6420 |
| actcaccagt cacagaaaag catcttacgg atggcatgac agtaagagaa ttatgcagtg  | 6480 |
| ctgccataac catgagtgat aacactgcgg ccaacttact tctgacaacg atcggaggac  | 6540 |
| cgaaggagct aaccgctttt ttgcacaaca tgggggatca tgtaactcgc cttgatcggt  | 6600 |
| gggaaccgga gctgaatgaa gccataccaa acgacgagcg tgacaccacg atgcctgtag  | 6660 |
| caatggcaac aacgttgccg aaactattaa ctggcgaact acttactcta gcttcccggc  | 6720 |
| aacaattaat agactggatg gaggcggata aagttgcagg accacttctg cgctcggccc  | 6780 |
| ttccggctgg ctggtttatt gctgataaat ctggagccgg tgagcgtggg tctcgcggta  | 6840 |
| tcattgcagc actggggcca gatggtaagc cctcccgtat cgtagttatc tacacgacgg  | 6900 |
| ggagtccagg aactatggat gaacgaaata gacagatcgc tgagataggt gcctcactga  | 6960 |
| ttaagcattg gtaactgtca gaccaagttt actcatatat acttttagatt gatttaaaac | 7020 |
| ttcatTTTTA atttaaaagg atctagggtga agatcctttt tgataatctc atgacaaaaa | 7080 |
| tcccttaacg tgagttttcg ttccactgag cgtcagaccc cgtagaaaag atcaaaggat  | 7140 |
| cttcttgaga tcctTTTTTT ctgcgcgtaa tctgctgctt gcaaacaaaa aaaccaccgc  | 7200 |
| taccagcggg ggtttgtttg ccggatcaag agctaccaac tctttttccg aaggtaactg  | 7260 |
| gcttcagcag agcgcagata ccaaatactg ttcttctagt gtagccgtag ttaggccacc  | 7320 |
| acttcaagaa ctctgtagca ccgcctacat acctcgctct gctaatacctg ttaccagtgg | 7380 |
| ctgctgccag tggcgataag tcgtgtctta ccgggttgga ctcaagacga tagttaccgg  | 7440 |
| ataaggcgca gcggtcgggc tgaacggggg gttcgtgcac acagcccagc ttggagcgaa  | 7500 |
| cgacctacac cgaactgaga tacctacagc gtgagctatg agaaaagcgcc acgcttcccg | 7560 |
| aagggagaaa ggccggacagg tatccggtaa gcggcagggt cggaacagga gagcgcacga | 7620 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gggagcttcc aggggggaaac gcctggatatc tttatagtcc tgtcgggttt cgccacctct | 7680 |
| gacttgagcg tcgatttttg tgatgctcgt caggggggcg gagcctatgg aaaaacgcca   | 7740 |
| gcaacgcggc ctttttacgg ttcctggcct tttgctggcc ttttgctcac atgttctttc   | 7800 |
| ctgcgttatc ccctgattct gtggataacc gtattaccgc ctttgagtga gctgataccg   | 7860 |
| ctcgccgcag ccgaacgacc gagcgagcg agtcagtga cgaggaagcg gaaga          | 7915 |

<210> 107  
 <211> 7747  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> 1863-MVA-GFP+transgene

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| <400> 107                                                          |     |
| gcgccaata cgcaaaccgc ctctccccgc gcgttggccg attcattaat gcagctggca   | 60  |
| cgacaggttt cccgactgga aagcgggcag tgagcgcaac gcaattaatg tgagttagct  | 120 |
| cactcattag gcaccccagg ctttacactt tatgcttccg gtcgtatgt tgtgtggaat   | 180 |
| tgtgagcgga taacaatttc acacaggaaa cagctatgac catgattacg ccaagcttgc  | 240 |
| atgcatctgg aaacgggcat ctccatttaa gactagacgc cacggggttt aaaatactaa  | 300 |
| tcatgacatt ttgtagagcg taattactta gtaaaccgc cgtactaggt tcatttcctc   | 360 |
| ctcgtttgga tctcacatca gaaattaaaa taatcttaga aggatgcagt tgttttttga  | 420 |
| tggatcgtag atattcctca tcaacgaacc gagtcactag agtcacatca cgcaatccat  | 480 |
| ttaaaaatagg atcatgatgg cggccgtcaa ttagcatcca tttgatgatc actcctaaat | 540 |
| tatagaaatg atctctcaaa taacgtatat gtgtaccggg agcagatcct atatacacta  | 600 |
| cggtggcacc atctaataata ccgtgtcgct gtaacttact aagaaaaaat aattctccta | 660 |
| gtaatagttt taactgtcct tgatacggca gtttttttgc gacctcattt gcactttctg  | 720 |
| gttcgtaatc taactcatta tcaatttcct caaaatacat aaacgggtta tctaacgaca  | 780 |
| caacatccat ttttaagtat tatattaaaa tttaatcaat gtttttttt agtttttttag  | 840 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| ataaaaaata taatattatg agtcgatgta acacttttcta cacaccgatt gatacatatc  | 900  |
| attacctcct attattttcta tctcgggtttc ctcacccaat cgtttagaaa aggaagcctc | 960  |
| cttaaagcat ttcatacaca cagcagtttag ttttaccacc atttcagata atggaataag  | 1020 |
| attcaaaata ttattaaacg gtttacgttg aaatgtccca tcgagtgcgg ctactataac   | 1080 |
| taatttttcc ttcgtttgcc tacagatcct acgtactcga gcccgggata gctgacgact   | 1140 |
| accacatttg tagagggtttt acttgcttta aaaaacctcc cacacctccc cctgaacctg  | 1200 |
| aaacataaaa tgaatgcaat tgttggttgtt aacttgttta ttgcagctta taatggttac  | 1260 |
| aaataaagca atagcatcac aaatttcaca aataaagcat ttttttctact gcattctagt  | 1320 |
| tgtgggtttgt ccaaactcat caatgtatct tatcatgtct gtgagctgaa ggtacgctgt  | 1380 |
| atctcagtca gtcaagctag cttatacagg gcgtacactt tcccttctca atctctcatt   | 1440 |
| cctccttctc tctctgcatc ttggggcaaa gcagtaggtc aggcagcata tcacaaaaat   | 1500 |
| tccatttact gagattaagg taatggccca ggatgggagc aggttatcag gaaaatgctc   | 1560 |
| ttgcttggtt gtattccagt tgaaggctctg attcactctt aaatgtccat acttgatgag  | 1620 |
| acacatgaag ctgtggttgg ttgtcatatt gaaatccagt ttgctgctaa cagcatagag   | 1680 |
| ctcagtttca ggatcttggg aaactgttgt gttgatggca ttttaattctt ctccattttc  | 1740 |
| caaccaggag aggtgaggct ctggaaaacc tccagagggt gagcaaatta tccttcta     | 1800 |
| attagaagtt ggaatttcaa agtcagatat actagggtgta gggaagtcag ctttgactga  | 1860 |
| taacgtcact tcagccagggt gttcccgtt gaaagcgtct ttttcatact tcagaacaac   | 1920 |
| acactcgtat gtgccctcgt cagatgggcg cagagccagg atcacaatgg agaggttatt   | 1980 |
| agtgatatca aagatgggtcc ggttcttgta ctcgggccat atattcatgt cccagacat   | 2040 |
| catagtcagc accattttct tctccttttg ccagtagatg cgagtttggtg ccagctcttc  | 2100 |
| aacagaaaca ttgtgaccac aggacagcgt tgccacttct ttcacttcct tggtcacgtg   | 2160 |
| gataacacct gaacagaagt gagaaaagacc agccagcacc aagagctgaa agaaattgag  | 2220 |
| gtatggacac ttggatgggtg atgttccctg cctccgtgtg tggccagggtc cagggttctc | 2280 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ctccacgtct ccagcctgct tcagcaggct gaagttagta gctccgcttc cacgtggctt  | 2340 |
| cttctgccaa agcatgatga ggatgataag ggagatgatg gtgagcacca ccagggccag  | 2400 |
| gatggctgag atcaccacca ccttaaaggg caaggagtgt ggcaccacga tgacctcctg  | 2460 |
| cgtgtcctgg cccacagcat tcagatcctc ttctgagatg agtttttgtt cggatccccg  | 2520 |
| gtttatattcc aactttgtcc ccgagccgaa cgtgaatggg ttactactcc actgctggca | 2580 |
| gtaataagtg gcagcatctt cagcctccat gccgctgatt gtgagagagt aagagggtccc | 2640 |
| agaccactg cccctgaagt gagcagggac tccagaagcc agtttgatg tgtcataaat    | 2700 |
| ccatcttttg ggggaggtgc ctgacttctg ctggtaccag ttcagttaac ttacacttga  | 2760 |
| gctggcactg caggtcatgg tgaccttctc ccctggagat gcagacatga ttgctggaga  | 2820 |
| ctgagtgagc acgatatcag atccgccgcc accagatcca ccaccgccc agccaccgcc   | 2880 |
| acctgaggag actgtgagag tgggtgccttg gccccagtag tcaaggcagt aatgatcatc | 2940 |
| ataatatctt gcacagtaat agactgcaga gtcctcagat gtcaggctgc tcagttgcat  | 3000 |
| gtaggctgtg ctggaggatt tgtctgtagt caatgtggcc ttgtccttga acttctgatt  | 3060 |
| gtaattagta taaccacggc taggattaat gtatccaatc cattccagac cctgtccagg  | 3120 |
| cctctgtttt acccagtgca tcgtgtacct agtaaagggtg tagccagaag ccttgcagga | 3180 |
| catcttcaact gaggccccag gtcttgccag ttcagcccca gactgctgca gctgcacctg | 3240 |
| ggagtggaca cctgtagctg ttgctaccaa gaagaggatg atacagctcc atcccatggt  | 3300 |
| gggctcgagg cggccgcggt accggatcct acgatacaaa cttaacggat atcgcgataa  | 3360 |
| tgaaattatt tatgattatt tctcgctttc aatttaacac aaccctcaag aacctttgta  | 3420 |
| tttatatttca atttttctgc aggtcgacga agttcctata ctttctagag aataggaact | 3480 |
| tcgcagccaa gctggaattc atccactttg gataagaaat ctgcatgata aatatattga  | 3540 |
| tatcctacca cctattaaag taccattatc taatagcaat aagatagata aacaaatgtt  | 3600 |
| ttttgatgaa gttattacgt ggataaatat atatcttcag gaaaagggtg ttatgttacc  | 3660 |
| agatgatata agagaactca gagatgctat tattccttaa ctagttacgt ctcttttaggt | 3720 |

eolf-seql (2)

|                                                                      |      |
|----------------------------------------------------------------------|------|
| acttatTTTTg atacgttaca agtaaaaaaac tatcaaatat aaatggaatc tgattctaata | 3780 |
| atagcgattg aagaggatcc accggtcgcc accatgggtga gcaagggcga ggagctgttc   | 3840 |
| accgggggtgg tgcccatcct ggctcgagctg gacggcgacg taaacggcca caagttcagc  | 3900 |
| gtgtccggcg agggcgaggg cgatgccacc tacggcaagc tgaccctgaa gttcatctgc    | 3960 |
| accaccggca agctgcccgt gccctggccc accctcgtga ccaccctgac ctacggcgtg    | 4020 |
| cagtgccttca gccgctaccc cgaccacatg aagcagcacg acttcttcaa gtccgccatg   | 4080 |
| cccgaaggct acgtccagga gcgcaccatc ttcttcaagg acgacggcaa ctacaagacc    | 4140 |
| cgcgccgagg tgaagttcga gggcgacacc ctggtgaacc gcatcgagct gaagggcac     | 4200 |
| gacttcaagg aggacggcaa catcctgggg cacaagctgg agtacaacta caacagccac    | 4260 |
| aacgtctata tcatggccga caagcagaag aacggcatca aggtgaactt caagatccgc    | 4320 |
| cacaacatcg aggacggcag cgtgcagctc gccgaccact accagcagaa ccccccatc     | 4380 |
| ggcgacggcc ccgtgctgct gcccgacaac cactacctga gcaccagtc cgccctgagc     | 4440 |
| aaagacccca acgagaagcg cgatcacatg gtcctgctgg agttcgtgac cgccgccggg    | 4500 |
| atcactctcg gcatggacga gctgtacaag taaagcggcc gcgaagttcc tatactttct    | 4560 |
| agagaatagg aacttcaaca atgtctggaa agaactgtcc ttcatcgata cctatcacgg    | 4620 |
| agaaatctgt aattgattcc aagagatcac atagtttagt tgcttccaat gcttcaaaat    | 4680 |
| tattcttatc atgctccat agtcccgttc cgtatctatt atcgttagaa tattttatag     | 4740 |
| tcacgcattt atattgagct atttgataac gtctaactcg tctaattaat tctgtacttt    | 4800 |
| tacctgaaaa catggggccg attatcaact gaatatgtcc gccgttcag atgacaataa     | 4860 |
| agaattaatt attgttcact ttattcgact ttaatatatc catcacgtta gaaaatgcga    | 4920 |
| tattgcgacg aggatctatg tatctaacag gatctattgc ggtggtagct agagaggatt    | 4980 |
| cttttttgaa tcgcatcaaa ctaatcaca agtcgaaca atatccttta ttaagtttga      | 5040 |
| cccttccatc tgtaacaata gggaccttgt taaacagttt tttaaaatct tgaaagtctg    | 5100 |
| tgaattttgt caattgtctg tattcctctg aaagagattc ataacaatga cccacggctt    | 5160 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ctaatttatt ttttgattgg atcaataata ataacagaaa gtctagatat tgagtgattt  | 5220 |
| gcaatatatc agataatgaa gatttcatca tcttgactag ccaaatactt aaaaaatgaa  | 5280 |
| tcatcatctg cgaagaacat cgттаagaga tactggttgt gatccattta tgagctcgcg  | 5340 |
| aaagcttggc actggccgtc gttttacaac gtcgtgactg ggaaaaccct ggcgttacct  | 5400 |
| aacttaatcg ccttgцagca catccccctt tcgccagctg gcgтаатаgc gaagaggccc  | 5460 |
| gcaccgatcg cccttcccaa cagttgcgca gcctgaatgg cgaatggcgc ctgatgcggt  | 5520 |
| attttctcct tacgcatctg tgcggtattt cacaccgcat atggtgcact ctcagtacaa  | 5580 |
| tctgctctga tgccgcatag tтааgccagc cccgacaccc gccaacaccc gctgacgcgc  | 5640 |
| cctgacgggc ttgtctgctc ccggcatccg cttacagaca agctgtgacc gtctccggga  | 5700 |
| gctgcatgtg tcagaggttt tcaccgtcat caccgaaacg cgcgagacga aagggcctcg  | 5760 |
| tgatagcct atttttatag gttaatgtca tgataataat ggtttcttag acgtcagggtg  | 5820 |
| gcacttttcg gggaaatgtg cgcggaaccc ctatttgttt atttttctaa atacattcaa  | 5880 |
| atatgtatcc gctcatgaga caataaccct gataaatgct tcaataatat tgaaaaagga  | 5940 |
| agagtatgag tattcaacat ttccgtgtcg cccttattcc cttttttgcg gcattttgcc  | 6000 |
| ttcctgtttt tgctcaccca gaaacgctgg tgaaagtaaa agatgctgaa gatcagttgg  | 6060 |
| gtgcacgagt gggttacatc gaactggatc tcaacagcgg тааgatcctt gagagttttc  | 6120 |
| gccccgaaga acgtttttcca atgatgagca cttttaaagt tctgctatgt ggcgcggtat | 6180 |
| tatcccgtat tgacgccggg caagagcaac tcggtcgccg catacactat tctcagaatg  | 6240 |
| acttggttga gtactacca gtcacagaaa agcatcttac ggatggcatg acagтааgag   | 6300 |
| aattatgcag tgctgccata accatgagtg атааcactgc ggccaactta cttctgacaa  | 6360 |
| cgatcggagg accgaaggag cтаaccgctt ttttgacaa catgggggat catgтаactc   | 6420 |
| gccttgatcg ttgggaaccg gagctgaatg aagccatacc aaacgacgag cgtgacacca  | 6480 |
| cgatgcctgt agcaatggca аcaacgttgс gcaaactatt aactggcgaa ctacttactc  | 6540 |
| tagcttcccc gcaacaatta atagactgga tggaggcgga тааagttgca ggaccacttc  | 6600 |



eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tgcgctcggc ccttccggct ggctggttta ttgctgataa atctggagcc ggtgagcgtg  | 6660 |
| ggtctcgcgg tatcattgca gactggggc cagatggtaa gccctcccgt atcgtagtta   | 6720 |
| tctacacgac ggggagtcag gcaactatgg atgaacgaaa tagacagatc gctgagatag  | 6780 |
| gtgcctcact gattaagcat tggtaactgt cagaccaagt ttactcatat atactttaga  | 6840 |
| ttgatttaaa acttcatttt taatttaaaa ggatctaggt gaagatcctt tttgataatc  | 6900 |
| tcatgaccaa aatcccttaa cgtgagtttt cgttccactg agcgtcagac cccgtagaaa  | 6960 |
| agatcaaagg atcttcttga gatccttttt ttctgcgcgt aatctgctgc ttgcaaacaa  | 7020 |
| aaaaaccacc gctaccagcg gtggtttgtt tgccggatca agagctacca actctttttc  | 7080 |
| cgaaggtaac tggcttcagc agagcgcaga taccaaatac tgtccttcta gtgtagccgt  | 7140 |
| agttaggcca ccacttcaag aactctgtag caccgcctac atacctcgct ctgctaatcc  | 7200 |
| tgttaccagt ggctgctgcc agtggcgata agtcgtgtct taccgggttg gactcaagac  | 7260 |
| gatagttacc ggataaggcg cagcggtcgg gctgaacggg gggttcgtgc acacagccca  | 7320 |
| gcttggagcg aacgacctac accgaactga gataacctaca gcgtgagcta tgagaaagcg | 7380 |
| ccacgcttcc cgaagggaga aaggcggaca ggtatccggt aagcggcagg gtcggaacag  | 7440 |
| gagagcgcac gagggagctt ccagggggaa acgcctggta tctttatagt cctgtcgggt  | 7500 |
| ttcgccacct ctgacttgag cgtcgatttt tgtgatgctc gtcagggggg cggagcctat  | 7560 |
| ggaaaaacgc cagcaacgcg gcctttttac ggttcctggc cttttgctgg ccttttgctc  | 7620 |
| acatgttctt tcctgcgtta tcccctgatt ctgtggataa ccgtattacc gcctttgagt  | 7680 |
| gagctgatac cgctcgccgc agccgaacga ccgagcgag cgagtcagtg agcgaggaag   | 7740 |
| cggaaga                                                            | 7747 |

<210> 108

<211> 7680

<212> DNA

<213> Artificial Sequence

<220>

<223> 1864-MVA-GFP+transgene

eolf-seql (2)

<400> 108

|                                                                      |      |
|----------------------------------------------------------------------|------|
| gcgccaata cgcaaaccgc ctctccccgc gcgttggccg attcattaat gcagctggca     | 60   |
| cgacaggttt cccgactgga aagcgggcag tgagcgcaac gcaattaatg tgagttagct    | 120  |
| cactcattag gcaccccagg ctttacctt tatgcttccg gctcgtatgt tgtgtggaat     | 180  |
| tgtgagcgga taacaatttc acacaggaaa cagctatgac catgattacg ccaagcttgc    | 240  |
| atgcatctgg aaacgggcat ctccatttaa gactagatgc cacggggttt aaaatactaa    | 300  |
| tcatgacatt ttgtagagcg taattactta gtaaaccgc cgtactaggt tcatttcctc     | 360  |
| ctcgtttgga tctcacatca gaaattaaaa taatcttaga aggatgcagt tgttttttga    | 420  |
| tggatcgtag atattcctca tcaacgaacc gagtcactag agtcacatca cgcaatccat    | 480  |
| ttaaaatagg atcatgatgg cggccgtcaa ttagcatcca tttgatgatc actcctaaat    | 540  |
| tatagaaatg atctctcaaa taacgtatat gtgtaccggg agcagatcct atatacacta    | 600  |
| cgggtggcacc atctaataata ccgtgtcgct gtaacttact aagaaaaaat aattctccta  | 660  |
| gtaatagttt taactgtcct tgatacggta gtttttttgc gacctcattt gcactttctg    | 720  |
| gttcgtaatc taactcatta tcaatttcct caaaatacat aaacgggtta tctaacgaca    | 780  |
| caacatccat ttttaagtat tatattaaaa tttaatcaat gtttattttt agtttttttag   | 840  |
| ataaaaaata taatattatg agtcgatgta acactttcta cacaccgatt gatacatatc    | 900  |
| attacctcct attattttcta tctcgggtttc ctcacccaat cgttttagaaa aggaagcctc | 960  |
| cttaaagcat ttcatacaca cagcagttag ttttaccacc atttcagata atggaataag    | 1020 |
| attcaaaaata ttattaaacg gtttacgttg aaatgtccca tcgagtgcgg ctactataac   | 1080 |
| tatttttcct tcgtttgcc aacagatcct acgtactcga gcccgggata gctgacgact     | 1140 |
| accacatttg tagaggtttt acttgcttta aaaaacctcc cacacctccc cctgaacctg    | 1200 |
| aaacataaaa tgaatgcaat tggtgtgtgt aacttgttta ttgcagctta taatggttac    | 1260 |
| aaataaagca atagcatcac aaatttcaca aataaagcat ttttttcact gcattctagt    | 1320 |
| tgtggtttgt ccaaactcat caatgtatct tatcatgtct gtgagctgaa ggtacgctgt    | 1380 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| atctcagtca gtcaagctag cttatacagg gcgtacactt tcccttctca atctctcatt   | 1440 |
| cctccttctc tctctgcatc ttggggcaaa gcagtaggtc aggcagcata tcacaaaaat   | 1500 |
| tccatttact gagattaagg taatggccca ggatgggagc aggttatcag gaaaatgctc   | 1560 |
| ttgcttggtt gtattccagt tgaaggctctg attcactctt aaatgtccat acttgatgag  | 1620 |
| acacatgaag ctgtggttgg ttgtcatatt gaaatccagt ttgctgctaa cagcatagag   | 1680 |
| ctcagtttca ggatcttggg aaactgttgt gttgatggca ttttaattctt ctccattttc  | 1740 |
| caaccaggag aggtgaggct ctggaaaacc tccagagggt gagcaaatta tccttctaata  | 1800 |
| attagaagtt ggaatttcaa agtcagatat actagggtga gggaagtcag ctttgactga   | 1860 |
| taacgtcact tcagccagggt gttcccgtt gaaagcgtct ttttcatact tcagaacaac   | 1920 |
| acactcgtat gtgccctcgt cagatgggcg cagagccagg atcaccaatgg agaggttatt  | 1980 |
| agtgatatca aagatgggtc ggttcttgta ctcgggcat atattcatgt cccagacat     | 2040 |
| catagtcagc accatthttct tctccttttg ccagtagatg cgagtttggt ccagctcttc  | 2100 |
| aacagaaaca ttgtgaccac aggacagcgt tgccacttct ttcacttcct tggtcacgtg   | 2160 |
| gataacacct gaacagaagt gagaaagacc agccagcacc aagagctgaa agaaattgag   | 2220 |
| gtatggacac ttggatgggt atgttccctg cctccgtgtg tggccagggt cagggttctc   | 2280 |
| ctccacgtct ccagcctgct tcagcaggct gaagttagta gctccgcttc cacgtggctt   | 2340 |
| cttctgcaa agcatgatga ggatgataag ggagatgatg gtgagcacca ccagggccag    | 2400 |
| gatggctgag atcaccacca ccttaaaggg caaggagtgt ggcaccacga tgacctctg    | 2460 |
| cgtgtcctgg cccacagcat tcagatcctc ttctgagatg agtttttggt cggtccccg    | 2520 |
| gtttattttcc aactttgtcc ccgagccgaa cgtgaatggg ttactactcc actgctggca  | 2580 |
| gtaataagtgc gcagcatctt cagcctccat gccgctgatt gtgagagagt aagagggtccc | 2640 |
| agaccactg cccctgaagt gagcagggtg tccagaagcc agtttggtg tgatcataaat    | 2700 |
| ccatcttttg ggggagggtg ctgacttctg ctggtaccag ttcatgtaac ttacacttga   | 2760 |
| gctggcactg caggatcatgg tgaccttctc ccctggagat gcagacatga ttgctggaga  | 2820 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ctgagtgagc acgatatcag atccgccgcc accagatcca ccaccgcccg agccaccgcc  | 2880 |
| acctgaggag actgtgagag tgggtgccttg gccccagtag tcaaggcagt aatgatcatc | 2940 |
| ataatatctt gcacagtaat agactgcaga gtcctcagat gtcaggctgc tcagttgcat  | 3000 |
| gtaggctgtg ctggaggatt tgtctgtagt caatgtggcc ttgtccttga acttctgatt  | 3060 |
| gtaattagta taaccacggc taggattaat gtatccaatc cattccagac cctgtccagg  | 3120 |
| cctctgtttt acccagtgca tcgtgtacct agtaaagggtg tagccagaag ccttgcagga | 3180 |
| catcttcact gaggccccag gtcttgccag ttcagcccca gactgctgca gctgcacctg  | 3240 |
| ggagtggaca cctgtagctg ttgctaccaa gaagaggatg atacagctcc atcccatggt  | 3300 |
| gggctcgaga taaaaagcgg ccttggccga ggcgccacg cgtaggccta gatctggcct   | 3360 |
| taatggccgg atccggtacc ttattttatat tccccaaaaa aaaaataaaa tttcaatttt | 3420 |
| tacaaaaaga attcatccac tttggataag aaatctgcat gataaatata ttgatatcct  | 3480 |
| accacctatt aaagtaccat tatctaatag caataagata gataaacaaa tgttttttga  | 3540 |
| tgaagttatt acgtggataa atatatatct tcaggaaaag ggtattatgt taccagatga  | 3600 |
| tataagagaa ctgagagatg ctattattcc ttaactagtt acgtctcttt aggtacttat  | 3660 |
| tttgatacgt tacaagtaaa aaactatcaa atataaatgg aatctgattc taatatagcg  | 3720 |
| attgaagagg atccaccggt cgccaccatg gtgagcaagg gcgaggagct gttcaccggg  | 3780 |
| gtggtgcccc tcctggtcga gctggacggc gacgtaaacg gccacaagtt cagcgtgtcc  | 3840 |
| ggcgagggcg agggcgatgc cacctacggc aagctgaccc tgaagtcat ctgcaccacc   | 3900 |
| ggcaagctgc ccgtgccctg gcccaccctc gtgaccaccc tgacctacgg cgtgcagtgc  | 3960 |
| ttcagccgct accccgacca catgaagcag cacgacttct tcaagtccgc catgcccga   | 4020 |
| ggctacgtcc aggagcgcac catcttcttc aaggacgacg gcaactacaa gacccgcgcc  | 4080 |
| gaggtgaagt tcgagggcga caccctgggtg aaccgcatcg agctgaaggg catcgacttc | 4140 |
| aaggaggacg gcaacatcct ggggcacaag ctggagtaca actacaacag ccacaacgtc  | 4200 |
| tatatcatgg ccgacaagca gaagaacggc atcaagggtga acttcaagat ccgccacaac | 4260 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| atcgaggacg gcagcgtgca gctcgccgac cactaccagc agaacacccc catcggcgac  | 4320 |
| ggccccgtgc tgctgcccga caaccactac ctgagcaccc agtccgccct gagcaaagac  | 4380 |
| cccaacgaga agcgcgatca catggtcctg ctggagttcg tgaccgccgc cgggatcact  | 4440 |
| ctcggcatgg acgagctgta caagtaaagc ggccgcgaag ttcctatact ttctagagaa  | 4500 |
| taggaacttc aacaatgtct ggaaagaact gtccttcac gataacctatc acggagaaat  | 4560 |
| ctgtaattga ttccaagaca tcacatagtt tagttgcttc caatgcttca aaattattct  | 4620 |
| tatcatgcgt ccatagtccc gttccgtatc tattatcggt agaatatattt atagtcacgc | 4680 |
| atttatattg agctatttga taacgtctaa ctcgtctaata taattctgta cttttacctg | 4740 |
| aaaacatggg gccgattatc aactgaatat gtccgccgtt catgatgaca ataaagaatt  | 4800 |
| aattattgtt cactttattc gactttaata tatccatcac gttagaaaat gcgatatcgc  | 4860 |
| gacgaggatc tatgtatcta acaggatcta ttgcgggtgg agctagagct gattcttttt  | 4920 |
| tgaatcgcat caaactaatc acaaagtcga acaaatatcc tttattaagt ttgacccttc  | 4980 |
| catctgtaac aatagggacc ttgttaaaca gttttttaaa atcttgagag tctgtgaatt  | 5040 |
| ttgtcaattg tctgtattcc tctgaaagag attcataaca atgaccacg gcttctaatt   | 5100 |
| tattttttga ttggatcaat aataataaca gaaagtctag atattgagtg atttgcaata  | 5160 |
| tatcagataa tgaagattca tcatcttgac tagccaaata cttaaaaaat gaatcatcat  | 5220 |
| ctgcgaagaa catcgttaag agatactggg tgtgatccat ttatgagctc gcgaaagctt  | 5280 |
| ggcactggcc gtcgttttac aacgtcgtga ctgggaaaac cctggcgta cccaacttaa   | 5340 |
| tcgccttgca gcacatcccc ctttcgccag ctggcgtaat agcgaagagg cccgcaccga  | 5400 |
| tcgcccttcc caacagttgc gcagcctgaa tggcgaatgg cgcctgatgc ggtattttct  | 5460 |
| ccttacgcat ctgtgcggta tttcacaccg catatgggtgc actctcagta caatctgctc | 5520 |
| tgatgccgca tagttaagcc agccccgaca cccgccaaca cccgctgacg cgccctgacg  | 5580 |
| ggcttgtctg ctcccgcat ccgcttacag acaagctgtg accgtctccg ggagctgcat   | 5640 |
| gtgtcagagg ttttcaccgt catcaccgaa acgcgcgaga cgaaagggcc tcgtgatacg  | 5700 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| cctatTTTTta taggttaatg tcatgataat aatggTTTTct tagacgtcag gtggcacttt | 5760 |
| tcggggaaaat gtgcgcggaa cccctatttg tttatTTTTc taaatacatt caaatatgta  | 5820 |
| tccgctcatg agacaataac cctgataaat gcttcaataa tattgaaaaa ggaagagtat   | 5880 |
| gagtattcaa catttccgtg tcgcccttat tccctTTTTt gcggcatttt gccttcctgt   | 5940 |
| ttttgctcac ccagaaacgc tggtgaaaagt aaaagatgct gaagatcagt tgggtgcacg  | 6000 |
| agtgggttac atcgaactgg atctcaacag cggtaagatc cttgagagtt ttcgccccga   | 6060 |
| agaacgtttt ccaatgatga gcacttttaa agttctgcta tgtggcgcgg tattatccccg  | 6120 |
| tattgacgcc gggcaagagc aactcggtcg ccgcatacac tattctcaga atgacttggt   | 6180 |
| tgagtactca ccagtcacag aaaagcatct tacggatggc atgacagtaa gagaattatg   | 6240 |
| cagtgctgcc ataaccatga gtgataacac tgccggccaac ttacttctga caacgatcgg  | 6300 |
| aggaccgaag gagctaaccg cttttttgca caacatgggg gatcatgtaa ctcgccttga   | 6360 |
| tcgttgggaa ccggagctga atgaagccat accaaacgac gagcgtgaca ccacgatgcc   | 6420 |
| tgtagcaatg gcaacaacgt tgcgcaaact attaactggc gaactactta ctctagcttc   | 6480 |
| ccggcaacaa ttaatagact ggatggaggc ggataaagtt gcaggaccac ttctgcgctc   | 6540 |
| ggcccttccg gctggctggt ttattgctga taaatctgga gccggtgagc gtgggtctcg   | 6600 |
| cggtatcatt gcagcactgg ggccagatgg taagccctcc cgtatcgtag ttatctacac   | 6660 |
| gacggggagt caggcaacta tggatgaacg aaatagacag atcgctgaga taggtgcctc   | 6720 |
| actgattaag cattggtaac tgtcagacca agtttactca tatatacttt agattgattt   | 6780 |
| aaaacttcat ttttaattta aaaggatcta ggtgaagatc ctttttgata atctcatgac   | 6840 |
| caaaatccct taacgtgagt tttcgttcca ctgagcgtca gaccccgtag aaaagatcaa   | 6900 |
| aggatcttct tgagatcctt tttttctgcg cgtaatctgc tgcttgcaaa caaaaaaacc   | 6960 |
| accgctacca gcggtggttt gtttgccgga tcaagagcta ccaactcttt ttccgaaggt   | 7020 |
| aactggcttc agcagagcgc agataccaaa tactgtcctt ctagtgtagc cgtagttagg   | 7080 |
| ccaccacttc aagaactctg tagcaccgcc tacatacctc gctctgctaa tcctgttacc   | 7140 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| agtggctgct gccagtggcg ataagtcgtg tcttaccggg ttggactcaa gacgatagtt  | 7200 |
| accggataag ggcgagcggg cgggctgaac ggggggttcg tgcacacagc ccagcttgga  | 7260 |
| gcgaacgacc tacaccgaac tgagatacct acagcgtgag ctatgagaaa gcgccacgct  | 7320 |
| tcccgaaggg agaaaggcgg acaggtatcc ggtaagcggc agggctcggaa caggagagcg | 7380 |
| cacgagggag cttccagggg gaaacgcctg gtatctttat agtcctgtcg ggtttcgcca  | 7440 |
| cctctgactt gagcgtcgat ttttgtgatg ctcgtcaggg gggcggagcc tatggaaaaa  | 7500 |
| cgccagcaac gcggcctttt tacggttcct ggctttttgc tggccttttg ctcacatgtt  | 7560 |
| ctttcctgcg ttatccccctg attctgtgga taaccgtatt accgcctttg agtgagctga | 7620 |
| taccgctcgc cgagccgaa cgaccgagcg cagcgagtca gtgagcgagg aagcggaaga   | 7680 |

<210> 109

<211> 664

<212> DNA

<213> Artificial Sequence

<220>

<223> CMV promoter

<400> 109

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| agtaatcaat tacgggggtca ttagttcata gcccataat ggagttccgc gttacataac  | 60  |
| ttacggtaaa tggcccgctt ggctgaccgc ccaacgaccc ccgcccattg acgtcaataa  | 120 |
| tgacgtatgt tcccatagta acgccaatag ggactttcca ttgacgtcaa tgggtggagt  | 180 |
| atttacggta aactgcccac ttggcagtac atcaagtgtg tcatatgcca agtacgcccc  | 240 |
| ctattgacgt caatgacggt aaatggcccc cctggcatta tgcccagtac atgaccttat  | 300 |
| gggactttcc tacttggcag tacatctacg tattagtcac cgctattacc atgctgatgc  | 360 |
| ggttttggca gtacatcaat gggcgtggat agcggtttga ctcacgggga tttccaagtc  | 420 |
| tccaccccat tgacgtcaat gggagtttgt tttggcacca aaatcaacgg gactttccaa  | 480 |
| aatgtcgtaa caactccgcc ccattgacgc aaatgggcgg taggcgtgta cgggtgggagg | 540 |
| tctatataag cagagctggg ttagtgaacc gtcagatcag atctttgtcg atcctaccat  | 600 |

eolf-seql (2)

|                                                                  |     |
|------------------------------------------------------------------|-----|
| ccactcgaca caccgccag cggccgctgc caagcttccg agctctcgaa ttcaaaggag | 660 |
| gtac                                                             | 664 |

<210> 110  
 <211> 36245  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Ad5-348 Genome

|                                                                                |      |
|--------------------------------------------------------------------------------|------|
| <400> 110<br>catcatcaat aatatacctt attttggatt gaagccaata tgataatgag ggggtggagt | 60   |
| ttgtgacgtg gcgcggggcg tgggaacggg gcgggtgacg tagtagtgtg gcggaagtgt              | 120  |
| gatgttgcaa gtgtggcgga acacatgtaa gcgacggatg tggcaaaagt gacgtttttg              | 180  |
| gtgtgcgccg gtgtacacag gaagtgacaa ttttcgcgcg gttttaggcg gatgttgtag              | 240  |
| taaatttggg cgtaaccgag taagatttgg ccattttcgc gggaaaactg aataagagga              | 300  |
| agtgaatct gaataatttt gtgttactca tagcgcgtaa tatttgtcta gggccgcggg               | 360  |
| gactttgacc gtttacgtgg agactcgccc aggtgttttt ctcaggtgtt ttccgcgttc              | 420  |
| cgggtcaaag ttggcgtttt attattatag tcagctgacg ttagtgttat ttatacccg               | 480  |
| tgagttcctc aagaggccac tcttgagtg cagcgagtag agttttctcc tccgagccgc               | 540  |
| tccgacaccg ggactgaaaa tgagacatat tatctgccac ggaggtgtta ttaccgaaga              | 600  |
| aatggccgcc agtcttttgg accagctgat cgaagaggta ctggctgata atcttccacc              | 660  |
| tcctagccat tttgaaccac ctacccttca cgaactgtat gatttagacg tgacggcccc              | 720  |
| cgaagatccc aacgaggagg cggtttcgca gatttttccc gactctgtaa tgttggcggt              | 780  |
| gcaggaaggg attgacttac tcaactttcc gccggcgccc ggttctccgg agccgcctca              | 840  |
| cctttcccgg cagcccgagc agccggagca gagagccttg ggtccggttt ctatgcaaaa              | 900  |
| ccttgtaccg gaggtgatcg atcttacctg ccacgaggct ggctttccac ccagtacga               | 960  |
| cgaggatgaa gaggggtgagg agtttgtgtt agattatgtg gagcaccgcc ggacgggtt              | 1020 |



eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| caggtcttgt cattatcacc ggaggaatac gggggaccca gatattatgt gttcgctttg  | 1080 |
| ctatatgagg acctgtggca tgtttgtcta cagtaagtga aaattatggg cagtgggtga  | 1140 |
| tagagtgggtg ggtttgggtg ggtaattttt tttttaattt ttacagtttt gtggtttaaa | 1200 |
| gaattttgta ttgtgatttt tttaaaaggt cctgtgtctg aacctgagcc tgagcccag   | 1260 |
| ccagaaccgg agcctgcaag acctacccgc cgtcctaaaa tggcgcctgc tatcctgaga  | 1320 |
| cgcccgacat cacctgtgtc tagagaatgc aatagtagta cggatagctg tgactccggt  | 1380 |
| ccttctaaca cacctcctga gatacacccg gtgggtcccg tgtgccccat taaaccagtt  | 1440 |
| gccgtgagag ttggtgggcg tcgccaggct gtggaatgta tcgaggactt gcttaacgag  | 1500 |
| cctgggcaac ctttggactt gagctgtaaa cgccccaggc cataaggtgt aaacctgtga  | 1560 |
| ttgcgtgtgt ggtaacgcc tttgtttgct gaatgagttg atgtaagttt aataaagggt   | 1620 |
| gagataatgt ttaacttgca tggcgtgtta aatggggcgg ggcttaaagg gtatataatg  | 1680 |
| cgccgtgggc taatcttggg tacatctgac ctcatggagg cttgggagtg tttggaagat  | 1740 |
| ttttctgctg tgcgtaactt gctggaacag agctctaaca gtacctcttg gttttggagg  | 1800 |
| tttctgtggg gctcatccca ggcaaagtta gtctgcagaa ttaaggagga ttacaagtgg  | 1860 |
| gaatttgaag agcttttgaa atcctgtggt gagctgtttg attctttgaa tctgggtcac  | 1920 |
| caggcgcttt tccaagagaa ggtcatcaag actttggatt tttccacacc ggggcgcgct  | 1980 |
| gcggctgctg ttgctttttt gagttttata aaggataaat ggagcgaaga aacctatctg  | 2040 |
| agcgggggggt acctgctgga ttttctggcc atgcatctgt ggagagcggg tgtgagacac | 2100 |
| aagaatcgcc tgctactgtt gtcttccgtc cgcccgcgga taataccgac ggaggagcag  | 2160 |
| cagcagcagc aggaggaagc caggcggcgg cggcaggagc agagcccatg gaacccgaga  | 2220 |
| gccggcctgg accctcggga atgaatgttg tacagggtggc tgaactgtat ccagaactga | 2280 |
| gacgcatttt gacaattaca gaggatgggc aggggctaaa gggggtaaag agggagcggg  | 2340 |
| gggcttgtga ggctacagag gaggctagga atctagcttt tagcttaatg accagacacc  | 2400 |
| gtcctgagtg tattactttt caacagatca aggataattg cgctaagtag cttgatctgc  | 2460 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| tggcgcagaa gtattccata gagcagctga ccacttactg gctgcagcca ggggatgatt   | 2520 |
| ttgaggaggc tattagggta tatgcaaagg tggcacttag gccagattgc aagtacaaga   | 2580 |
| tcagcaaaact tgtaaataatc aggaattgtt gctacatttc tgggaacggg gccgaggtgg | 2640 |
| agatagatac ggaggatagg gtggccttta gatgtagcat gataaatatg tggccggggg   | 2700 |
| tgcttggcat ggacgggggtg gttattatga atgtaagggt tactggcccc aatttttagcg | 2760 |
| gtacggttttt cctggccaat accaacctta tcctacacgg tgtaagcttc tatgggttta  | 2820 |
| acaataacctg tgtggaagcc tggaccgatg taagggttcg gggctgtgcc ttttactgct  | 2880 |
| gctggaaggg ggtggtgtgt cgcacaaaaa gcagggttc aattaagaaa tgcctctttg    | 2940 |
| aaaggtgtac cttgggtatc ctgtctgagg gtaactccag ggtgcgccac aatgtggcct   | 3000 |
| ccgactgtgg ttgcttcatg ctagtgaaaa gcgtggctgt gattaagcat aacatggtat   | 3060 |
| gtggcaactg cgaggacagg gcctctcaga tgctgacctg ctcggacggc aactgtcacc   | 3120 |
| tgctgaagac cattcacgta gccagccact ctcgcaaggc ctggccagt tttgagcata    | 3180 |
| acatactgac ccgctgttcc ttgcatttgg gtaacaggag gggggtgttc ctaccttacc   | 3240 |
| aatgcaattt gagtcacact aagatattgc ttgagcccga gagcatgtcc aaggtgaacc   | 3300 |
| tgaacgggggt gtttgacatg accatgaaga tctggaaggt gctgaggtac gatgagaccc  | 3360 |
| gcaccagggtg cagaccctgc gagtgtggcg gtaaaccatat taggaaccag cctgtgatgc | 3420 |
| tggatgtgac cgaggagctg aggcccgatc acttggtgct ggcctgcacc cgcgctgagt   | 3480 |
| ttggctctag cgatgaagat acagattgag gtactgaaat gtgtgggcgt ggcttaaggg   | 3540 |
| tgggaaagaa tatataaggt gggggcttta tgtagttttg tatctgtttt gcagcagccg   | 3600 |
| ccgccgcat gagcaccaac tcgtttgatg gaagcattgt gagctcatat ttgacaacgc    | 3660 |
| gcatgcccc atgggccggg gtgcgtcaga atgtgatggg ctccagcatt gatggtcgcc    | 3720 |
| ccgtcctgcc cgcaaaactct actaccttga cctacgagac cgtgtctgga acgccgttgg  | 3780 |
| agactgcagc ctccgccgcc gcttcagccg ctgcagccac cggccgagg attgtgactg    | 3840 |
| actttgcttt cctgagcccc cttgcaagca gtgcagcttc ccgttcatcc gcccgcgatg   | 3900 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| acaagttgac ggctcttttg gcacaattgg attctttgac ccgggaactt aatgtcgttt   | 3960 |
| ctcagcagct gttggatctg cgccagcagg tttctgccct gaaggcttcc tcccctcca    | 4020 |
| atgcggttta aaacataaat aaaaaaccag actctgtttg gatttggatc aagcaagtgt   | 4080 |
| cttgctgtct ttatttaggg gttttgcgcg cgcggtaggc ccgggaccag cggctctcgg   | 4140 |
| cgttgagggt cctgtgtatt ttttccagga cgtggtaaag gtgactctgg atgttcagat   | 4200 |
| acatgggcat aagcccgtct ctgggggtgga ggtagcacca ctgcagagct tcatgctgcg  | 4260 |
| gggtggtggt gtagatgac cagtcgtagc aggagcgctg ggcgtggtgc ctaaaaatgt    | 4320 |
| ctttcagtag caagctgatt gccaggggca ggcccttggt gtaagtgttt acaaagcgg    | 4380 |
| taagctggga tgggtgcata cgtggggata tgagatgcat cttggactgt atttttaggt   | 4440 |
| tggctatggt cccagccata tccctccggg gattcatggt gtgcagaacc accagcacag   | 4500 |
| tgtatccggt gcacttggga aatttgtcat gtagcttaga aggaaatgcg tggaagaact   | 4560 |
| tggagacgcc cttgtgacct ccaagatfff ccatgcattc gtccataatg atggcaatgg   | 4620 |
| gcccacgggc ggcggcctgg gcgaagatat ttctgggac actaacgtca tagttgtgtt    | 4680 |
| ccaggatgag atcgatcatag gccattttta caaagcgcg gcggagggtg ccagactgcg   | 4740 |
| gtataatggt tccatccggc ccaggggctg agttaccctc acagatttgc atttcccacg   | 4800 |
| ctttgagttc agatgggggg atcatgtcta cctgcggggc gatgaagaaa acggtttccg   | 4860 |
| gggtagggga gatcagctgg gaagaaagca ggttcctgag cagctgcgac ttaccgcagc   | 4920 |
| cggtagggccc gtaaatacaca cctattaccg gctgcaactg gtagttaaga gagctgcagc | 4980 |
| tgccgtcatc cctgagcagg ggggccactt cgtaaagcat gtccctgact cgcatgtttt   | 5040 |
| ccctgaccaa atccgccaga aggcgctcgc cgcccagcga tagcagttct tgcaaggaag   | 5100 |
| caaagttttt caacggtttg agaccgtccg ccgtaggcat gcttttgagc gtttgaccaa   | 5160 |
| gcagttccag gcggtccac agctcgggtca cctgctctac ggcatctcga tccagcatat   | 5220 |
| ctcctcgttt cgcggttg ggcggtttt gctgtacggc agtagtcggg gctcgtccag      | 5280 |
| acgggccagg gtcatgtctt tccacgggcg cagggtcctc gtcagcgtag tctgggtcac   | 5340 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ggtgaagggg tgcgctccgg gctgcgcgct ggccagggtg cgcttgaggc tggtcctgct  | 5400 |
| ggtgctgaag cgctgccggg cttcgccctg cgcgtcggcc aggtagcatt tgaccatggt  | 5460 |
| gtcatagtcc agccccctccg cggcgtggcc cttggcgcgc agcttgccct tggaggaggc | 5520 |
| gccgcacgag gggcagtgca gacttttgag ggcgtagagc ttgggcgcga gaaataccga  | 5580 |
| ttccggggag taggcatccg cgccgcaggc cccgcagacg gtctcgcatt ccacgagcca  | 5640 |
| ggtgagctct ggccgttcgg ggtcaaaaac caggtttccc ccatgctttt tgatgcgttt  | 5700 |
| cttacctctg gtttccatga gccggtgtcc acgctcgggtg acgaaaaggc tgtccgtgtc | 5760 |
| cccgtataca gacttgagag gcctgtcctc gagcgggtgtt ccgcggtcct cctcgtatag | 5820 |
| aaactcggac cactctgaga caaaggctcg cgtccaggcc agcacgaagg aggctaagtg  | 5880 |
| ggaggggtag cggtcgttgt ccactagggg gtccactcgc tccagggtgt gaagacacat  | 5940 |
| gtcgccctct tcggcatcaa ggaagggtgat tggttttag gtgtaggcca cgtgaccggg  | 6000 |
| tgttcctgaa ggggggctat aaaagggggg gggggcgcgt tcgtcctcac tctcttccgc  | 6060 |
| atcgctgtct gcgagggccca gctgttgggg tgagtactcc ctctgaaaag cgggcatgac | 6120 |
| ttctgcgcta agattgtcag tttccaaaaa cgaggaggat ttgatattca cctggcccgc  | 6180 |
| ggtgatgcct ttgagggtgg ccgcatccat ctggtcagaa aagacaatct ttttgttgtc  | 6240 |
| aagcttggtg gcaaacgacc cgtagagggc gttggacagc aacttggcga tggagcgag   | 6300 |
| ggtttggttt ttgtcgcgat cggcgcgctc cttggccgcg atgttttagct gcacgtattc | 6360 |
| gcgcgcaacg caccgccatt cgggaaagac ggtgggtgcgc tcgtcgggca ccagggtcac | 6420 |
| gcgccaaccg cggttggtgca gggtgacaag gtcaacgctg gtggctacct ctccgcgtag | 6480 |
| gcgctcgttg gtccagcaga ggccggccgcc cttgcgcgag cagaatggcg gtagggggtc | 6540 |
| tagctgcgtc tcgtccgggg ggtctgcgtc cacggtaaag accccgggca gcaggcgcgc  | 6600 |
| gtcgaagtag tctatcttgc atccttgcaa gtctagcgcc tgctgccatg cgcgggcggc  | 6660 |
| aagcgcgcgc tcgtatgggt tgagtggggg accccatggc atgggggtggg tgagcgcgga | 6720 |
| ggcgtacatg ccgcaaagtgt cgtaaacgta gaggggctct ctgagtattc caagatatgt | 6780 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| agggtagcat cttccaccgc ggatgctggc ggcacacgtaa tcgtatagtt cgtgcgaggg  | 6840 |
| agcgaggagg tcgggaccga ggttgctacg ggcgggctgc tctgctcgga agactatctg   | 6900 |
| cctgaagatg gcatgtgagt tggatgatat ggttggacgc tggaaagacgt tgaagctggc  | 6960 |
| gtctgtgaga cctaccgcgt cacgcacgaa ggaggcgtag gagtcgcgca gcttggtgac   | 7020 |
| cagctcggcg gtgacctgca cgtctagggc gcagtagtcc agggtttcct tgatgatgtc   | 7080 |
| atacttatcc tgtccctttt ttttccacag ctcgcggttg aggacaaact cttcgcggtc   | 7140 |
| tttccagtac tcttgatcg gaaacccgtc ggcctccgaa cggtaagagc ctagcatgta    | 7200 |
| gaactggttg acggcctggg aggcgcagca tcccttttct acgggtagcg cgtatgcctg   | 7260 |
| cgcggccttc cggagcgagg tgtgggtgag cgcaaagggtg tccctgacca tgactttgag  | 7320 |
| gtactgggtat ttgaagtcag tgctgctgca tccgccctgc tcccagagca aaaagtccgt  | 7380 |
| gcgctttttg gaacgcggat ttggcagggc gaagggtgaca tcgttgaaga gtatctttcc  | 7440 |
| cgcgcgaggc ataaaagttgc gtgtgatgcg gaagggtccc ggcacctcgg aacggttggt  | 7500 |
| aattacctgg gcggcgagca cgatctcgtc aaagccgttg atgttggtggc ccacaatgta  | 7560 |
| aagttccaag aagcgcggga tgcccttgat ggaaggcaat tttttaagtt cctcgtaggt   | 7620 |
| gagctcttca ggggagctga gcccgtgctc tgaaagggcc cagtctgcaa gatgagggtt   | 7680 |
| ggaagcgacg aatgagctcc acaggtcacg ggccattagc atttgaggtt ggctcgcaaa   | 7740 |
| ggctcctaaac tggcgacctg tggccatttt ttctgggggtg atgcagtaga aggtaagcgg | 7800 |
| gtcttggtcc cagcgggtccc atccaagggt cgcggctagg tctcgcgcgg cagtcactag  | 7860 |
| aggctcatct ccgccgaact tcatgaccag catgaagggc acgagctgct tcccaaaggc   | 7920 |
| ccccatccaa gtataggtct ctacatcgta ggtgacaaaag agacgctcgg tgcgaggatg  | 7980 |
| cgagccgatc gggaagaact ggatctcccc ccaccaattg gaggagtggc tattgatgtg   | 8040 |
| gtgaaagtag aagtccctgc gacgggccga acactcgtgc tggcttttgt aaaaacgtgc   | 8100 |
| gcagtactgg cagcgggtgca cgggctgtac atcctgcacg aggttgacct gacgaccgcg  | 8160 |
| cacaaggaag cagagtggga atttgagccc ctcgcctggc gggtttggct ggtgggtcttc  | 8220 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tacttcggct gcttgtcctt gaccgtctgg ctgctcgagg ggagttacgg tggatcggac  | 8280 |
| caccacgccg cgcgagccca aagtccagat gtccgcgcgc gccggtcgga gcttgatgac  | 8340 |
| aacatcgcg agatgggagc tgtccatggc ctggagctcc cgcggcgctca ggtcaggcgg  | 8400 |
| gagctcctgc aggtttacct cgcatagacg ggtcagggcg cgggctagat ccagggtgata | 8460 |
| cctaatttcc aggggctggc tggcggcgcc gtcgatggct tgcaagaggc cgcacccccg  | 8520 |
| cggcgcgact acggtaccgc gcggcgggcg gtggcccgcg ggggtgtcct tggatgatgc  | 8580 |
| atctaaaagc ggtgacgcgg gcgagcccc ggaggtaggg ggggctccgg acccgccggg   | 8640 |
| agagggggca ggggcacgtc ggccgcgcgc gcgggcagga gctggtgctg cgcgcgtagg  | 8700 |
| ttgctggcga acgcgacgac gcggcggttg atctcctgaa tctggcgctt ctgcgtgaag  | 8760 |
| acgacgggcc cggtagctt gaacctgaaa gagagttcga cagaatcaat ttcggtgtcg   | 8820 |
| ttgacggcgg cctggcgcaa aatctcctgc acgtctcctg agttgtcttg ataggcgatc  | 8880 |
| tcggccatga actgctgat ctcttcctcc tggagatctc cgcgtccggc tcgctccacg   | 8940 |
| gtggcggcga ggtcgttga aatgcgggcc atgagctgcg agaaggcggt gaggcctccc   | 9000 |
| tcgttccaga cgcggctgta gaccacgccc ctttcggcat cgcggcgcg catgaccacc   | 9060 |
| tgcgcgagat tgagctccac gtgccgggcg aagacggcgt agtttcgcag gcgctgaaag  | 9120 |
| aggtagttga gggcgtggc ggtgtgttct gccacgaaga agtacataac ccagcgtcgc   | 9180 |
| aacgtggatt cgttgatata cccaaggcc tcaaggcgct ccatggcctc gtagaagtcc   | 9240 |
| acggcgaagt tgaaaaactg ggagttgcgc gccgacacgg ttaactcctc ctccagaaga  | 9300 |
| cggatgagct cggcgacagt gtcgcgcacc tcgcgtcaa aggctacagg ggcctcttct   | 9360 |
| tcttcttcaa tctcctcttc cataagggcc tccccttctt cttcttcttg cggcggcggg  | 9420 |
| ggagggggga cacggcggcg acgacggcg accgggaggc ggtcgacaaa gcgctcgatc   | 9480 |
| atctccccgc ggcgacggcg catggtctcg gtgacggcg gcccgttctc gcggggcgcg   | 9540 |
| agttggaaga cgccgccgt catgtcccgg ttatgggttg gcggggggct gccatgcggc   | 9600 |
| agggatacgg cgctaacgat gcatctcaac aattgttgtg taggtactcc gccgccgagg  | 9660 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gacctgagcg agtccgcatc gaccggatcg gaaaacctct cgagaaaggc gtctaaccag  | 9720  |
| tcacagtcgc aaggtaggct gagcaccgtg gcgggcggca gcgggcggcg gtcgggggttg | 9780  |
| tttctggcgg aggtgctgct gatgatgtaa ttaaagtagg cggctcttgag acggcggatg | 9840  |
| gtcgacagaa gcaccatgtc cttgggtccg gcctgctgaa tgcgcaggcg gtcggccatg  | 9900  |
| ccccaggctt cgttttgaca tcggcgcagg tctttgtagt agtcttgcat gagcctttct  | 9960  |
| accggcactt cttcttctcc ttctctttgt cctgcatctc ttgcatctat cgctgcggcg  | 10020 |
| gcggcggagt ttggccgtag gtggcgccct cttcctcca tgcgtgtgac cccgaagccc   | 10080 |
| ctcatcggct gaagcaggcg taggtcggcg acaacgcgct cggctaatat ggctgctgc   | 10140 |
| acctgcgtga gggtagactg gaagtcaccc atgtccacaa agcggtggtg tgcgcccgtg  | 10200 |
| ttgatggtgt aagtgcagtt ggccataacg gaccagttaa cggctctggtg acccggctgc | 10260 |
| gagagctcgg tgtacctgag acgcgagtaa gccctcgagt caaatacgta gtcgttgcaa  | 10320 |
| gtccgcacca ggtactggtg tcccacaaaa aagtgcggcg gcggctggcg gtagaggggc  | 10380 |
| cagcgtaggg tggccggggc tccgggggcg agatcttcca acataaggcg atgatatccg  | 10440 |
| tagatgtacc tggacatcca ggtgatgccg gcggcgggtg tggaggcgcg cggaaagtcg  | 10500 |
| cggacgcggt tccagatgtt gcgcagcggc aaaaagtgtc ccatggtcgg gacgctctgg  | 10560 |
| ccggtcaggc gcgcgcaatc gttgacgctc tagaccgtgc aaaaggagag cctgtaagcg  | 10620 |
| ggcactcttc cgtggctctgg tggataaatt cgcaagggtg tcatggcgga cgaccggggt | 10680 |
| tcgagccccg tatccggccg tccgccgtga tccatgcggt taccgcccgc gtgtcgaacc  | 10740 |
| cagggtgtcg acgtcagaca acgggggagt gtcctttttg gcttccttcc aggcgcggcg  | 10800 |
| gctgctgcgc tagctttttt ggccactggc gcgcgcgagc gtaagcggtt aggctggaaa  | 10860 |
| gcgaaagcat taagtggctc gctccctgta gccggagggt tattttccaa gggttgagtc  | 10920 |
| gcgggacccc cggttcgagt ctcggaaccg ccggactgcg gcgaacgggg gtttgcctcc  | 10980 |
| ccgtcatgca agaccccgt tgcaaatcc tccggaaaca gggacgagcc ctttttttgc    | 11040 |
| ttttcccaga tgcatccggt gctgcggcag atgcgcccc ctcctcagca gcggcaagag   | 11100 |

eolf-seql (2)

|            |             |             |            |            |            |       |
|------------|-------------|-------------|------------|------------|------------|-------|
| caagagcagc | ggcagacatg  | cagggcaccc  | tcccctctc  | ctaccgcgtc | aggaggggcg | 11160 |
| acatccgcgg | ttgacgcggc  | agcagatggg  | gattacgaac | ccccgcggcg | ccgggcccgg | 11220 |
| cactacctgg | acttgaggga  | gggcgagggc  | ctggcgcggc | taggagcgcc | ctctcctgag | 11280 |
| cggcacccaa | gggtgcagct  | gaagcgtgat  | acgcgtgagg | cgtacgtgcc | gcggcagaac | 11340 |
| ctgtttcgcg | accgcgaggg  | agaggagccc  | gaggagatgc | gggatcgaaa | gttccacgca | 11400 |
| gggcgcgagc | tgcggcatgg  | cctgaatcgc  | gagcggttgc | tgcgcgagga | ggactttgag | 11460 |
| cccgacgcgc | gaaccgggat  | tagtcccgcg  | cgcgcacacg | tggcggccgc | cgacctggta | 11520 |
| accgcatacg | agcagacggg  | gaaccaggag  | attaactttc | aaaaaagctt | taacaaccac | 11580 |
| gtgcgtacgc | ttgtggcgcg  | cgaggagggtg | gctataggac | tgatgcatct | gtgggacttt | 11640 |
| gtaagcgcg  | tggagcaaaa  | cccaaatagc  | aagccgctca | tggcgcagct | gttccttata | 11700 |
| gtgcagcaca | gcaggggacaa | cgaggcattc  | agggatgcgc | tgctaaacat | agtagagccc | 11760 |
| gagggccgct | ggctgctcga  | tttgataaac  | atcctgcaga | gcatagtggg | gcaggagcg  | 11820 |
| agcttgagcc | tggctgacaa  | ggtggccgcc  | atcaactatt | ccatgcttag | cctgggcaag | 11880 |
| ttttacgccc | gcaagatata  | ccatacccct  | tacgttccca | tagacaagga | ggtaaagatc | 11940 |
| gaggggttct | acatgcgcat  | ggcgctgaag  | gtgcttacct | tgagcgacga | cctgggcgtt | 12000 |
| tatcgcaacg | agcgcatcca  | caaggccgtg  | agcgtgagcc | ggcggcgcg  | gctcagcgac | 12060 |
| cgcgagctga | tgcacagcct  | gcaaagggcc  | ctggctggca | cgggcagcgg | cgatagagag | 12120 |
| gccgagtcct | actttgacgc  | gggcgctgac  | ctgcgctggg | ccccaagccg | acgcgccctg | 12180 |
| gaggcagctg | gggccggacc  | tgggctggcg  | gtggcacccg | cgcgcgctgg | caacgtcggc | 12240 |
| ggcgtggagg | aatatgacga  | ggacgatgag  | tacgagccag | aggacggcga | gtactaagcg | 12300 |
| gtgatgtttc | tgatcagatg  | atgcaagacg  | caacggaccc | ggcgggtcgg | gcggcgctgc | 12360 |
| agagccagcc | gtccggcctt  | aactccacgg  | acgactggcg | ccaggtcatg | gaccgcatca | 12420 |
| tgctgctgac | tgcgcgcaat  | cctgacgcgt  | tccggcagca | gccgcaggcc | aaccggctct | 12480 |
| ccgcaattct | ggaagcgggtg | gtcccggcgc  | gcgcaaacc  | cacgcacgag | aaggtgctgg | 12540 |



eolf-seql (2)

|            |             |             |             |             |             |       |
|------------|-------------|-------------|-------------|-------------|-------------|-------|
| cgatcgtaaa | cgcgctggcc  | gaaaacaggg  | ccatccggcc  | cgacgaggcc  | ggcctggtct  | 12600 |
| acgacgcgct | gcttcagcgc  | gtggctcggt  | acaacagcgg  | caacgtgcag  | accaacctgg  | 12660 |
| accggctggt | gggggatgtg  | cgcgaggccg  | tggcgcagcg  | tgagcgcgcg  | cagcagcagg  | 12720 |
| gcaacctggg | ctccatgggt  | gcactaaacg  | ccttcctgag  | tacacagccc  | gccaacgtgc  | 12780 |
| cgcggggaca | ggaggactac  | accaactttg  | tgagcgcaact | gcggctaata  | gtgactgaga  | 12840 |
| caccgcaaag | tgagggtgtac | cagtctgggc  | cagactatctt | tttccagacc  | agtagacaag  | 12900 |
| gcctgcagac | cgtaaacctg  | agccaggcct  | tcaaaaactt  | gcaggggctg  | tgggggggtgc | 12960 |
| gggctccac  | aggcgaccgc  | gcgaccgtgt  | ctagcttgct  | gacgcccac   | tcgcgcctgt  | 13020 |
| tgctgctgct | aatagcgcgc  | ttcacggaca  | gtggcagcgt  | gtcccgggac  | acatacctag  | 13080 |
| gtcacttgct | gacactgtac  | cgcgaggcca  | taggtcaggc  | gcatgtggac  | gagcatactt  | 13140 |
| tccaggagat | tacaagtgtc  | agccgcgcgc  | tggggcagga  | ggacacgggc  | agcctggagg  | 13200 |
| caaccctaaa | ctacctgctg  | accaaccggc  | ggcagaagat  | cccctcgctg  | cacagtttaa  | 13260 |
| acagcgagga | ggagcgcatt  | ttgcgctacg  | tgcagcagag  | cgtgagcctt  | aacctgatgc  | 13320 |
| gcgacggggg | aacgcccagc  | gtggcgctgg  | acatgaccgc  | gcgcaacatg  | gaaccgggca  | 13380 |
| tgtatgcctc | aaaccggccg  | tttatcaacc  | gcctaattga  | ctacttgcat  | cgcgcggccg  | 13440 |
| ccgtgaaccc | cgagtatttc  | accaatgcca  | tcttgaaccc  | gacttggtta  | ccgccccctg  | 13500 |
| gtttctacac | cgggggattc  | gaggtgcccc  | agggtaacga  | tggattcctc  | tgggacgaca  | 13560 |
| tagacgacag | cgtgttttcc  | ccgcaaccgc  | agaccctgct  | agagttgcaa  | cagcgcgagc  | 13620 |
| aggcagaggc | ggcgctgcga  | aaggaaaagct | tccgcaggcc  | aagcagcttg  | tccgatctag  | 13680 |
| gcgctgcggc | cccgcgggtca | gatgctagta  | gcccatttcc  | aagcttgata  | gggtctctta  | 13740 |
| ccagcactcg | caccacccgc  | ccgcgcctgc  | tgggcgagga  | ggagtaccta  | aacaactcgc  | 13800 |
| tgctgcagcc | gcagcgcgaa  | aaaaacctgc  | ctccggcatt  | tccaacaac   | gggatagaga  | 13860 |
| gcctagtggg | caagatgagt  | agatggaaga  | cgtacgcgca  | ggagcacagg  | gacgtgccag  | 13920 |
| gcccgcgccc | gcccacccgt  | cgtcaaaggc  | acgaccgtca  | gcgggggtctg | gtgtgggagg  | 13980 |

eolf-seql (2)

|             |            |            |            |            |            |       |
|-------------|------------|------------|------------|------------|------------|-------|
| acgatgactc  | ggcagacgac | agcagcgtcc | tggatttggg | agggagtggc | aaccggtttg | 14040 |
| cgcaccttcg  | ccccaggctg | gggagaatgt | tttaaaaaaa | aaaaagcatg | atgcaaaata | 14100 |
| aaaaactcac  | caaggccatg | gcaccgagcg | ttggttttct | tgtattcccc | ttagtatgcg | 14160 |
| gcgcgcggcg  | atgtatgagg | aaggctcctc | tccctcctac | gagagtgtgg | tgagcgcggc | 14220 |
| gccagtggcg  | gcggcgctgg | gttctccctt | cgatgctccc | ctggacccgc | cgtttgtgcc | 14280 |
| tccgcggtac  | ctgcggccta | ccggggggag | aaacagcatc | cgttactctg | agttggcacc | 14340 |
| cctattcgac  | accacccgtg | tgtacctggt | ggacaacaag | tcaacggatg | tggcatccct | 14400 |
| gaactaccag  | aacgaccaca | gcaactttct | gaccacggtc | attcaaaaca | atgactacag | 14460 |
| cccggggggag | gcaagcacac | agaccatcaa | tcttgacgac | cggtcgcact | ggggcggcga | 14520 |
| cctgaaaacc  | atcctgcata | ccaacatgcc | aaatgtgaac | gagttcatgt | ttaccaataa | 14580 |
| gtttaaggcg  | cgggtgatgg | tgtcgcgctt | gcctactaag | gacaatcagg | tggagctgaa | 14640 |
| atacgagtgg  | gtggagtcca | cgctgcccga | gggcaactac | tccgagacca | tgaccataga | 14700 |
| ccttatgaac  | aacgcgatcg | tggagcacta | cttgaaagtg | ggcagacaga | acggggttct | 14760 |
| ggaaagcgac  | atcggggtaa | agtttgacac | ccgcaacttc | agactggggg | ttgaccccgt | 14820 |
| cactggtctt  | gtcatgcctg | gggtatatac | aaacgaagcc | ttccatccag | acatcatttt | 14880 |
| gctgccagga  | tgccgggtgg | acttcaccca | cagccgcctg | agcaacttgt | tgggcatccg | 14940 |
| caagcggcaa  | cccttccagg | agggtcttag | gatcacctac | gatgatctgg | agggtggtaa | 15000 |
| cattcccgca  | ctgttggatg | tggacgccta | ccaggcgagc | ttgaaagatg | acaccgaaca | 15060 |
| gggcgggggt  | ggcgcaggcg | gcagcaacag | cagtggcagc | ggcgcggaag | agaactccaa | 15120 |
| cgcggcagcc  | gcggcaatgc | agccggtgga | ggacatgaac | gatcatgcca | ttcgcggcga | 15180 |
| cacctttgcc  | acacgggctg | aggagaagcg | cgctgaggcc | gaagcagcgg | ccgaagctgc | 15240 |
| cgcccccgct  | gcgcaaccgg | aggctgagaa | gcctcagaag | aaaccggtga | tcaaaccctt | 15300 |
| gacagaggac  | agcaagaaac | gcagttacaa | cctaataagc | aatgacagca | ccttcaccca | 15360 |
| gtaccgcagc  | tgggtacctg | catacaacta | cggcgaccct | cagaccggaa | tccgctcatg | 15420 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gaccctgctt tgcactcctg acgtaacctg cggctcggag caggtctact ggtcgttgcc  | 15480 |
| agacatgatg caagaccccg tgaccttccg ctccacgcgc cagatcagca actttccggt  | 15540 |
| ggtgggccc gagctgttgc ccgtgcactc caagagcttc tacaacgacc aggccgtcta   | 15600 |
| ctcccaactc atccgccagt ttacctctct gaccacgtg ttcaatcgct ttcccgagaa   | 15660 |
| ccagattttg gcgcgcccgc cagccccac catcaccacc gtcagtgaac acgttcctgc   | 15720 |
| tctcacagat cacgggacgc taccgctgcg caacagcatc ggaggagtcc agcgagtgc   | 15780 |
| cattactgac gccagacgcc gcacctgccc ctacgtttac aaggccctgg gcatagtctc  | 15840 |
| gccgcgcgtc ctatcgagcc gcactttttg agcaagcatg tccatcctta tatcgcccag  | 15900 |
| caataacaca ggctggggcc tgcgcttccc aagcaagatg tttggcgggg ccaagaagcg  | 15960 |
| ctccgaccaa caccagtgcc gcgtgcgcgg gcactaccgc gcgccctggg gcgcgcacaa  | 16020 |
| acgcggccgc actgggcgca ccaccgtcga tgacgccatc gacgcggtgg tggaggaggc  | 16080 |
| gcgcaactac acgcccacgc cgccaccagt gtccacagtg gacgcggcca ttcagaccgt  | 16140 |
| ggtgcgcgga gcccggcgct atgctaaaat gaagagacgg cggaggcgcg tagcacgtcg  | 16200 |
| ccaccgccgc cgacccggca ctgccgcca acgcgcggcg gcggccctgc ttaaccgcgc   | 16260 |
| acgtcgcacc ggccgacggg cggccatgcg ggccgctcga aggctggccg cgggtattgt  | 16320 |
| cactgtgccc cccagggtcca ggcgacgagc ggccgccgca gcagccgcgg ccattagtgc | 16380 |
| tatgactcag ggtcgcaggg gcaacgtgta ttgggtgcgc gactcgggta gcggcctgcg  | 16440 |
| cgtgcccgtg cgcacccgcc cccgcgcaa ctagattgca agaaaaaact acttagactc   | 16500 |
| gtactgttgt atgtatccag cggcggcggc gcgcaacgaa gctatgtcca agcgcaaaat  | 16560 |
| caaagaagag atgctccagg tcatcgcgcc ggagatctat ggccccccga agaaggaaga  | 16620 |
| gcaggattac aagccccgaa agctaaagcg ggtcaaaaag aaaaagaaag atgatgatga  | 16680 |
| tgaacttgac gacgaggtgg aactgctgca cgctaccgcg cccaggcgac ggggtacagtg | 16740 |
| gaaaggctga cgcgtaaaac gtgttttgcg acccggcacc accgtagtct ttacgcccgg  | 16800 |
| tgagcgctcc acccgcacct acaagcgcgt gtatgatgag gtgtacggcg acgaggacct  | 16860 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gcttgagcag gccaacgagc gcctcgggga gtttgcctac ggaaagcggc ataaggacat  | 16920 |
| gctggcgcttg ccgctggacg agggcaaccc aacacctagc ctaaagcccg taacactgca | 16980 |
| gcaggtgctg cccgcgcttg caccgtccga agaaaagcgc ggcctaaagc gcgagtctgg  | 17040 |
| tgacttggca cccaccgtgc agctgatggg acccaagcgc cagcgactgg aagatgtctt  | 17100 |
| ggaaaaaatg accgtggaac ctgggctgga gcccagaggtc cgcgtgcggc caatcaagca | 17160 |
| ggtggcgccg ggactgggcg tgcagaccgt ggacgttcag ataccacta ccagtagcac   | 17220 |
| cagtattgcc accgccacag agggcatgga gacacaaacg tccccggttg cctcagcggg  | 17280 |
| ggcggatgcc gcggtgcagg cggtcgtgc ggccgcgtcc aagacctcta cggaggtgca   | 17340 |
| aacggacccg tggatgtttc gcgtttcagc ccccgccgc ccgcgccgtt cgaggaagta   | 17400 |
| cggcgccgcc agcgcgctac tgcccgaata tgccctacat ctttccattg cgcctacccc  | 17460 |
| cggctatcgt ggctacacct accgccccag aagacgagca actacccgac gccgaaccac  | 17520 |
| cactggaacc cgccgccgcc gtcgccgtcg ccagcccgtg ctggccccga tttccgtgcg  | 17580 |
| caggggtggct cgcgaaggag gcaggacctt ggtgctgcca acagcgcgct accaccccag | 17640 |
| catcgtttaa aagccggtct ttgtggttct tgcagatatg gccctcacct gccgcctccg  | 17700 |
| tttcccgggtg ccgggattcc gaggaagaat gcaccgtagg aggggcatgg ccggccacgg | 17760 |
| cctgacgggc ggcatgcgtc gtgcgcacca ccggcggcgg cgcgcgtcgc accgtcgcac  | 17820 |
| gcgcggcggg atcctgcccc tccttattcc actgatcgcc gcggcgattg gcgccgtgcc  | 17880 |
| cggaattgca tccgtggcct tgcaggcgca gagacactga ttaaaaacaa gttgcatgtg  | 17940 |
| gaaaaatcaa aataaaaagt ctggactctc acgctcgctt ggtcctgtaa ctattttgta  | 18000 |
| gaatggaaga catcaacttt gcgtctctgg ccccgcgaca cggctcgcgc ccgttcattg  | 18060 |
| gaaactggca agatatcggc accagcaata tgagcgggtg cgccttcagc tggggctcgc  | 18120 |
| tgtggagcgg cattaaaaat ttcggttcca ccgttaagaa ctatggcagc aaggcctgga  | 18180 |
| acagcagcac aggccagatg ctgagggata agttgaaaga gcaaaatttc caacaaaagg  | 18240 |
| tggtagatgg cctggcctct ggcattagcg ggggtggtgga cctggccaac caggcagtgc | 18300 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| aaaataagat taacagtaag cttgatcccc gccctcccgt agaggagcct ccaccggccg  | 18360 |
| tggagacagt gtctccagag gggcgtggcg aaaagcgtcc gcgccccgac aggggaagaaa | 18420 |
| ctctggtgac gcaaatagac gagcctccct cgtacgagga ggcactaaag caaggcctgc  | 18480 |
| ccaccacccg tcccatcgcg cccatggcta ccggagtgtt gggccagcac acacccgtaa  | 18540 |
| cgctggacct gcctcccccc gccgacaccc agcagaaacc tgtgtgtcca ggcccgaccg  | 18600 |
| ccgttgttgt aacccgtcct agccgcgcgt ccctgcgccg cgccgccagc ggtccgcgat  | 18660 |
| cgttgcggcc cgtagccagt ggcaactggc aaagcacact gaacagcatc gtgggtcttg  | 18720 |
| gggtgcaatc cctgaagcgc cgacgatgtt tctgatagct aacgtgtcgt atgtgtgtca  | 18780 |
| tgtatgcgtc catgtcgccg ccagaggagc tgctgagccg ccgcgcgccc gctttccaag  | 18840 |
| atggctaccc cttcgatgat gccgcagtgg tcttacatgc acatctcggg ccaggacgcc  | 18900 |
| tcggagtacc tgagccccgg gctggtgcag tttgcccgcg ccaccgagac gtacttcagc  | 18960 |
| ctgaataaca agtttagaaa cccacgggtg gcgcctacgc acgacgtgac cacagaccgg  | 19020 |
| tcccagcggt tgacgctgcg gttcatccct gtggaccgtg aggatactgc gtactcgtac  | 19080 |
| aaggcgcggt tcaccctagc tgtgggtgat aaccgtgtgc tggacatggc ttccacgtac  | 19140 |
| tttgacatcc gcggcgtgct ggacaggggc cctactttta agccctactc tggcactgcc  | 19200 |
| tacaacgccc tggctcccaa gggtgcccca aatccttgcg aatgggatga agctgtact   | 19260 |
| gctcttgaaa taaacctaga agaagaggac gatgacaacg aagacgaagt agacgagcaa  | 19320 |
| gctgagcagc aaaaaactca cgtatttggg caggcgcctt attctggtat aaatattaca  | 19380 |
| aaggagggtt ttcaaatagg tgtcgaaggt caaacaccta aatatgccga taaaacattt  | 19440 |
| caacctgaac ctcaaatagg agaatctcag tggtagcaaa cagaaattaa tcatgcagct  | 19500 |
| gggagagtcc taaaaaagac taccccaatg aaaccatgtt acggttcata tgcaaaaccc  | 19560 |
| acaaatgaaa atggagggca aggcattctt gtaaagcaac aaaatggaaa gctagaaagt  | 19620 |
| caagtggaaa tgcaattttt ctcaactact gaggcagccg caggcaatgg tgataacttg  | 19680 |
| actcctaaag tgggtattgta cagtgaagat gtagatatag aaaccccaga cactcatatt | 19740 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tcttacatgc ccactattaa ggaaggtaac tcacgagaac taatgggcca acaatctatg   | 19800 |
| cccaacaggc ctaattacat tgcttttagg gacaatttta ttgggtctaata gtattacaac | 19860 |
| agcacgggta atatgggtgt tctggcgggc caagcatcgc agttgaatgc tgttgtagat   | 19920 |
| ttgcaagaca gaaacacaga gctttcatac cagcttttgc ttgattccat tggatgata    | 19980 |
| accagggtact tttctatgtg gaatcaggct gttgacagct atgatccaga tgtagaatt   | 20040 |
| attgaaaatc atggaactga agatgaactt ccaaattact gctttccact gggagggtgtg  | 20100 |
| attaatacag agactcttac caaggtaaaa cctaaaacag gtcaggaaaa tggatgggaa   | 20160 |
| aaagatgcta cagaattttc agataaaaaat gaaataagag ttggaaataa ttttgccatg  | 20220 |
| gaaatcaatc taaatgccaa cctgtggaga aatttcctgt actccaacat agcgctgtat   | 20280 |
| ttgcccagaca agctaaagta cagtccttcc aacgtaaaaa tttctgataa cccaacacc   | 20340 |
| tacgactaca tgaacaagcg agtgggtggct cccgggctag tggactgcta cattaacctt  | 20400 |
| ggagcacgct ggtcccttga ctatatggac aacgtcaacc catttaacca ccaccgcaat   | 20460 |
| gctggcctgc gctaccgctc aatgttgctg ggcaatggc gctatgtgcc cttccacatc    | 20520 |
| cagggtgcctc agaagttctt tgccattaaa aacctccttc tcctgccggg ctcatcaccc  | 20580 |
| tacgagtgga acttcaggaa ggatgttaac atggttctgc agagctccct aggaaatgac   | 20640 |
| ctaagggttg acggagccag cattaagttt gatagcattt gccttttacgc caccttcttc  | 20700 |
| cccatggccc acaacaccgc ctccacgctt gaggccatgc ttagaaacga caccaacgac   | 20760 |
| cagtccttta acgactatct ctccgccgcc aacatgctct accctatacc cgccaacgct   | 20820 |
| accaacgtgc ccatatccat cccctcccgc aactgggcgg ctttccgcgg ctgggccttc   | 20880 |
| acgcgcctta agactaagga aaccccatca ctgggctcgg gctacgaccc ttattacacc   | 20940 |
| tactctggct ctatacccta cctagatgga accttttacc tcaaccacac ctttaagaag   | 21000 |
| gtggccatta cctttgactc ttctgtcagc tggcctggca atgaccgcct gcttaccccc   | 21060 |
| aacgagtttg aaattaagcg ctacagttgac ggggagggtt acaacgttgc ccagtgtaac  | 21120 |
| atgaccaaag actgggttcct ggtacaaatg ctagctaact ataacattgg ctaccagggc  | 21180 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ttctatatcc cagagagcta caaggaccgc atgtactcct tcttttagaaa cttccagccc | 21240 |
| atgagccgctc aggtggtgga tgatactaaa tacaaggact accaacaggt gggcatccta | 21300 |
| caccaacaca acaactctgg atttggtggc taccttgccc ccaccatgcg cgaaggacag  | 21360 |
| gcctaccctg ctaacttccc ctatccgctt ataggcaaga ccgcagttga cagcattacc  | 21420 |
| cagaaaaagt ttctttgcga ccgcaccctt tggcgcaccc cattctccag taactttatg  | 21480 |
| tccatgggctg cactcacaga cctgggcca aaccttctct acgccaactc cgcccacgcg  | 21540 |
| ctagacatga cttttgaggt ggatcccatg gacgagccca cctttcttta tgttttgttt  | 21600 |
| gaagtctttg acgtggtccg tgtgcaccag ccgcaccgcg gcgtcatcga aaccgtgtac  | 21660 |
| ctgcgcacgc ctttctcggc cggcaacgcc acaacataaa gaagcaagca acatcaacaa  | 21720 |
| cagctgccgc catgggctcc agtgagcagg aactgaaagc cattgtcaaa gatcttggtt  | 21780 |
| gtgggccata ttttttgggc acctatgaca agcgctttcc aggctttgtt tctccacaca  | 21840 |
| agctcgcttg cgccatagtc aatacggccg gtcgagagac tgggggcgta cactggatgg  | 21900 |
| cctttgcctg gaacccgcac tcaaaaacat gctacctctt tgagcccttt ggcttttctg  | 21960 |
| accagcgact caagcagggt taccagtttg agtacgagtc actcctgcgc cgtagcgcca  | 22020 |
| ttgcttcttc ccccgaccgc tgtataacgc tggaaaagtc cacccaaagc gtacaggggc  | 22080 |
| ccaactcggc cgctgtgga ctattctgct gcatgtttct ccacgccttt gccaaactggc  | 22140 |
| cccaaactcc catggatcac aacccaccca tgaaccttat taccggggta cccaactcca  | 22200 |
| tgctcaacag tccccaggta cagcccaccc tgcgtcgcaa ccaggaacag ctctacagct  | 22260 |
| tcctggagcg ccactcgccc tacttccgca gccacagtgc gcagattagg agcgccactt  | 22320 |
| ctttttgtca cttgaaaaac atgtaaaaat aatgtactag agacactttc aataaaggca  | 22380 |
| aatgctttta tttgtacact ctcgggtgat tatttaccac cacccttgcc gtctgcgccg  | 22440 |
| tttaaaaaatc aaaggggttc tgccgcgcat cgctatgcgc cactggcagg gacacgttgc | 22500 |
| gatactgggtg tttagtgtc cacttaaaact caggcacaac catccgcggc agctcggtga | 22560 |
| agttttcact ccacaggctg cgcaccatca ccaacgcgtt tagcaggctc ggcgccgata  | 22620 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tcttgaagtc gcagttgggg cctccgccct gcgcgcgcga gttgcgatac acagggttgc   | 22680 |
| agcactggaa cactatcagc gccgggtggt gcacgctggc cagcacgctc ttgtcggaga   | 22740 |
| tcagatccgc gtccagggtcc tccgcgttgc tcagggcgaa cggagtcaac tttggtagct  | 22800 |
| gccttcccaa aaagggcgcg tgcccaggct ttgagttgca ctcgcaccgt agtggcatca   | 22860 |
| aaaggtgacc gtgcccggtc tgggcgttag gatacagcgc ctgcataaaa gccttgatct   | 22920 |
| gcttaaaagc cacctgagcc tttgcgcctt cagagaagaa catgccgcaa gacttgccgg   | 22980 |
| aaaactgatt ggccggacag gccgcgtcgt gcacgcagca ctttgcgtcg gtgttggaga   | 23040 |
| tctgcaccac atttcggccc caccggttct tcacgatctt ggccttgcta gactgctcct   | 23100 |
| tcagcgcgcg ctgcccgttt tcgctcgtca catccatttc aatcacgtgc tccttattta   | 23160 |
| tcataatgct tccgtgtaga cacttaagct cgcttcgat ctcagcgcag cggcgcagcc    | 23220 |
| acaacgcgca gcccgtgggc tcgtgatgct tgtaggtcac ctctgcaaac gactgcaggt   | 23280 |
| acgcctgcag gaatcgcccc atcatcgtca caaaggctctt gttgctgggtg aaggcagct  | 23340 |
| gcaacccgcg gtgctcctcg ttcagccagg tcttgcatac ggccgccaga gcttccactt   | 23400 |
| ggtcaggcag tagtttgaag ttcgccttta gatcgttatac cacgtggtagc ttgtccatca | 23460 |
| gcgcgcgcgc agcctccatg ccttctctcc acgcagacac gatcggcaca ctcagcgggt   | 23520 |
| tcatcacctg aatttcactt tccgcttcgc tgggctcttc ctcttctctt tgcgtccgca   | 23580 |
| taccacgcgc cactgggtcg tcttcattca gccgccgcac tgtgcgctta cctcctttgc   | 23640 |
| catgcttgat tagcacctgt ggggttgctga aaccacccat ttgtagcgcc acatcttctc  | 23700 |
| tttcttctc gctgtccacg attacctctg gtgatggcgg gcgctcgggc ttgggagaag    | 23760 |
| ggcgcttctt tttcttcttg ggcgcaatgg ccaaaccgc cgccgaggtc gatggccgcg    | 23820 |
| ggctgggtgt gcgcggcacc agcgcgtctt gtgatgagtc ttcctcgtcc tcggactcga   | 23880 |
| tacgccgct catccgcttt tttgggggcg cccggggagg cggcggcgac ggggacgggg    | 23940 |
| acgacacgtc ctccatggtt gggggacgtc gcgccgcacc gcgtccgcgc tcgggggttg   | 24000 |
| tttcgcgctg ctctcttcc cgactggcca tttccttctc ctataggcag aaaaagatca    | 24060 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tggagtcagt cgagaagaag gacagcctaa cgcggccctc tgagttcgcc accaccgcct  | 24120 |
| ccaccgatgc cgccaacgcg cctaccacct tccccgtcga ggcacccccg cttgaggagg  | 24180 |
| aggaagtgat tatcgagcag gacccagggtt ttgtaagcga agacgacgag gaccgctcag | 24240 |
| taccaacaga ggataaaaaag caagaccagg acaacgcaga ggcaaacgag gaacaagtcg | 24300 |
| ggcgggggga cgaaaaggcat ggcgactacc tagatgtggg agacgacgtg ctgttgaagc | 24360 |
| atctgcagcg ccagtgcgcc attatctgcg acgcgttgca agagcgcagc gatgtgcccc  | 24420 |
| tcgccatagc ggatgtcagc cttgcctacg aacgccacct attctcaccg cgcgtacccc  | 24480 |
| ccaaacgcca agaaaacggc acatgcgagc ccaaccgcg cctcaacttc taccctgtat   | 24540 |
| ttgccgtgcc agagggtgctt gccacctatc acatcttttt ccaaaactgc aagatacccc | 24600 |
| tatcctgccg tgccaaccgc agccgagcgg acaagcagct ggccttgccg cagggcgctg  | 24660 |
| tcatacctga tatcgctcgc ctcaacgaag tgccaaaaat ctttgagggt cttggacgcg  | 24720 |
| acgagaagcg cgcggcaaac gctctgcaac agggaaaacag cgaaaatgaa agtcactctg | 24780 |
| gagtgttggg ggaactcgag ggtgacaacg cgcgcctagc cgtactaaaa cgcagcatcg  | 24840 |
| aggtcaccca ctttgcctac ccggcactta acctaccccc caaggctcatg agcacagtca | 24900 |
| tgagtgagct gatcgtgcgc cgtgcgcagc ccctggagag ggatgcaaat ttgcaagaac  | 24960 |
| aaacagagga gggcctaccc gcagttggcg acgagcagct agcgcgctgg cttcaaacgc  | 25020 |
| gcgagcctgc cgacttggag gagcgacgca aactaatgat ggccgcagtg ctcgttaccg  | 25080 |
| tggagcttga gtgcatgcag cggttctttg ctgacccgga gatgcagcgc aagctagagg  | 25140 |
| aaacattgca ctacaccttt cgacagggtt acgtacgcca ggcctgcaag atctccaacg  | 25200 |
| tggagctctg caacctggtc tcctaccttg gaattttgca cgaaaaccgc cttgggcaaa  | 25260 |
| acgtgcttca ttccacgctc aagggcgagg cgcgccgcga ctacgtccgc gactgcgttt  | 25320 |
| acttatttct atgctacacc tggcagacgg ccatgggcgt ttggcagcag tgcttggagg  | 25380 |
| agtgaacct caaggagctg cagaaaactgc taaagcaaaa cttgaaggac ctatggacgg  | 25440 |
| ccttcaacga gcgctccgtg gccgcgcacc tggcggacat ctttttcccc gaacgcctgc  | 25500 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ttaaaaccct gcaacagggt ctgccagact tcaccagtca aagcatgttg cagaacttta  | 25560 |
| ggaactttat cctagagcgc tcaggaatct tgcccgccac ctgctgtgca cttcctagcg  | 25620 |
| actttgtgcc cattaagtac cgcgaatgcc ctccgccgct ttggggccac tgctaccttc  | 25680 |
| tgtagctagc caactacctt gcctaccact ctgacataat ggaagacgtg agcgggtgacg | 25740 |
| gtctactgga gtgtcactgt cgctgcaacc tatgcacccc gcaccgctcc ctggtttgca  | 25800 |
| attcgcagct gcttaacgaa agtcaaatta tcggtacctt tgagctgcag ggtccctcgc  | 25860 |
| ctgacgaaaa gtccgcggct ccgggggttg aactcactcc ggggctgtgg acgtcggctt  | 25920 |
| accttcgcaa atttgtacct gaggactacc acgcccacga gattaggttc tacgaagacc  | 25980 |
| aatcccgccc gcctaattgcg gagcttaccg cctgcgtcat taccagggc cacattcttg  | 26040 |
| gccaattgca agccatcaac aaagcccgcc aagagtttct gctacgaaag ggacgggggg  | 26100 |
| tttacttgga cccccagtcc ggcgaggagc tcaaccaat cccccgccg ccgcagccct    | 26160 |
| atcagcagca gccgcgggccc cttgcttccc aggatggcac caaaaagaa gctgcagctg  | 26220 |
| ccgccgccac ccacggacga ggaggaatac tgggacagtc aggagagga ggttttggac   | 26280 |
| gaggaggagg aggacatgat ggaagactgg gagagcctag acgaggaagc ttccgaggtc  | 26340 |
| gaagagggtg cagacgaaac accgtcacc tcggtcgcac tcccctgcc ggcgccccag    | 26400 |
| aaatcggcaa ccggttccag catggctaca acctccgctc ctcaggcgcc gccggcactg  | 26460 |
| cccgttcgcc gacccaaccg tagatgggac accactggaa ccagggccgg taagtccaag  | 26520 |
| cagccgccgc cgttagccca agagcaacaa cagcgccaag gctaccgctc atggcgcggg  | 26580 |
| cacaagaacg ccatagttgc ttgcttgcaa gactgtgggg gcaacatctc cttcgccgc   | 26640 |
| cgctttcttc tctaccatca cggcgtggcc ttccccgta acatcctgca ttactaccgt   | 26700 |
| catctctaca gcccatactg caccggcggc agcggcagca acagcagcg ccacacagaa   | 26760 |
| gcaaaggcga ccggatagca agactctgac aaagcccaag aaatccacag cggcggcagc  | 26820 |
| agcaggagga ggagcgctgc gtctggcgcc caacgaaccc gtatcgaccc gcgagcttag  | 26880 |
| aaacaggatt tttcccactc tgtatgctat atttcaacag agcaggggcc aagaacaaga  | 26940 |

eolf-seql (2)

|            |            |            |             |            |             |       |
|------------|------------|------------|-------------|------------|-------------|-------|
| gctgaaaata | aaaaacaggt | ctctgcgatc | cctcaccgcg  | agctgcctgt | atcacaaaag  | 27000 |
| cgaagatcag | cttcggcgca | cgctggaaga | cgcgagggct  | ctcttcagta | aatactgcgc  | 27060 |
| gctgactctt | aaggactagt | ttcgcgccct | ttctcaaatt  | taagcgcgaa | aactacgtca  | 27120 |
| tctccagcgg | ccacacccgg | cgccagcacc | tgttgtcagc  | gccattatga | gcaaggaaat  | 27180 |
| tcccacgccc | tacatgtgga | gttaccagcc | acaaatggga  | cttgcggtg  | gagctgccc   | 27240 |
| agactactca | acccgaataa | actacatgag | cgcgggaccc  | cacatgatat | cccgggtcaa  | 27300 |
| cggaatacgc | gcccaccgaa | accgaattcc | cttggaacag  | gcggctatta | ccaccacacc  | 27360 |
| tcgtaataac | cttaatcccc | gtagttggcc | cgctgccctg  | gtgtaccagg | aaagtcccgc  | 27420 |
| tcccaccact | gtggtacttc | ccagagacgc | ccaggccgaa  | gttcagatga | ctaactcagg  | 27480 |
| ggcgcagctt | gcggggcggt | ttcgtcacag | ggtgcggctc  | cccgggcagg | gtataactca  | 27540 |
| cctgacaatc | agagggcgag | gtattcagct | caacgacgag  | tcggtgagct | cctcgcttgg  | 27600 |
| tctccgtccg | gacgggacat | ttcagatcgg | cggcgccggc  | cgctcttcat | tcacgcctcg  | 27660 |
| tcaggcaatc | ctaactctgc | agacctcgtc | ctctgagccg  | cgctctggag | gcattggaac  | 27720 |
| tctgcaattt | attgaggagt | ttgtgccatc | ggtctacttt  | aacccttct  | cgggacctcc  | 27780 |
| cggccactat | ccggatcaat | ttattcctaa | ctttgacgcg  | gtaaaggact | cggcggacgg  | 27840 |
| ctacgactga | atgttaagt  | gagaggcaga | gcaactgcgc  | ctgaaacacc | tgggtccactg | 27900 |
| tcgccgccac | aagtgccttg | cccgcgactc | cgggtgagttt | tgctactttg | aattgcccga  | 27960 |
| ggatcatatc | gagggcccg  | cgcacggcgt | ccggcttacc  | gcccaggag  | agcttgcccg  | 28020 |
| tagcctgatt | cgggagttta | cccagcgccc | cctgctagtt  | gagcgggaca | ggggaccctg  | 28080 |
| tgttctcact | gtgatttgca | actgtcctaa | ccttgatta   | catcaagatc | atcttattcc  | 28140 |
| ctttaactaa | taaaaaaaaa | taataaagca | tcacttactt  | aaaatcagtt | agcaaattta  | 28200 |
| tgcatgtcga | cagtaatcaa | ttacggggtc | attagttcat  | agcccatata | tggagttccg  | 28260 |
| cgttacataa | cttacggtaa | atggcccgc  | tggctgaccg  | cccaacgacc | cccgccatt   | 28320 |
| gacgtcaata | atgacgtatg | ttcccatagt | aacgccaata  | gggactttcc | attgacgtca  | 28380 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| atgggtggag tatttacggt aaactgcccc cttggcagta catcaagtgt atcatatgcc   | 28440 |
| aagtacgccc cctattgacg tcaatgacgg taaatggccc gcctggcatt atgcccagta   | 28500 |
| catgacctta tgggactttc ctacttggca gtacatctac gtattagtca tcgctattac   | 28560 |
| catgctgatg cggttttggc agtacatcaa tgggcgtgga tagcggtttg actcacgggg   | 28620 |
| atttccaagt ctccacccca ttgacgtcaa tgggagtttg ttttggcacc aaaatcaacg   | 28680 |
| ggactttcca aaatgtcgta acaactccgc cccattgacg caaatgggcg gtaggcgtgt   | 28740 |
| acggtgggag gtctatataa gcagagctgg tttagtgaac cgtcagatca gatctttgtc   | 28800 |
| gatcctacca tccactcgac acacccgcca gcggccgtg ccaagcttcc gagctctcga    | 28860 |
| attcaaagga ggtacccacc atgggatgga gctgtatcat cctcttcttg gtagcaacag   | 28920 |
| ctacaggtgt ccactcccag gtgcagctgc agcagtctgg ggctgaactg gcaagacctg   | 28980 |
| gggcctcagt gaagatgtcc tgcaaggctt ctggctacac ctttactagg tacacgatgc   | 29040 |
| actgggtaaa acagaggcct ggacagggtc tggaatggat tggatacatt aatcctagcc   | 29100 |
| gtggttatac taattacaat cagaagttca aggacaaggc cacattgact acagacaaat   | 29160 |
| cctccagcac agcctacatg caactgagca gcctgacatc tgaggactct gcagtctatt   | 29220 |
| actgtgcaag atattatgat gatcattact gccttgacta ctggggccaa ggcaccactc   | 29280 |
| tcacagtctc ctcaggtggc ggtggctcgg gcggtgggtg atctgggtggc ggcggtatctg | 29340 |
| atatcgtgct cactcagtct ccagcaatca tgtctgcatc tccaggggag aaggtcacca   | 29400 |
| tgacctgcag tgccagctca agtgtaagtt acatgaactg gtaccagcag aagtcaggca   | 29460 |
| cctcccccaa aagatggatt tatgacacat ccaaactggc ttctggagtc cctgctcact   | 29520 |
| tcaggggcag tgggtctggg acctcttact ctctcacaat cagcggcatg gaggtgaag    | 29580 |
| atgctgccac ttattactgc cagcagtgga gtagtaaccc attcacgttc ggctcgggga   | 29640 |
| caaagttgga aataaaccgg ggatccgaac aaaaactcat ctcagaagag gatctgaatg   | 29700 |
| ctgtgggcca ggacacgcag gaggtcatcg tgggtgccaca ctcttgccc ttttaagggtg  | 29760 |
| tggatgatctc agccatcctg gccctgggtg tgctcaccat catctccctt atcatcctca  | 29820 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tcatgctttg gcagaagaag ccacgtggaa gcgagctac taacttcagc ctgctgaagc    | 29880 |
| aggctggaga cgtggaggag aaccttggac ctggccacac acggaggcag ggaacatcac   | 29940 |
| catccaagtg tccatacctc aattttctttc agctcttggg gctggctggg ctttctcact  | 30000 |
| tctgttcagg tgttatccac gtgaccaagg aagtgaaaga agtggcaacg ctgtcctgtg   | 30060 |
| gtcacaatgt ttctgttgaa gagctggcac aaactcgcac ctactggcaa aaggagaaga   | 30120 |
| aaatgggtgct gactatgatg tctggggaca tgaatatatg gcccaggtac aagaaccgga  | 30180 |
| ccatctttga tatcactaat aacctctcca ttgtgatcct ggctctgcgc ccatctgacg   | 30240 |
| agggcacata cgagtgtgtt gttctgaagt atgaaaaaga cgctttcaag cgggaacacc   | 30300 |
| tggctgaagt gacgttatca gtcaaagctg acttccctac acctagtata tctgactttg   | 30360 |
| aaattccaac ttctaataatt agaaggataa tttgctcaac ctctggagggt tttccagagc | 30420 |
| ctcacctctc ctggttggaa aatggagaag aattaaatgc catcaacaca acagtttccc   | 30480 |
| aagatcctga aactgagctc tatgctgtta gcagcaaact ggatttcaat atgacaacca   | 30540 |
| accacagctt catgtgtctc atcaagtatg gacatttaag agtgaatcag accttcaact   | 30600 |
| ggaatacaac caagcaagag cattttcctg ataacctgct cccatcctgg gccattacct   | 30660 |
| taatctcagt aaatggaatt tttgtgatat gctgcctgac ctactgcttt gcccgaagat   | 30720 |
| gcagagagag aaggaggaat gagagattga gaagggaaag tgtacgccct gtataatcta   | 30780 |
| gaagttgtct cctcctgcac tgactgactg atacaatcga tttctggatc cgcaggcctc   | 30840 |
| tgctagcttg actgactgag atacagcgta ccttcagctc acagacatga taagatacat   | 30900 |
| tgatgagttt ggacaaacca caactagaat gcagtgaaaa aaatgcttta tttgtgaaat   | 30960 |
| ttgtgatgct attgctttat ttgtaaccat tataagctgc aataaacaag ttaacaacaa   | 31020 |
| caattgcatt cattttatgt ttcaggttca gggggagggtg tgggagggtt tttaaagcaa  | 31080 |
| gtaaaacctc taaaaatgtg gtagtcgtca gctatcctag gtcgcgatct tattcccttt   | 31140 |
| aactaataaaa aaaaaataat aaagcatcac ttacttaaaa tcagttagca aatttctgtc  | 31200 |
| cagtttattc agcagcacct ccttgccctc ctcccagctc tgggtattgca gcttcctcct  | 31260 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| ggctgcaaac tttctccaca atctaaatgg aatgtcagtt tcctcctggt cctgtccatc   | 31320 |
| cgcacccact atcttcatgt tggtgcagat gaagcgcgca agaccgtctg aagatacctt   | 31380 |
| caaccccggtg tatccatatg acacggaaac cggtcctcca actgtgcctt ttcttactcc  | 31440 |
| tccctttgta tcccccaatg gggttcaaga gagtccccct ggggtactct ctttgcgcct   | 31500 |
| atccgaacct ctagttacct ccaatggcat gcttgcgctc aaaatgggca acggcctctc   | 31560 |
| tctggacgag gccggcaacc ttacctccca aaatgtaacc actgtgagcc cacctctcaa   | 31620 |
| aaaaaccaag tcaaacataa acctggaaat atctgcaccc ctcacagtta cctcagaagc   | 31680 |
| cctaactgtg gctgccgccc cacctctaata ggtcgcgggc aacacactca ccatgcaatc  | 31740 |
| acaggccccg ctaaccgtgc acgactccaa acttagcatt gccacccaag gacccctcac   | 31800 |
| agtgtcagaa ggaaagctag ccctgcaaac atcaggcccc ctcaccacca ccgatagcag   | 31860 |
| tacccttact atcactgcct cccccctct aactactgcc actggtagct tgggcattga    | 31920 |
| cttgaaagag cccatttata cacaaaatgg aaaactagga ctaaagtacg gggctccttt   | 31980 |
| gcatgtaaca gacgacctaa acactttgac cgtagcaact ggtccagggtg tgactattaa  | 32040 |
| taatacttcc ttgcaaacta aagttactgg agccttgggt tttgattcac aaggcaatat   | 32100 |
| gcaacttaat gtagcaggag gactaaggat tgattctcaa aacagacgcc ttatacttga   | 32160 |
| tgtagttat ccgtttgatg ctcaaaacca actaaatcta agactaggac agggccctct    | 32220 |
| ttttataaac tcagcccaca acttggatat taactacaac aaaggccttt acttgtttac   | 32280 |
| agcttcaaac aattccaaaa agcttgaggt taacctaagc actgccaagg ggttgatggt   | 32340 |
| tgacgctaca gccatagcca ttaatgcagg agatgggctt gaatttggtt cacctaatgc   | 32400 |
| accaaacaca aatccccctca aaacaaaaat tggccatggc ctagaatttg attcaaacaa  | 32460 |
| ggctatgggt cctaaactag gaactggcct tagttttgac agcacagggtg ccattacagt  | 32520 |
| aggaaacaaa aataatgata agctaacttt gtggaccaca ccagctccat ctcctaactg   | 32580 |
| tagactaaat gcagagaaaag atgctaaact cactttgggtc ttaacaaaat gtggcagtca | 32640 |
| aatacttgct acagtttcag ttttggctgt taaaggcagt ttggctccaa tatctggaac   | 32700 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| agttcaaagt gctcatctta ttataagatt tgacgaaaat ggagtgtctac taaacaattc  | 32760 |
| cttcctggac ccagaatatt ggaacttttag aaatggagat cttactgaag gcacagccta  | 32820 |
| tacaaacgct gttggattta tgcctaacct atcagcttat ccaaaatctc acggtaaaac   | 32880 |
| tgccaaaagt aacattgtca gtcaagttta cttaaacgga gacaaaacta aacctgtaac   | 32940 |
| actaaccatt acactaaacg gtacacagga aacaggagac acaactccaa gtgcatactc   | 33000 |
| tatgtcattt tcatgggact ggtctggcca caactacatt aatgaaatat ttgccacatc   | 33060 |
| ctcttacact ttttcataca ttgccaaga ataaagaatc gtttgtgtta tgtttcaacg    | 33120 |
| tgtttatitt tcaattgcag aaaatttcaa gtcatttttc attcagtagt atagccccac   | 33180 |
| caccacatag cttatacaga tcaccgtacc ttaatcaaac tcacagaacc ctagtattca   | 33240 |
| acctgccacc tccctcccaa cacacagagt acacagtcct ttctccccgg ctggccttaa   | 33300 |
| aaagcatcat atcatgggta acagacatat tcttaggtgt tatattccac acggtttcct   | 33360 |
| gtcgagccaa acgctcatca gtgatattaa taaactcccc gggcagctca ctttaagtca   | 33420 |
| tgctgctgtc cagctgctga gccacaggct gctgtccaac ttgcggttgc ttaacgggcg   | 33480 |
| gcgaaggaga agtccacgcc tacatggggg tagagtcata atcgtgcatc aggatagggc   | 33540 |
| ggtggtgctg cagcagcgcg cgaataaact gctgccgccg ccgctccgtc ctgcaggaat   | 33600 |
| acaacatggc agtgggtctcc tcagcgtatga ttcgcaccgc ccgcagcata aggcgccttg | 33660 |
| tcctccgggc acagcagcgc accctgatct cacttaaadc agcacagtaa ctgcagcaca   | 33720 |
| gcaccacaat attgttcaaa atcccacagt gcaaggcgct gtatccaaag ctcatggcgg   | 33780 |
| ggaccacaga acccacgtgg ccatcatacc acaagcgag gtagattaag tggcgacccc    | 33840 |
| tcataaacac gctggacata aacattacct cttttggcat gttgtaattc accacctccc   | 33900 |
| ggtaccatat aaacctctga ttaaaccatgg cgccatccac caccatccta aaccagctgg  | 33960 |
| ccaaaacctg cccgccggct atacactgca gggaaccggg actggaacaa tgacagtgga   | 34020 |
| gagcccagga ctcgtaacca tggatcatca tgctcgtcat gatatcaatg ttggcacaac   | 34080 |
| acaggcacac gtgcatacac ttcctcagga ttacaagctc ctcccgcgtt agaaccatat   | 34140 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cccagggAAC aacccattcc tgaatcagcg taaatcccac actgcaggga agacctcgca  | 34200 |
| cgtaactcac gttgtgcatt gtcaaagtgt tacattcggg cagcagcgga tgatcctcca  | 34260 |
| gtatggtagc gcgggtttct gtctcaaaag gaggtagacg atccctactg tacggagtgc  | 34320 |
| gccgagacaa ccgagatcgt gttggtcgta gtgtcatgcc aaatggaacg ccggacgtag  | 34380 |
| tcatatttcc tgaagcaaaa ccaggtgcgg gcgtgacaaa cagatctgcg tctccggtct  | 34440 |
| cgccgcttag atcgctctgt gtagtagttg tagtatatcc actctctcaa agcatccagg  | 34500 |
| cgccccctgg cttcgggttc tatgtaaact ctttcatgcg ccgctgccct gataacatcc  | 34560 |
| accaccgcag aataagccac acccagccaa cctacacatt cgttctgcga gtcacacacg  | 34620 |
| ggaggagcgg gaagagctgg aagaaccatg tttttttttt tattccaaaa gattatccaa  | 34680 |
| aacctcaaaa tgaagatcta ttaagtgaac gcgctcccct ccggtggcgt ggtcaaactc  | 34740 |
| tacagccaaa gaacagataa tggcatttgt aagatgttgc acaatggctt ccaaaaggca  | 34800 |
| aacggccctc acgtccaagt ggacgtaaaag gctaaaccct tcagggtgaa tctcctctat | 34860 |
| aaacattcca gcaccttcaa ccatgcccac ataattctca tctcgccacc ttctcaatat  | 34920 |
| atctctaagc aaatcccgaa tattaagtcc ggccattgta aaaatctgct ccagagcgcc  | 34980 |
| ctccaccttc agcctcaagc agcgaatcat gattgcaaaa attcaggttc ctacagacc   | 35040 |
| tgtataagat tcaaaagcgg aacattaaca aaaataccgc gatcccgtag gtcccttcgc  | 35100 |
| agggccagct gaacataatc gtgcaggctc gcacggacca gcgcggccac ttccccgcca  | 35160 |
| ggaaccatga caaaagaacc cacactgatt atgacacgca tactcggagc tatgctaacc  | 35220 |
| agcgtagccc cgatgtaagc ttgttgcatt ggcggcgata taaaatgcaa ggtgctgctc  | 35280 |
| aaaaaatcag gcaaagcctc gcgcaaaaaa gaaagcacat cgtagtcatt ctcatgcaga  | 35340 |
| taaaggcagg taagctccgg aaccaccaca gaaaaagaca ccatttttct ctcaaacatg  | 35400 |
| tctgcgggtt tctgcataaa cacaaaataa aataacaaaa aaacatttaa acattagaag  | 35460 |
| cctgtcttac aacaggaaaa acaaccctta taagcataag acggactacg gccatgccgg  | 35520 |
| cgtgaccgta aaaaaactgg tcaccgtgat taaaaagcac caccgacagc tcctcgggtca | 35580 |



eolf-seql (2)

tgtccggagt cataatgtaa gactcggtaa acacatcagg ttgattcaca tcggtcagtg 35640  
 ctaaaaaagcg accgaaatag cccgggggaa tacatacccg caggcgtaga gacaacatta 35700  
 cagcccccat aggagggtata acaaaattaa taggagagaa aaacacataa acacctgaaa 35760  
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 cagcggcagc cataacagtc agccttacca gtaaaaaaga aaacctatta aaaaaacacc 35880  
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 tatatatagg actaaaaaat gacgtaacgg ttaaagtcca caaaaaacac ccagaaaacc 36000  
 gcacgcgaac ctacgccag aaacgaaagc caaaaaaccc acaacttcct caaatcgtca 36060  
 cttccgtttt cccacgttac gtaacttccc attttaagaa aactacaatt cccaacacat 36120  
 acaagttact ccgccctaaa acctacgtca cccgccccgt tcccacgccc cgcgccacgt 36180  
 cacaaactcc accccctcat tatcatattg gcttcaatcc aaaataaggt atattattga 36240  
 tgatg 36245

<210> 111

<211> 188

<212> PRT

<213> Artificial Sequence

<220>

<223> Human Interferona amino acid sequence

<400> 111

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

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

Gly Ser Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile Ser  
 35 40 45

Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu

eolf-seql (2)

50

55

60

Glu Phe Gly Asn Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His  
65 70 75 80

Glu Met Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser  
85 90 95

Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr  
100 105 110

Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val  
115 120 125

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

Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro  
145 150 155 160

Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu  
165 170 175

Ser Thr Asn Leu Gln Glu Ser Leu Arg Ser Lys Glu  
180 185

<210> 112

<211> 179

<212> PRT

<213> Artificial Sequence

<220>

<223> Human soluble Flt3 ligand amino acid sequence

<400> 112

Met Thr Val Leu Ala Pro Ala Trp Ser Pro Thr Thr Tyr Leu Leu Leu  
1 5 10 15

eolf-seql (2)

Leu Leu Leu Leu Ser Ser Gly Leu Ser Gly Thr Gln Asp Cys Ser Phe  
20 25 30

Gln His Ser Pro Ile Ser Ser Asp Phe Ala Val Lys Ile Arg Glu Leu  
35 40 45

Ser Asp Tyr Leu Leu Gln Asp Tyr Pro Val Thr Val Ala Ser Asn Leu  
50 55 60

Gln Asp Glu Glu Leu Cys Gly Gly Leu Trp Arg Leu Val Leu Ala Gln  
65 70 75 80

Arg Trp Met Glu Arg Leu Lys Thr Val Ala Gly Ser Lys Met Gln Gly  
85 90 95

Leu Leu Glu Arg Val Asn Thr Glu Ile His Phe Val Thr Lys Cys Ala  
100 105 110

Phe Gln Pro Pro Pro Ser Cys Leu Arg Phe Val Gln Thr Asn Ile Ser  
115 120 125

Arg Leu Leu Gln Glu Thr Ser Glu Gln Leu Val Ala Leu Lys Pro Trp  
130 135 140

Ile Thr Arg Gln Asn Phe Ser Arg Cys Leu Glu Leu Gln Cys Gln Pro  
145 150 155 160

Asp Ser Ser Thr Leu Pro Pro Pro Trp Ser Pro Arg Pro Leu Glu Ala  
165 170 175

Thr Ala Pro

<210> 113

<211> 93

<212> PRT

eolf-seql (2)

<213> Artificial Sequence

<220>

<223> Human Macrophage Inflammatory protein 1a amino acid sequence  
(LD78b isoform)

<400> 113

Met Gln Val Ser Thr Ala Ala Leu Ala Val Leu Leu Cys Thr Met Ala  
1 5 10 15

Leu Cys Asn Gln Val Leu Ser Ala Pro Leu Ala Ala Asp Thr Pro Thr  
20 25 30

Ala Cys Cys Phe Ser Tyr Thr Ser Arg Gln Ile Pro Gln Asn Phe Ile  
35 40 45

Ala Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser Lys Pro Ser Val Ile  
50 55 60

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

Trp Val Gln Lys Tyr Val Ser Asp Leu Glu Leu Ser Ala  
85 90

<210> 114

<211> 322

<212> PRT

<213> Artificial Sequence

<220>

<223> Membrane anchored form of the anti-human CD3 single chain Fv

<400> 114

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

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

eolf-seql (2)

Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
35 40 45

Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu  
50 55 60

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn  
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser  
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val  
100 105 110

Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp  
115 120 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly  
130 135 140

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

Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys  
165 170 175

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser  
180 185 190

Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser  
195 200 205

Gly Val Pro Ala His Phe Arg Gly Ser Gly Ser Gly Thr Ser Tyr Ser  
210 215 220

eolf-seql (2)

Leu Thr Ile Ser Gly Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys  
225 230 235 240

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

Glu Ile Asn Arg Gly Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu  
260 265 270

Asn Ala Val Gly Gln Asp Thr Gln Glu Val Ile Val Val Pro His Ser  
275 280 285

Leu Pro Phe Lys Val Val Val Ile Ser Ala Ile Leu Ala Leu Val Val  
290 295 300

Leu Thr Ile Ile Ser Leu Ile Ile Leu Ile Met Leu Trp Gln Lys Lys  
305 310 315 320

Pro Arg

<210> 115  
<211> 33493  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> NG-330 virus genome sequence comprising the EnAd genome with a transgene cassette that encodes the T lymphocyte activation antigen, CD80, inserted in the region By. The transgene cassette contains a 5' SSA, human CD80 cDNA sequence and a 3' poly(A)

<400> 115  
tctatctata taatataacct tatagatgga atgggtgcaa tatgtaaatg aggtgatttt 60  
aaaaagtgtg gatcgtgtgg tgattggctg tgggggttaac ggctaaaagg ggcggtgcga 120  
ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt 180

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggt atttaacagg   | 240  |
| aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa   | 300  |
| tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg   | 360  |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt   | 420  |
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtg cagctgatcg ctagggattt   | 480  |
| tatacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc   | 540  |
| tctgcgccgg cagtttaata ataaaaaaaaat gagagatttg cgatttctgc ctcaggaaat | 600  |
| aatctctgct gagactggaa atgaaatatt ggagcttggt gtgcacgccc tgatgggaga   | 660  |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt   | 720  |
| agaggtagag ggatcggagg attctaataa ggaagctgta aatggctttt ttaccgattc   | 780  |
| tatgctttta gctgctaata aagggttaga attagatccg cttttggaca cttttgatac   | 840  |
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt   | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga   | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt   | 1020 |
| tcagttggat tgcccggagc ttcctggaca tggctgtaag tcttgtaat ttcacaggaa    | 1080 |
| aaatactgga gtaaaggaac tgttatgttc gctttgttat atgagaacgc actgccactt   | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat   | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc   | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg   | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga   | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaacgtc caagacaata    | 1440 |
| agtgttccat atccgtgttt acttaagggt acgtcaatat ttgtgtgaca gtgcaatgta   | 1500 |
| ataaaaaatat gttaactgtt cactgggttt tattgctttt tgggcgggga ctcaggtata  | 1560 |
| taagtagaag cagacctgtg tggttagctc ataggagctg gctttcatcc atggagggtt   | 1620 |

eolf-seql (2)

|          |       |           |       |            |          |           |          |          |            |      |
|----------|-------|-----------|-------|------------|----------|-----------|----------|----------|------------|------|
| gggccat  | ttt   | ggaagac   | ctt   | aggaagacta | ggcaactg | t         | agagaacg | ct       | tcggacggag | 1680 |
| tctccg   | gtt   | ttggagatt | c     | tggttcg    | cta      | gtgaattag | c        | tagggtag | t          | 1740 |
| aacagg   | acta  | taaacaaga | a     | tttgaaa    | agt      | tgttggt   | aga      | ttgcccag | ga         | 1800 |
| ctctta   | at    | gggccat   | cag   | gttcact    | ttta     | aagaaaa   | agt      | tttatcag | t          | 1860 |
| caacccc  | cagg  | tagaact   | g     | ctgctgt    | gg       | cttttct   | tac      | ttttat   | atta       | 1920 |
| tcccg    | cagac | tcatttc   | cagc  | aggggata   | c        | ttttggat  | tt       | catagcc  | caca       | 1980 |
| gaacat   | ggaa  | ggttc     | gcaag | atgaggaca  | a        | tcttagg   | tta      | ctggccag | t          | 2040 |
| gtgtag   | cggg  | aatcct    | gagg  | catccacc   | gg       | tcatgcc   | agc      | ggttctg  | gag        | 2100 |
| aagagg   | acaa  | cccga     | gagcc | ggcctg     | gacc     | ctccag    | t        | ggaggc   | ggag       | 2160 |
| gtctc    | ctgaa | ctgcaac   | ggg   | tgcttact   | gg       | atctac    | gtcc     | actggac  | ggg        | 2220 |
| taagagg  | gag   | agggcat   | cta   | gtggtact   | ga       | tgctagat  | ct       | gagttg   | gctt       | 2280 |
| gagtc    | gcaga | cgtcct    | gaaa  | ccatttg    | gtg      | gcatgag   | gtt      | cagaaag  | agg        | 2340 |
| agttt    | ctgta | ttgcagg   | aga   | aatattc    | act      | ggaacag   | gtg      | aaaacat  | gtt        | 2400 |
| tgaggat  | gat   | tgggag    | gtg   | ccattaaaa  | a        | ttatgcc   | aag      | atagctt  | tga        | 2460 |
| acagtata | ag    | attactag  | ac    | ggattaat   | at       | ccggaat   | gct      | tgttacat | at         | 2520 |
| ggctgag  | gtg   | gtaatag   | ata   | ctcaagaca  | a        | ggcagtt   | att      | agatgct  | gca        | 2580 |
| gtggc    | ctggg | gtagtc    | ggta  | tggaagc    | agt      | aactttt   | gta      | aatgtta  | agt        | 2640 |
| tggttata | aat   | ggaatag   | tgt   | ttatggc    | caa      | taccaa    | actt     | atattg   | catg       | 2700 |
| ttttg    | gtttc | aacaata   | cct   | gtgtagat   | gc       | ctggggac  | ag       | gttagt   | gtac       | 2760 |
| tttctat  | gcg   | tgttggat  | t     | ccacagct   | gg       | cagaacca  | aag      | agtcaatt | gt         | 2820 |
| atgcatat | ttt   | caaagat   | gta   | acctggg    | cat      | tctgaat   | gaa      | ggcgaag  | caa        | 2880 |
| ctgcg    | cttct | acagata   | ctg   | gatgttt    | t        | tttgatta  | aag      | ggaaatg  | cca        | 2940 |
| taacatg  | att   | tgcggt    | gctt  | ccgatgag   | ag       | gccttat   | caa      | atgctc   | actt       | 3000 |
| gcattg   | taat  | atgctg    | gcta  | ctgtgcat   | at       | tgtttccc  | at       | caacgc   | aaaa       | 3060 |



eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt   | 3120 |
| tatgccttac cagtgtaca tgaatcatgt gaaagtgttg ttggaaccag atgccttttc    | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta   | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca   | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac   | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt   | 3420 |
| tggggtggga ttttcagatg gacagattga gtaaaaattt gttttttctg tcttgcagct   | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtcttca gcccttatct gacagggcgt   | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc   | 3600 |
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagtcttc acctttggac    | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac   | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac   | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct   | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa   | 3900 |
| taaaaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt | 3960 |
| gtttttattt catttttcgc gcacggtatg ccctagacca ccgatctcta tcattgagaa   | 4020 |
| ctcgggtggat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca  | 4080 |
| ttaggccgtc tttggggtgg agatagctcc attgaaggga ttcatgctcc ggggtagtgt   | 4140 |
| tgtaaatcac ccagtcataa caaggtcgca gtgcatgggt ttgcacaata tcttttagaa   | 4200 |
| gtaggctgat tgccacagat aagcccttgg tgtaggtgtt taaaaaccgg ttgagctggg   | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttggattg gatttttaag ttggcaatat   | 4320 |
| tgccccaag atcccgtctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg    | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac   | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg   | 4500 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagttatgt tcctgagtta  | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg  | 4620 |
| ttccttcggg ccccgagca tagttcccct cacagatttg catttcccaa gctttcagtt   | 4680 |
| ccgagggtgg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg  | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga tttgccacat ccggtggggc  | 4800 |
| cataaatgat tccgattacg ggttgcaggt ggtagtttag ggaacggcaa ctgccgtctt  | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca  | 4920 |
| aatccattag gaggcgctct cctcctagt atagaagttc ttgtagtgag gaaaagtttt   | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttgagag agtttgctgc aaaagtctta   | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt  | 5100 |
| tcgcgggttt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag  | 5160 |
| ggttcgggtcc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaaggg | 5220 |
| gtgtgcgctt gcttgggcgc ttgccagggt gcgcttcaga ctcatcctgc tggtcgaaaa  | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag tttacatga gttcgtagtt   | 5340 |
| gagcgctcgc gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatat  | 5400 |
| cgggcagtat aggcatttca gcgcatacaa cttgggcgca aggaaaacgg attctggggga | 5460 |
| gtatgcatct gcgccgagg aggcgcaaac agtttcacat tccaccagcc aggttaaadc   | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatttt ttgatgcgtt tcttaccttt | 5580 |
| ggtctccatg agttcgtgtc ctggttgagt gacaaacagg ctgtccgtgt ccccgtagac  | 5640 |
| tgattttaca ggcctcttct ccagtggagt gcctcgggtt tcttcgtaca ggaactctga  | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcaciaag gaggctatgt gggaggggta  | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcaccctc  | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc   | 5940 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact  | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc  | 6060 |
| tttcatgagg ttttcgtcca tctggtcaga aaacacaatt tttttattgt caagtttggt  | 6120 |
| ggcaaatgat ccatacaggg cgttggataa aagtttggca atggatcgca tggtttggtt  | 6180 |
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag  | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcattctggc acgattctca cttgccaccc | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt  | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag  | 6420 |
| ttcatcggga gggctctgcat ccatggtaaa gattcccgga agtaaatcct tatcaaaata | 6480 |
| gctgatggga gtgggggtcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc   | 6720 |
| cggacccaag ttggtgcat tgggtttttc tgttctgtag acgatctggc gaaagatggc   | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggt  | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg  | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggtattct tcgcgaccc tccagtactc   | 7020 |
| ttctagcgga aacccgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac  | 7080 |
| tgccctgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgtc tctgaccatg actttgagga attggtatct | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa   | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaaggtta ggtctgtggg   | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa   | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg  | 7620 |
| ccgtccgact gccatTTTTT ctgggggtgac gcaatagaag gtttgggggt cctgccgcca  | 7680 |
| gcgatcccac ttgagtttta tggcgagggtc ataggcgatg ttgacgagcc gctgggtctcc | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt   | 7800 |
| gtaggtttcc acatcgtagg tgagaaagag cttttctgtg cgaggatgag agccaatcgg   | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa   | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca   | 7980 |
| gcgttgcacg ggttgatatc cgtgaatgag ttgtacctgg cttcccttga cgagaaattt   | 8040 |
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc   | 8100 |
| ctgttcatct tctgtctcga tgggtggcat gctgacgagc cctcgcggga ggcaagtcca   | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag   | 8220 |
| ggtcctgaga cgctgcggac tcaggttagt aggcagtgtc aggagattaa cttgcatgat   | 8280 |
| cttttgagg gcgtgcggga ggttcagata gtacttgatc tcaacgggtc cgttgggtgga   | 8340 |
| gatgtcgatg gcttgcaggg ttccgtgtcc cttgggcgct accaccgtgc cttgtttttt   | 8400 |
| cattttggac ggcgggtggct ctgttgcttc ttgcatgttt agaagcgggtg tcgagggcgc | 8460 |
| gcaccgggcg gcaggggcgg ctccgggaccc ggccggcatgg ctggcagtgg tacgtcggcg | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg   | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac   | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt   | 8700 |
| tcttgcacgt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct   | 8760 |
| tcctcttgaa gatctccgcg gcccgctctc tcgacgggtgg ccgcgagggtc gttggagatg | 8820 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc  | 8880  |
| acggccccca cgggatctct cgcgcgcatg accacctggg cgaggttgag ctccacgtgg  | 8940  |
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg  | 9000  |
| tgctcgggta cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc  | 9060  |
| agagcttcca agcgctccat ggcctcgtag aagtccacgg caaaattaaa aaactgggag  | 9120  |
| tttcgcgcgg acacgggtcaa ctctctttcc agaagacgga taagttcggc gatgggtggg | 9180  |
| cgcacctcgc gctcgaaagc ccctgggatt tcttcctcaa tctcttcttc ttccactaac  | 9240  |
| atctcttcct cttcaggtgg ggctgcagga ggagggggaa cgcggcgacg ccggcggcgc  | 9300  |
| acgggcagac ggtcgatgaa tctttcaatg acctctccgc ggcggcggcg catggtttca  | 9360  |
| gtgacggcgc ggccgttctc gcgcgggtcgc agagtaaaaa caccgccgcg catctcctta | 9420  |
| aagtggtgac tgggagggtt tccgtttggg agggagaggg cgctgattat acattttatt  | 9480  |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa  | 9540  |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct  | 9600  |
| tgtgggcggg ggtggttatg tggtcggctt gggtcttctg tttcttcttc atctcgggaa  | 9660  |
| ggtgagacga tgctgctggg gatgaaatta aagtaggcag ttctaagacg gcggatggg   | 9720  |
| gcgaggagca ccaggctctt gggtccggct tgctggatac gcaggcgatt ggccattccc  | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg  | 9840  |
| ggcacttctt cctcaccgt tctgccatgc atacgtgtga gtccaaatcc gcgcattggg   | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta  | 9960  |
| agggtggctt gaaagtcac aaaatccaca aagcgggtgg aagctcctgt attaatggg    | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggg gaccagggcg cacgagctcg  | 10080 |
| gtgtatttaa ggcggaata ggcgcggggtg tcaaagatgt aatcgttgca ggtgcgcacc  | 10140 |
| agatactggg accctataag aaaatgcggc ggtgggtggc ggtagagagg ccatcgttct  | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac  | 10260 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| ctggacatcc aggtgattcc tgcggcggta gtagaagccc gaggaaactc gcgtacgcgg   | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcattgtag gcacggtttg accagtgagg   | 10380 |
| cgcgcgagcgt cattgatgct ctatagacac ggagaaaatg aaagcgttca gcgactcgac  | 10440 |
| tccgtagcct ggaggaacgt gaacggggtg ggtcgcgggtg taccgccggtt cgagacttgt | 10500 |
| actcgagccg gccggagccg cggctaacgt ggtattggca ctcccgtctc gaccagcct    | 10560 |
| acaaaaatcc aggatacggg atcgagtcgt tttgctgggtt tccgaatggc aggggaagtga | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa   | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact   | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc   | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa   | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag   | 10920 |
| gagccggagg agatgcgagc ttcccgtttt aacgcgggtc gtgagctgcg tcacggtttg   | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagttg atgaaatgac agggatcagt   | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag   | 11100 |
| gaagagcgta acttccaaaa gtcttttaat aatcatgtgc gaaccctgat tgcccgcgaa   | 11160 |
| gaagttaccc ttggtttgat gcatttgtgg gatttgatgg aagctatcat tcagaaccct   | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtgggtc aacacagcag agacaatgag   | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggtt gtatgatctt  | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg  | 11400 |
| gctgccatca attactcggg tttgagcttg ggaaaatatt acgctcgcaa aatctacaag   | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg  | 11520 |
| ctcaaggctc tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc   | 11580 |
| gcggttagcg ccagcaggag gcgagagtta agcgacaggg aactgatgca cagtttgcaa   | 11640 |
| agagctctga ctggagctgg aaccgagggt gagaattact tcgacatggg agctgacttg   | 11700 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac  | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac  | 11820 |
| aacccgtgtt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct  | 11880 |
| gcagagccag ccgtccggca ttaactcctc ggacgattgg acccaggcca tgcaacgtat  | 11940 |
| catggcgttg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct  | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggctct | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa agctattcgt ccagatgagg ccggactggg  | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaat    | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagg tccagcgtga   | 12240 |
| tgccaacctg ggttcgctgg tggcgtaaa tgctttcttg agtactcagc ctgctaattg   | 12300 |
| gccgcgtggg caacaggatt atactaactt ttttaagtgt ttgagactga tggatatcaga | 12360 |
| agtacctcag agcgaagtgt atcagtccgg tcctgattac ttctttcaga ctagcagaca  | 12420 |
| gggcttgtag acggtaaaac tgagccaagc ttttaaaaac cttaaagggt tgtggggagt  | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actccgcct   | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctat    | 12600 |
| gggttaccta ctaaacctgt atcgcggaagc catagggcaa agtcagggtg acgagcagac | 12660 |
| ctatcaagaa attacccaag tcagtcgcgc tttgggacag gaagacactg gcagtttgga  | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaag atccctcctc aatatgctct  | 12780 |
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat  | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag  | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc  | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgcactggc tgccccacc   | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaata gacggatttc tgtgggacga | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg  | 13140 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cgatagaatg cattcttctg catcgctgtc cggggtcatg ggtgctaccg cggctgagcc   | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga   | 13260 |
| agtgggtaga ataagtcgcc cgagtttaat gggcgaagag gagtatctaa acgattcctt   | 13320 |
| gctcagaccg gcaagagaaa aaaattttccc aaacaatgga atagaaagtt tgggtggataa | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat   | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga   | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa   | 13560 |
| cccgtttgct catttgcgcc ctcgcttggg tggatatgtt taaaaaaaaa taaaaaaaaa   | 13620 |
| actcaccaag gccatggcga cgagcgtacg ttcgttcttc tttattatct gtgtctagta   | 13680 |
| taatgaggcg agtcgtgcta ggcggagcgg tgggtgtatcc ggagggctct cctccttcgt  | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcgggtgat gcaatcccca ctggaggctc  | 13800 |
| cctttgtgcc tccgcgatac ctggcaccta cggagggcag aaacagcatt cgttattcgg   | 13860 |
| aactggcacc tcagtacgat accaccaggt tgtatctggt ggacaacaag tcggcggaca   | 13920 |
| ttgcttctct gaactatcag aatgaccaca gcaacttctt gaccacggtg gtgcaaaaca   | 13980 |
| atgactttac ccctacggaa gccagcacc agaccattaa ctttgatgaa cgatcgcggt    | 14040 |
| ggggcgggtca gctaaagacc atcatgcata ctaacatgcc aaacgtgaac gagtatatgt  | 14100 |
| ttagtaacaa gttcaaagcg cgtgtgatgg tgtccagaaa acctcccgac ggtgctgcag   | 14160 |
| ttggggatac ttatgatcac aagcaggata ttttgaaata tgagtgggtc gagtttactt   | 14220 |
| tgccagaagg caacttttca gttactatga ctattgattt gatgaacaat gccatcatag   | 14280 |
| ataattactt gaaagtgggt agacagaatg gagtgcttga aagtgacatt ggtgttaagt   | 14340 |
| tcgacaccag gaacttcaag ctgggatggg atcccgaaac caagttgatc atgcctggag   | 14400 |
| tgtatacgta tgaagccttc catcctgaca ttgtcttact gcctggctgc ggagtggatt   | 14460 |
| ttaccgagag tcgtttgagc aaccttcttg gtatcagaaa aaaacagcca tttcaagagg   | 14520 |
| gttttaagat tttgtatgaa gatttagaag gtggtaatat tccggccctc ttggatgtag   | 14580 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| atgcctatga gaacagtaag aaagaacaaa aagccaaaat agaagctgct acagctgctg  | 14640 |
| cagaagctaa ggcaaacata gttgccagcg actctacaag ggttgctaac gctggagagg  | 14700 |
| tcagaggaga caattttgcg ccaacacctg ttccgactgc agaatcatta ttggccgatg  | 14760 |
| tgtctgaagg aacggacgtg aaactcacta ttcaacctgt agaaaaagat agtaagaata  | 14820 |
| gaagctataa tgtgttgga gacaaaatca acacagccta tcgcagttgg tatctttcgt   | 14880 |
| acaattatgg cgatcccgaa aaaggagtg gttcctggac attgctcacc acctcagatg   | 14940 |
| tcacctgcgg agcagagcag gtctactggg cgcttccaga catgatgaag gatcctgtca  | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggg gggtgcagag cttatgcccc  | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca  | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg  | 15180 |
| cgcccacat taccaccgtc agtgaaaacg ttctgtctt cacagatcac gggaccctgc    | 15240 |
| cgttgcgag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca   | 15300 |
| cctgtcccta cgtgtacaag gcaactgggca tagtcgcacc gcgcgtcctt tcaagccgca | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg  | 15420 |
| tctgcgcgt ccaagcaaga tgtacggagg cgacgcgaaa cgttctaccc aacatcctgt   | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctgcggttcg  | 15540 |
| aaccaccgtc gatgatgtaa tcgatcaggt ggttgccgac gcccgttaatt atactcctac | 15600 |
| tgcgctaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctgcgaacta   | 15660 |
| tgctcgacgt aagagccggc gaaggcgcgt tgccagacgc caccgagcta cactgcat    | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag  | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag cgccggcagg tcccgcaggc aagcagccgc  | 15840 |
| tgctgcagcg gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt   | 15900 |
| gcgtgacgct gccaccggtc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa  | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa  | 16020 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ggaagaaatg ctgcaggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa  | 16080 |
| aaaacccccgc aaaatcaagc gggttaaaaa ggacaaaaaa gaagaggaag atggcgatga | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga cgcgtgcaat ggcgtgggcg  | 16200 |
| caaagttcga catgtgttga gacctggaac ttcggtggtc tttacacccg gcgagcggtc  | 16260 |
| aagcgctact tttaaagcgtt cctatgatga ggtgtacggg gatgatgata ttcttgagca | 16320 |
| ggcggctgac cgattaggcg agtttgctta tggcaagcgt agtagaataa cttccaagga  | 16380 |
| tgagacagtg tcgataccct tggatcatgg aaatcccacc cctagtctta aaccggtcac  | 16440 |
| tttgacgcaa gtgttaccg taactccgcg aacagggtgtt aaacgcgaag gtgaagattt  | 16500 |
| gtatcccact atgcaactga tggtagccaa acgccagaag ttggaggacg ttttggagaa  | 16560 |
| agtaaaagtg gatccagata ttcaacctga ggttaaagt agacccatta agcaggtagc   | 16620 |
| gcctgggtctg ggggtacaaa ctgtagacat taagattccc actgaaagta tggaagtgca | 16680 |
| aactgaaccc gcaaagccta ctgccacct cactgaagt caaacggatc catggatgcc    | 16740 |
| catgcctatt acaactgacg ccgccggtcc cactcgaaga tcccgcgaa agtacgggtcc  | 16800 |
| agcaagtctg ttgatgcca attatgttgt acacccatct attattccta ctcttggtta   | 16860 |
| ccgaggcact cgctactatc gcagccgaaa cagtacctcc cgccgtcgcc gcaagacacc  | 16920 |
| tgcaaatcgc agtcgtcgcc gtagacgcac aagcaaaccg actcccggcg ccctgggtgcg | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc tttgacactg ccgctgcgc gttaccatcc   | 17040 |
| gagtatcatc acttaatcaa tggtgccgct gcctccttgc agatatggcc ctcaattgtc  | 17100 |
| gccttcgcgt tcccatcact ggttaccgag gaagaaactc gcgccgtaga agagggatgt  | 17160 |
| tgggacgcgg aatgcgacgc tacaggcgac ggcgtgctat ccgcaagcaa ttgcggggtg  | 17220 |
| gttttttacc agccttaatt ccaattatcg ctgctgcaat tggcgcgata ccaggcatag  | 17280 |
| cttccgtggc gggtcaggcc tcgcaacgac attgacattg gaaaaaacg tataaataaa   | 17340 |
| aaaaaaaaaa tacaatggac tctgacactc ctggtcctgt gactatgttt tcttagagat  | 17400 |
| ggaagacatc aatttttcat ccttggctcc gcgacacggc acgaagccgt acatgggcac  | 17460 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ctggagcgac atcggcacga gccaaactgaa cgggggcgcc ttcaattgga gcagtatctg | 17520 |
| gagcgggctt aaaaattttg gctcaaccat aaaaacatac gggaacaaag cttggaacag  | 17580 |
| cagtacagga caggcgctta gaaataaact taaagaccag aacttccaac aaaaagtagt  | 17640 |
| cgatgggata gcttccggca tcaatggagt ggtagatttg gctaaccagg ctgtgcagaa  | 17700 |
| aaagataaac agtcgttttg acccgccgcc agcaaccca ggtgaaatgc aagtggagga   | 17760 |
| agaaattcct ccgccagaaa aacgaggcga caagcgtccg cgtcccgatt tggaagagac  | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc  | 17880 |
| caccactaga ccgatagccc caatggccac cggggtgatg aaaccttctc agttgcatcg  | 17940 |
| acccgtcacc ttggatttgc cccctcccc tgctgtact gctgtaccg cttctaagcc     | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccgggggcg ctcctcgtcc  | 18060 |
| aaatgcgcac tggcaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa  | 18120 |
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgcctat ctgtgtatat  | 18180 |
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct  | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc atgggcatac atgcacatcg   | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctggt gcagttcgcc cgcgccacag  | 18360 |
| acacctactt caatctggga aataagtta gaaatccac cgtagcgccg acccacgatg    | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca  | 18480 |
| atacatactc ttacaaagtg cggtagaccc tggccgtggg cgacaacaga gtgctggata  | 18540 |
| tggccagcac gttctttgac attaggggtg tgttgacag aggtcccagt ttcaaaccct   | 18600 |
| attctggtac ggcttacaac tccctggctc cttaaaggcg tccaaatata tctcagtgga  | 18660 |
| ttgcagaagg tgtaaaaaat acaactggtg aggaacacgt aacagaagag gaaaccaata  | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag  | 18780 |
| gactcccagt aggtttggaa gtttcagatg aagaaaagtaa accgatttat gctgataaaa | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg  | 18900 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| aaaagtatgg aggcagggct ctcaaaccgc atactaagat gaaacccatgc tacgggtcct  | 18960 |
| ttgccaaacc tactaatgtg aaaggcgggtc aggcaaaaaca aaaaacaacg gagcagccaa | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa  | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc   | 19140 |
| atgtagtgta caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat   | 19200 |
| ctatgccccaa cagacccaac tacattgggtc tcagagataa ctttattgga cttatgtact | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctggtcaagc gtctcagtta aatgcagtgg   | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg   | 19380 |
| acagaaccag atacttttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac  | 19440 |
| gtgttattga aaatcatggt gtggaagatg aacttcccaa ctactgtttt ccactggacg   | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgccta   | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca   | 19620 |
| tggaaaattaa cttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat   | 19680 |
| atctcccaga ctctgtaaaa tacaccccggt ccaatgtcac tcttccagaa aacaaaaaca  | 19740 |
| cctacgacta catgaacggg cgggtgggtc cgccatctct agtagacacc tatgtgaaca   | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta   | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca   | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca   | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg   | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt   | 20100 |
| tccccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg   | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg    | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctgggtcat  | 20280 |
| ttaccagact gaaaacaaaa gaaactccct ctttgggggtc tggatttgac ccctactttg  | 20340 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac actttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc   | 20460 |
| ctaacgaatt tgaaataaag cgcactgtgg atggcgaagg ctacaacgta gccaatgca    | 20520 |
| acatgaccaa agactgggtc ttggtacaga tgctcgccaa ctacaacatc ggctatcagg   | 20580 |
| gcttctacat tccagaagga taaaaagatc gcatgtattc atttttcaga aacttccagc   | 20640 |
| ccatgagcag gcagggtggtt gatgagggtca attacaaaga cttcaaggcc gtcgccatac | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc   | 20760 |
| aaccctatcc cgctaactat ccctatccac tcatttgaac aactgccgta aatagtgtta   | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcac accgttctcg agcaacttca   | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg   | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct   | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct    | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc   | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca   | 21180 |
| gagccattgt ccaagacctg ggttgcggac cctatTTTTT gggaacctac gataagcgct   | 21240 |
| tcccggggtt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg    | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc   | 21360 |
| tttttgatcc ttttggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg   | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat   | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcatgttcc    | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaacccacc atgaaattgc    | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca    | 21660 |
| atcaaaaagc actctaccat tttcttaata cccattcgcc ttattttcgc tcccatcgta   | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa   | 21780 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| caacgtgttc aataaacatc actttatttt ttacatgta tcaaggctct gcattactta    | 21840 |
| tttattttaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtatacgc  | 21900 |
| ttgcggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt   | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca  | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgttt gagcgcgaga gttgcggtac    | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacgggtg  | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cgggggtcatc  | 22200 |
| ttgcaggctc gcctacccat ggccgggcacc caattaggct tgtggttgca atcgcagtc   | 22260 |
| aggggggatca gtatcatctt ggccgtgatcc tgtctgattc ctggatacac ggctctcatg | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcgggtata aaacatcccg  | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcgggcg   | 22440 |
| tcattgttag ctatttgcac cacacttctg cccagcgggt tttgggtgat tttggttcgc   | 22500 |
| tcgggattct cctttaaggc tcgttgtccg ttctcgctgg ccacatccat ctcgataatc   | 22560 |
| tgctccttct gaatcataat attgccatgc aggcacttca gcttgccctc ataactattg   | 22620 |
| cagccatgag gccacaacgc acagcctgta cattccaat tatggtgggc gatctgagaa    | 22680 |
| aaagaatgta tcattcccctg cagaaatctt cccatcatcg tgctcagtggt cttgtgacta | 22740 |
| gtgaaagtta actggatgcc tcgggtgctcc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtc taagttcgtt atccagcctg   | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc   | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcactttta  | 22980 |
| gcgatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg   | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct    | 23100 |
| tgcatgggga tatgtttggt cttccttggc ttctttttgg ggggtatcgg aggaggagga   | 23160 |
| ctgtcgctcc gttccggaga caggaggat tgtgacgttt cgctcacat taccaactga     | 23220 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ctgtcggtag aagaacctga cccacacagg cgacagggtgt ttctcttcgg gggcagaggt | 23280 |
| ggaggcgatt gcgaagggct gcggtccgac ctggaaggcg gatgactggc agaaccctt   | 23340 |
| ccgcgttcgg ggggtgtgctc cctgtggcgg tcgcttaact gatttccttc gcggctggcc | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |
| cgccacgagt gccatcacat ctcgctctca gcgacgagga aaaggagcag agcttaagca  | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gacccgggct  | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa  | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca  | 23760 |
| ccgactacct catagggcctt gacggggaag acgcgctcct taaacatcta gcaagacagt | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccatcagt gtggaagagc  | 23880 |
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tcccccaaa cgtcagccaa   | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag  | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta  | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag  | 24120 |
| cttccttgga agagggtcca aagatcttcg agggctctggg caataatgag actcgggccg | 24180 |
| caaatgctct gcaaaaggga gaaaatggca tggatgagca tcacagcggt ctggtggaat  | 24240 |
| tggaaggcga taatgccaga ctgcagtagc tcaagcgaag catcgaggtc acacacttcg  | 24300 |
| catatccgcg tgtcaacctg cccctaaag tcatgacggc ggtcatggac cagttactca   | 24360 |
| ttaagcgcg aagtccccct tcagaagaca tgcagacccc agatgcctgt gatgagggtta  | 24420 |
| aaccagtggc cagtgatgag cagctaacc gatggctggg caccgactct cccagggtt    | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tgggtgctggt taccgtagaa ctagagtgtc | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca  | 24600 |
| cttttagaca cggcctttgtg cggcaggcat gcaagatatc taacgtggaa ctcaccaacc | 24660 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tggtttccta catgggtatt ctgcatgaga atcgccagg acaaagcgtg ctgcacagca   | 24720 |
| ccctgaaggg ggaagccgc cgtgattaca tccgcgattg tgtctatctg tacctgtgcc   | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag  | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca  | 24900 |
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa  | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcacacctg  | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca  | 25080 |
| cctaccgcga gtgcccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact   | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc  | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga  | 25260 |
| gcgaaacca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt   | 25320 |
| cttctcctgg gcaaagtta aaactgaccc cgggactgtg gacctccgcc tacttgcgca   | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc   | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcaccagggg ggcaattctg gcccattgc   | 25500 |
| aagccatcca aaaatccgc caagaatttc tactgaaaaa gggtaagggg gtctaccttg   | 25560 |
| acccccagac cggcgaggaa ctcaacacaa gggtccctca ggatgtccca acgacgagaa  | 25620 |
| aacaagaagt tgaagggtgca gccgccgccc ccagaagata tggaggaaga ttgggacagt | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttgag   | 25740 |
| gaggaaaacg aggaggcaga ggaggtggaa gaagtaaccg ccgacaaaca gttatcctcg  | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt  | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcg ttccaagacc   | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcgggggc ataagaatgc catcatctcc  | 25980 |
| tgcttgcatg agtgcggggg caacatatcc ttcacgcggc gctacttgct attccaccat  | 26040 |
| gggggtgaact ttccgcgcaa tgttttgcat tactaccgtc acctccacag cccctactat | 26100 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| agccagcaaa tcccggcagt ctcgacagat aaagacagcg gcggcgacct ccaacagaaa  | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac  | 26220 |
| agccaacgag ccagcgcaaa cccgagagtt aagaaatcgg atcttttcaa ccctgtatgc  | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |
| ttcgctcacc agaagttggt tgtatcacaa gagcgaagat caacttcagc gcactctcga  | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac  | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcatcctcga catgagtaaa gaaattccca  | 26520 |
| cgccttacat gtggagttat caaccccaaa tgggattggc ggacggcgcc tcccaggact  | 26580 |
| actccacccg catgaattgg ctcagcgccg ggcccttctat gatttctcga gttaatgata | 26640 |
| tacgcgccta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc  | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca  | 26760 |
| ccactgtatt acttcctcga gacgcccagg ccgaagtcca aatgactaat gcaggtgcgc  | 26820 |
| agttagctgg cggctccacc ctatgtcgtc acaggcctcg gcataatata aaacgcctga  | 26880 |
| tgatcagagg ccgaggtatc cagctcaacg acgagtcggt gagctctccg cttggtctac  | 26940 |
| gaccagacgg aatctttcag attgccggct gcgggagatc ttccttcacc cctcgtcagg  | 27000 |
| ctgttctgac tttggaaaagt tcgtcttcgc aaccccgctc gggcggaatc gggaccgttc | 27060 |
| aatttgtgga ggagtttact ccctctgtct acttcaaccc cttctccgga tctcctgggc  | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg  | 27180 |
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg  | 27240 |
| ctttcgctgc tttgcccggg aactcattga gttcatctac ttcgaactcc ccaaggatca  | 27300 |
| ccctcaaggt ccggcccacg gagtgcggat ttctatcgaa ggcaaaatag actctcgcct  | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccaggga acaccacggt   | 27420 |
| ttccatctac tgcatttgta atcaccgccg attgcatgaa agcctttgct gtcttatgtg  | 27480 |
| tactgagttt aataaaaact gaattaagac tctcctacgg actgccgctt cttcaacccg  | 27540 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctgtt aacttcacct  | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttcccta  | 27660 |
| ctaatactac tttcaaaacc ggaggtgagc tccaaggtct tcctacagaa aacccttggg  | 27720 |
| tggaagcggg ccttgtagtg ctaggaattc ttgcgggtgg gcttgtgatt attctttgct  | 27780 |
| acctatacac accttgcttc actttcttag tgggtgtgtg gtattggttt aaaaaatggg  | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga  | 27900 |
| tccatgtcta gacttcgacc cagaaaactg cacacttact tttgcacccg acacaagccg  | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aatttacctg  | 28020 |
| catggtggga atcaacccca tagttatcac ccagcaaagt ggagatacta agggttgcat  | 28080 |
| tcactgtccc tgcgattcca tcgagtgcac ctacaccctg ctgaagacc tatgcggcct   | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca  | 28200 |
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttccctc ttcccaactc  | 28260 |
| tggatttcta aaccccgctc agcggcatac tttctccata ctttaaaggg gatgtcaaat  | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt   | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca  | 28440 |
| cccctttata aacccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt  | 28500 |
| tcttacttta aaatgtttaa cccactaac aaccacaggc ggatctctac agctaaaagt   | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac  | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac  | 28680 |
| gaatgaaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aacccaccg aagccaactg   | 28800 |
| tcaaatcatg aactccagt aatctaataa ttgcaaatta attctaacac tagttaaaac   | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct  | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaattt  | 28980 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc  | 29040 |
| tactggtgcc attactaatg ctaaagggtt catgcccagc acgactgcct atcctttcaa  | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga  | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga  | 29220 |
| gacatcatat tgtattcgta taacttgggt ctggaacaca ggagatgccc cagaggtgca  | 29280 |
| aacctctgct acaaccctag tcacctcccc attttaccttt tactacatca gagaagacga | 29340 |
| ctgacaaata aagtttgcga tcgccaggcc caccatgggc cacacacgga ggcagggaac  | 29400 |
| atcaccatcc aagtgtccat acctcaattt ctttcagctc ttggtgctgg ctggtctttc  | 29460 |
| tcacttctgt tcagggtgta tccacgtgac caaggaagtg aaagaagtgg caacgctgtc  | 29520 |
| ctgtgggtcac aatgtttctg ttgaagagct ggcacaaact cgcacttact ggcaaaagga | 29580 |
| gaagaaaatg gtgctgacta tgatgtctgg ggacatgaat atatggcccg agtacaagaa  | 29640 |
| ccggaccatc tttgatata ctaataacct ctccattgtg atcctggctc tgcgccccatc  | 29700 |
| tgacgagggc acatacgagt gtgttgttct gaagtatgaa aaagacgctt tcaagcggga  | 29760 |
| acacctggct gaagtgacgt tatcagtcaa agctgacttc cctacaccta gtatatctga  | 29820 |
| ctttgaaatt ccaacttcta atattagaag gataatttgc tcaacctctg gaggttttcc  | 29880 |
| agagcctcac ctctcctgggt tggaaaatgg agaagaatta aatgccatca acacaacagt | 29940 |
| ttcccaagat cctgaaactg agctctatgc tgtttagcagc aaactggatt tcaatatgac | 30000 |
| aaccaaccac agcttcatgt gtctcatcaa gtatggacat ttaagagtga atcagacctt  | 30060 |
| caactggaat acaaccaagc aagagcattt tcctgataac ctgctcccat cctgggcat   | 30120 |
| taccttaatc tcagtaaatg gaatttttgt gatatgctgc ctgacctact gctttgcccc  | 30180 |
| aagatgcaga gagagaagga ggaatgagag attgagaagg gaaagtgtac gccctgtata  | 30240 |
| agctagcttg actgactgag atacagcgta ctttcagctc acagacatga taagatacat  | 30300 |
| tgatgagttt ggacaaacca caactagaat gcagtgaaaa aaatgcttta tttgtgaaat  | 30360 |
| ttgtgatgct attgctttat ttgtaaccat tataagctgc aataaacaag ttaacaacaa  | 30420 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| caattgcatt cattttatgt ttcaggttca gggggagggtg tgggaggttt tttaaagcaa | 30480 |
| gtaaaacctc tacaaatgtg gtagtcgtca gctatcctgc aggaacttgt ttatttgaaa  | 30540 |
| atcaattcac aaaatccgag tagttatttt gcctccccct tcccatttaa cagaatacac  | 30600 |
| caatctctcc ccacgcacag ctttaaacad ttggatacca ttagatatag acatggtttt  | 30660 |
| agattccaca ttccaaacag tttcagagcg agccaatctg gggtcagtga tagataaaaa  | 30720 |
| tccatcggga tagtctttta aagcgctttc acagtccaac tgctgcggat gcgactccgg  | 30780 |
| agtctggatc acggtcatct ggaagaagaa cgatgggaat cataatccga aaacggtatc  | 30840 |
| ggacgattgt gtctcatcaa acccacaagc agccgctgtc tgcgtcgctc cgtgcgactg  | 30900 |
| ctgtttatgg gatcagggtc cacagtgtcc tgaagcatga ttttaatagc ctttaacatc  | 30960 |
| aactttctgg tgcgatgcgc gcagcaacgc attctgattt cactcaaatac tttgcagtag | 31020 |
| gtacaacaca ttattacaat attgtttaat aaaccataat taaaagcgct ccagccaaaa  | 31080 |
| ctcatatctg atataatcgc ccctgcatga ccatcatacc aaagttaat ataaattaaa   | 31140 |
| tgacgttccc tcaaaaacac actaccacaca tacatgatct cttttggcat gtgcatatta | 31200 |
| acaatctgtc tgtaccatgg acaacgttgg ttaatcatgc aacccaatat aaccttccgg  | 31260 |
| aaccacactg ccaacaccgc tccccagcc atgcattgaa gtgaaccctg ctgattacaa   | 31320 |
| tgacaatgaa gaacccaatt ctctcgaccg tgaatcactt gagaatgaaa aatatctata  | 31380 |
| gtggcacaac atagacataa atgcatgcat cttctcataa tttttaactc ctcaggattt  | 31440 |
| agaaacatat cccagggaat aggaagctct tgcagaacag taaagctggc agaacaagga  | 31500 |
| agaccacgaa cacaacttac actatgcata gtcatagtat cacaatctgg caacagcggg  | 31560 |
| tggctctcag tcatagaagc tcgggtttca ttttcctcac aacgtggtaa ctgggctctg  | 31620 |
| gtgtaagggt gatgtctggc gcatgatgtc gagcgtgcgc gcaaccttgt cataatggag  | 31680 |
| ttgcttcctg acattctcgt attttgata gcaaaacgcg gccctggcag aacacactct   | 31740 |
| tcttcgcctt ctatcctgcc gcttagcgtg ttccgtgtga tagttcaagt acaaccacac  | 31800 |
| tcttaagttg gtcaaaagaa tgctggcttc agttgtaatc aaaactccat cgcatctaata | 31860 |

eolf-seql (2)

|            |             |            |             |             |            |       |
|------------|-------------|------------|-------------|-------------|------------|-------|
| cgttctgagg | aaatcatcca  | agcaatgcaa | ctggattgtg  | tttcaagcag  | gagaggagag | 31920 |
| ggaagagacg | gaagaacccat | gttaattttt | attccaaacg  | atctcgcagt  | acttcaaatt | 31980 |
| gtagatcgcg | cagatggcat  | ctctcgcccc | cactgtgttg  | gtgaaaaagc  | acagctagat | 32040 |
| caaaagaaat | gcgattttca  | aggtgctcaa | cgggtggcttc | cagcaaagcc  | tccacgcgca | 32100 |
| catccaagaa | caaaagaata  | ccaaaagaag | gagcattttc  | taactcctca  | atcatcatat | 32160 |
| tacattcctg | caccattccc  | agataatttt | cagctttcca  | gccttgaatt  | attcgtgtca | 32220 |
| gttcttgtgg | taaatccaat  | ccacacatta | caaacaggtc  | ccggaggggcg | ccctccacca | 32280 |
| ccattcttaa | acacaccctc  | ataatgacaa | aatatcttgc  | tcctgtgtca  | cctgtagcga | 32340 |
| attgagaatg | gcaacatcaa  | ttgacatgcc | cttggctcta  | agttcttctt  | taagttctag | 32400 |
| ttgtaaaaac | tcttcatat   | tatcaccaaa | ctgcttagcc  | agaagcccc   | cgggaacaag | 32460 |
| agcaggggac | gctacagtgc  | agtacaagcg | cagacctccc  | caattggctc  | cagcaaaaac | 32520 |
| aagattggaa | taagcatatt  | gggaaccgcc | agtaatatca  | tcgaagtgc   | tggaaatata | 32580 |
| atcaggcaga | gtttcttgta  | aaaattgaat | aaaagaaaaa  | tttgccaaaa  | aaacattcaa | 32640 |
| aacctctggg | atgcaaatgc  | aataggttac | cgcgctgcgc  | tccaacattg  | ttagttttga | 32700 |
| attagtctgc | aaaaataaaa  | aaaaaaacaa | gcgtcatatc  | atagtagcct  | gacgaacaga | 32760 |
| tggataaatc | agtctttcca  | tcacaagaca | agccacaggg  | tctccagctc  | gaccctcgta | 32820 |
| aaacctgtca | tcatgattaa  | acaacagcac | cgaaagttcc  | tcgcggtgac  | cagcatgaat | 32880 |
| aattcttgat | gaagcataca  | atccagacat | gttagcatca  | gttaacgaga  | aaaaacagcc | 32940 |
| aacatagcct | ttgggtataa  | ttatgcttaa | tcgtaagtat  | agcaaagcca  | cccctcgcgg | 33000 |
| atacaaagta | aaaggcacag  | gagaataaaa | aatataatta  | tttctctgct  | gctgttcagg | 33060 |
| caacgtcgcc | cccgggtcct  | ctaaatacac | atacaaagcc  | tcatcagcca  | tggcttacca | 33120 |
| gacaaagtac | agcgggcaca  | caaagcaca  | gctctaaagt  | gactctccaa  | cctctccaca | 33180 |
| atatatatat | acacaagccc  | taaactgacg | taatgggagt  | aaagtgtaaa  | aaatcccgcc | 33240 |
| aaaccaaca  | cacaccccga  | aactgcgtca | ccagggaaaa  | gtacagtttc  | acttccgcaa | 33300 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| tcccaacagg cgtaacttcc tctttctcac ggtacgtgat atcccactaa cttgcaacgt | 33360 |
| cattttccca cggctgcacc gcccctttta gccgttaacc ccacagccaa tcaccacacg | 33420 |
| atccacactt tttaaaatca cctcatttac atattggcac cattccatct ataaggtata | 33480 |
| ttatatagat aga                                                    | 33493 |

<210> 116  
 <211> 34119  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> NG-343 virus genome sequence comprising the EnAd genome with a transgene cassette that encodes IFNa, and CD80, inserted in the region By. The transgene cassette contains a 5' SSA, IFNa cDNA sequence, P2A peptide, CD80 cDNA sequence and a 3' poly(A)

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| <400> 116                                                          |     |
| tctatctata taatatacct tatagatgga atggtgcca tatgtaaatg aggtgatttt   | 60  |
| aaaaagtgtg gatcgtgtgg tgattggctg tgggggttaac ggctaaaagg ggcggtgcga | 120 |
| ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt  | 180 |
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggt atttaacagg  | 240 |
| aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa  | 300 |
| tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg  | 360 |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt  | 420 |
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtg cagctgatcg ctagggattt  | 480 |
| tatacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc  | 540 |
| tctgcgccgg cagtttaata ataaaaaat gagagatttg cgatttctgc ctcaggaaat   | 600 |
| aatctctgct gagactggaa atgaaatatt ggagcttgtg gtgcacgccc tgatgggaga  | 660 |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt  | 720 |
| agaggtagag ggatcggagg attctaata ggaagctgta aatggctttt ttaccgattc   | 780 |
| tatgctttta gctgctaata aagggttaga attagatccg cttttggaca cttttgatac  | 840 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt  | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga  | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt  | 1020 |
| tcagttggat tgcccggagc ttcctggaca tggctgtaag tcttgatgaat ttcacaggaa | 1080 |
| aaatactgga gtaaaggaac tggtatgttc gctttgttat atgagaacgc actgccactt  | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat  | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc  | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg  | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga  | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaaacgtc caagacaata  | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta | 1500 |
| ataaaaaatat gttaactgtt cactgggtttt tattgctttt tgggcgggga ctcaggata | 1560 |
| taagtagaag cagacctgtg tggttagctc ataggagctg gctttcatcc atggagggtt  | 1620 |
| gggccatttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag  | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa  | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgcccagga ctttttgaag  | 1800 |
| ctcttaattt gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt  | 1860 |
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga  | 1920 |
| tcccgagac tcatttcagc aggggatacg ttttggttt catagccaca gcattgtgga    | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg  | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc  | 2100 |
| aagaggacaa cccgagagcc ggcctggacc ctccagtgga ggaggcggag tagctgactt  | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt  | 2220 |
| taagagggag agggcatcta gtggtactga tgctagatct gagttggctt taagttaaat  | 2280 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gagtcgcaga cgtcctgaaa ccatttgggtg gcatgagggt cagaaagagg gaagggatga  | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacagggtg aaaacatggt gggttgagacc | 2400 |
| tgaggatgat tgggagggtgg ccattaaaaa ttatgccaaag atagctttga ggcctgataa | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg   | 2520 |
| ggctgagggtg gtaatagata ctcaagacaa ggcagttatt agatgctgca tgatggatat  | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga   | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt   | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag   | 2760 |
| tttctatgcg tgttggttg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa    | 2820 |
| atgcatattt caaagatgta acctgggcat tctgaatgaa ggcgaagcaa ggggtccgcca  | 2880 |
| ctgcgcttct acagatactg gatgttttat ttgattaag ggaaatgcca gcgtaaagca    | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctggtgg   | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt   | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt   | 3120 |
| tatgccttac cagtgtaca tgaatcatgt gaaagtgtt ttggaaccag atgccttttc     | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta   | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca   | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac   | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt   | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaattt gttttttctg tcttgcagct  | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtcttca gcccttatct gacagggcgt   | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc   | 3600 |
| gtccaacccg ccaattcttc aacgtgacc tatgctactt taagtcttc accttggac      | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac   | 3720 |



eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac  | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct  | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa  | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt  | 3960 |
| gtttttattt catttttcgc gcacggatatg ccctagacca ccgatctcta tcattgagaa | 4020 |
| ctcgggtgat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca  | 4080 |
| ttaggccgtc tttgggggtg agatagctcc attgaaggga ttcattgctcc ggggtagtgt | 4140 |
| tgtaaatcac ccagtcataa caaggtcgca gtgcatggtg ttgcacaata tcttttagaa  | 4200 |
| gtaggctgat tgccacagat aagcccttgg tgtaggtgtt taaaaaccgg ttgagctggg  | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttggattg gatttttaag ttggcaatat  | 4320 |
| tgccgccaag atcccgtctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg  | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac  | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg  | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagtatatgt tcctgagtta | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg  | 4620 |
| ttccttcggg ccccgagca tagttcccct cacagatttg catttcccaa gctttcagtt   | 4680 |
| ccgaggggtg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg  | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga ttgcccacat ccggtggggc  | 4800 |
| cataaatgat tccgattacg ggttgcaggt ggtagtttag ggaacggcaa ctgccgtctt  | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca  | 4920 |
| aatccattag gaggcgctct cctcctagt atagaagttc ttgtagtgag gaaaagtttt   | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttgagag agtttgctgc aaaagttcta   | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt  | 5100 |
| tcgcgggttt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag  | 5160 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ggttcgggcc ttccaggggc tcagtgttcg agtcaggggt gtttccgtca cagtgaaggg  | 5220 |
| gtgtgcgcct gcttgggcgc ttgccagggg gcgcttcaga ctcatcctgc tggtcgaaaa  | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag tttacatga gttcgtagtt   | 5340 |
| gagcgccctc gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatat  | 5400 |
| cgggcagtat aggcatttca gcgcatacaa cttgggcgca aggaaaacgg attctgggga  | 5460 |
| gtatgcatct gcgccgcagg aggcgcaaac agtttcacat tccaccagcc aggttaaatt  | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatatt ttgatgcgtt tcttaccttt | 5580 |
| ggctctccatg agttcgtgtc ctggttgagt gacaaacagg ctgtccgtgt ccccgtagac | 5640 |
| tgattttaca ggccctcttct ccagtggagt gcctcgggtt tcttcgtaca ggaactctga | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcacaag gaggctatgt gggaggggta   | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcacctc   | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc   | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact  | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc  | 6060 |
| tttcatgagg ttttcgtcca tctggtcaga aaacacaatt tttttattgt caagtttggt  | 6120 |
| ggcaaatgat ccatacaggg cgttggataa aagtttggca atggatcgca tggtttggtt  | 6180 |
| cttttccttg tccgcgcgt ctttggcggc gatgttgagt tggacatact cgcgtgccag   | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcattctggc acgattctca cttgccaccc | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt  | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag  | 6420 |
| ttcatcggga gggctctgcat ccatggtaaa gattcccga agtaaatcct tatcaaaata  | 6480 |
| gctgatggga gtgggggtcat ctaaggccat ttgccattct cgagctgcca gtgcgcgtc  | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatatgttca tgtgatggcg ctagcagccc  | 6720 |
| cggacccaag ttggtgcat tgggtttttc tgttctgtag acgatctggc gaaagatggc   | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggt | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg  | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggatttct tcgcatcct tccagtactc   | 7020 |
| ttctagcggg aacccgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac  | 7080 |
| tgccttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgc tctgaccatg actttgagga attggtattt  | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat  | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaaggta ggtctgtggg   | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg | 7620 |
| ccgtccgact gccatTTTTT ctgggggtgac gcaatagaag gtttgggggt cctgccgcca | 7680 |
| gcgatccac ttgagtttta tggcgaggtc ataggcgatg ttgacgagcc gctggtctcc   | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtttcc acatcgtagg tgagaaagag cttttctgtg cgaggatgag agccaatcgg  | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgcacg ggttgatatc cgtgaatgag ttgtacctgg cttcccttga cgagaaattt  | 8040 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc  | 8100 |
| ctgttcatct tctgtctcga tgggtggcat gctgacgagc cctcgcggga ggcaagtcca  | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag  | 8220 |
| ggtcctgaga cgctgcggac tcaggtagt aggcagtgtc aggagattaa cttgcatgat   | 8280 |
| cttttggagg gcgtgcggga ggttcagata gtacttgatc tcaacgggtc cgttgggtgga | 8340 |
| gatgtcgatg gcttgcaggg ttccgtgtcc cttgggcgct accaccgtgc ccttgttttt  | 8400 |
| cattttggac ggcggtggct ctgttgcttc ttgcatgttt agaagcgggtg tcgagggcgc | 8460 |
| gcaccgggcg gcaggggcgg ctcgggaccc ggcgcatgg ctggcagtgg tacgtcggcg   | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg  | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac  | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt  | 8700 |
| tcttgcacgt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct  | 8760 |
| tcctcttgaa gatctccgcg gcccgtctc tcgacgggtgg ccgcgaggtc gttggagatg  | 8820 |
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc  | 8880 |
| acggcccca cgggatctct cgcgcatg accacctggg cgaggttgag ctccacgtgg     | 8940 |
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg  | 9000 |
| tgctcggatga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc | 9060 |
| agagcttcca agcgctccat ggcctcgtag aagtccacgg caaaattaaa aaactgggag  | 9120 |
| tttcgcgcgg acacggtcaa ctctcttcc agaagacgga taagttcggc gatggtggtg   | 9180 |
| cgcacctcgc gctcgaaagc ccctgggatt tcttcctcaa tctcttcttc ttccactaac  | 9240 |
| atctcttcct cttcaggtgg ggctgcagga ggagggggaa cgcggcgacg ccggcggcgc  | 9300 |
| acgggcagac ggtcgatgaa tctttcaatg acctctccgc ggcggcggcg catggtttca  | 9360 |
| gtgacggcgc ggccgttctc gcgcggtcgc agagtaaaaa caccgccgcg catctcctta  | 9420 |
| aagtggtgac tgggaggttc tccgtttggg agggagaggg cgctgattat acattttatt  | 9480 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| aattggcccg tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa   | 9540  |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct   | 9600  |
| tgtgggcggg ggtggttatg tgttcggctt gggctcttctg tttcttcttc atctcgggaa  | 9660  |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatgggtg  | 9720  |
| gcgaggagca ccaggctctt gggctccggct tgctggatac gcaggcgatt ggccattccc  | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg   | 9840  |
| ggcacttctt cctcaccgt tctgccatgc atacgtgtga gtccaaatcc gcgcattgggt   | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta   | 9960  |
| agggtggctt gaaagtcacg aaaatccaca aagcgggtggt aagctcctgt attaatgggtg | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggt gaccagggcg cacgagctcg   | 10080 |
| gtgtatttaa ggcggaata ggcgcggtg tcaaagatgt aatcgttgca ggtgcgcacc     | 10140 |
| agatactggt accctataag aaaatgcggc ggtggttggc ggtagagagg ccatcgttct   | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac   | 10260 |
| ctggacatcc aggtgattcc tgcggcggtg gtagaagccc gaggaaactc gcgtacgcgg   | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgtag gcacggtttg accagtgagg    | 10380 |
| cgcgcgagcgt cattgatgct ctatagacac ggagaaaatg aaagcgttca gcgactcgac  | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcgggtg taccggtt cgagacttgt    | 10500 |
| actcgagccg gccggagccg cggctaactg ggtattggca ctcccgtctc gaccagcct    | 10560 |
| acaaaaatcc aggatacggg atcgagtcgt ttgctggtt tccgaatggc aggggaagtga   | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa   | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact   | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc   | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa   | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag   | 10920 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| gagccggagg agatgcgagc ttcccgtttt aacgcgggtc gtgagctgcg tcacggtttg   | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagttg atgaaatgac agggatcagt   | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag   | 11100 |
| gaagagcgta acttccaaaa gtcttttaaat aatcatgtgc gaaccctgat tgcccgcgaa  | 11160 |
| gaagttaccc ttggtttgat gcatttgtgg gatttgatgg aagctatcat tcagaaccct   | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctgggtggtgc aacacagcag agacaatgag  | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt   | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg  | 11400 |
| gctgccatca attactcggg tttgagcttg ggaaaatatt acgctcgcaa aatctacaag   | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg  | 11520 |
| ctcaaggctt tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc   | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa   | 11640 |
| agagctctga ctggagctgg aaccgaggggt gagaattact tcgacatggg agctgacttg  | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac   | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac   | 11820 |
| aacccgtgtt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct   | 11880 |
| gcagagccag ccgtccggca ttaactcctc ggacgattgg acccaggcca tgcaacgtat   | 11940 |
| catggcgttg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct   | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggtcct  | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa agctattcgt ccagatgagg ccggactgggt  | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaatth   | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagggt tccagcgtga  | 12240 |
| tgccaacctg ggctcgctgg tggcgtaaaa tgctttcttg agtactcagc ctgctaattg   | 12300 |
| gccgcgtgggt caacaggatt atactaactt ttttaagtgt ttgagactga tggatatcaga | 12360 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| agtacctcag agcgaagtgt atcagtccgg tcctgattac ttctttcaga ctagcagaca    | 12420 |
| gggcttgacag acggtaaatc tgagccaagc ttttaaaaac cttaaagggtt tgtggggaggt | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actccccgct    | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctatctt   | 12600 |
| gggttaccta ctaaacctgt atcgcggaagc catagggcaa agtcagggtgg acgagcagac  | 12660 |
| ctatcaagaa attaccaag tcagtcgctc tttgggacag gaagacactg gcagtttgga     | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaag atccctcctc aatatgctct    | 12780 |
| tactgaggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat    | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag    | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc    | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgcactggc tgccccacc     | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaata gacggatttc tgtgggacga   | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg    | 13140 |
| cgatagaatg cattcttctg catcgctgtc cgggggtcatg ggtgctaccg cggctgagcc   | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga    | 13260 |
| agtgggtaga ataagtcgcc cgagttaaat gggcggaagag gagtatctaa acgattcctt   | 13320 |
| gctcagaccg gcaagagaaa aaaatttccc aaacaatgga atagaaagt ttggtggataa    | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat    | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga    | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa    | 13560 |
| cccgtttgct catttgccgc ctcgcttggg ttgtatgttg taaaaaaaaa taaaaaaaaa    | 13620 |
| actaccaag gccatggcga cgagcgtacg ttcgttcttc ttattatct gtgtctagta      | 13680 |
| taatgaggcg agtcgtgcta ggaggagcgg ttgtgtatcc ggagggtcct cctccttcgt    | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcgggtgat gcaatcccca ctggaggctc   | 13800 |

eolf-seql (2)

|             |            |            |            |             |             |       |
|-------------|------------|------------|------------|-------------|-------------|-------|
| ccttttgccc  | tccgcgatac | ctggcaccta | cggagggcag | aaacagcatt  | cgttattcgg  | 13860 |
| aactggcacc  | tcagtacgat | accaccaggt | tgtatctggt | ggacaacaag  | tcggcggaca  | 13920 |
| ttgcttctct  | gaactatcag | aatgaccaca | gcaacttctt | gaccacgggtg | gtgcaaaaaca | 13980 |
| atgactttac  | ccctacggaa | gccagcaccc | agaccattaa | ctttgatgaa  | cgatcgcggt  | 14040 |
| ggggcgggtca | gctaaagacc | atcatgcata | ctaacatgcc | aaacgtgaac  | gagtatatgt  | 14100 |
| ttagtaacaa  | gttcaaagcg | cgtgtgatgg | tgtccagaaa | acctcccgac  | ggtgctgcag  | 14160 |
| ttggggatac  | ttatgatcac | aagcaggata | ttttgaaata | tgagtggttc  | gagtttactt  | 14220 |
| tgccagaagg  | caacttttca | gttactatga | ctattgattt | gatgaacaat  | gccatcatag  | 14280 |
| ataattactt  | gaaagtgggt | agacagaatg | gagtgcctga | aagtgacatt  | ggtgttaagt  | 14340 |
| tcgacaccag  | gaacttcaag | ctgggatggg | atcccgaac  | caagttgatc  | atgcctggag  | 14400 |
| tgtatacgta  | tgaagccttc | catcctgaca | ttgtcttact | gcctggctgc  | ggagtggatt  | 14460 |
| ttaccgagag  | tcgtttgagc | aaccttcttg | gtatcagaaa | aaaacagcca  | tttcaagagg  | 14520 |
| gttttaagat  | tttgtatgaa | gatttagaag | gtggtaatat | tccggccctc  | ttggatgtag  | 14580 |
| atgcctatga  | gaacagtaag | aaagaacaaa | aagccaaaat | agaagctgct  | acagctgctg  | 14640 |
| cagaagctaa  | ggcaaacata | gttgccagcg | actctacaag | ggttgctaac  | gctggagagg  | 14700 |
| tcagaggaga  | caattttgcg | ccaacacctg | ttccgactgc | agaatcatta  | ttggccgatg  | 14760 |
| tgtctgaagg  | aacggacgtg | aaactcacta | ttcaacctgt | agaaaaagat  | agtaagaata  | 14820 |
| gaagctataa  | tgtgttgga  | gacaaaatca | acacagccta | tcgcagttgg  | tatctttcgt  | 14880 |
| acaattatgg  | cgatcccgaa | aaaggagtgc | gttcctggac | attgctcacc  | acctcagatg  | 14940 |
| tcacctgcgg  | agcagagcag | gtctactggt | cgcttccaga | catgatgaag  | gatcctgtca  | 15000 |
| ctttccgctc  | cactagacaa | gtcagtaact | accctgtggt | gggtgcagag  | cttatgcccg  | 15060 |
| tcttctcaaa  | gagcttctac | aacgaacaag | ctgtgtactc | ccagcagctc  | cgccagtcca  | 15120 |
| cctcgcttac  | gcacgtcttc | aaccgctttc | ctgagaacca | gattttaatc  | cgtccgccgg  | 15180 |
| cgcccaccat  | taccaccgtc | agtgaaaacg | ttcctgctct | cacagatcac  | gggaccctgc  | 15240 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cgttgcgag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca    | 15300 |
| cctgtcccta cgtgtacaag gacttgggca tagtcgcacc gcgcgtcctt tcaagccgca   | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg   | 15420 |
| tctgcgcgt ccaagcaaga tgtacggagg cgcacgcaaa cgttctaccc aacatcctgt    | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg   | 15540 |
| aaccaccgtc gatgatgtaa tcgatcagggt gggtgccgac gcccgttaatt atactcctac | 15600 |
| tgcgctaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta    | 15660 |
| tgctcgacgt aagagccggc gaaggcgcat tgccagacgc caccgagcta cactgccat    | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag   | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag cgccggcagg tcccgcaggc aagcagccgc   | 15840 |
| tgctgcagcg gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt    | 15900 |
| gcgtgacgct gccaccggtc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa   | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa   | 16020 |
| ggaagaaatg ctgcaggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa   | 16080 |
| aaaacccgc aaaatcaagc ggggtaaaaa ggacaaaaaa gaagaggaag atggcgatga    | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga gcggtgcaat ggcggtggcg   | 16200 |
| caaagtgcga catgtgttga gacctggaac ttcgggtggtc ttacacccg gcgagcggtc   | 16260 |
| aagcgctact ttttaagcgtt cctatgatga ggtgtacggg gatgatgata ttcttgagca  | 16320 |
| ggcggctgac cgattaggcg agtttgctta tggcaagcgt agtagaataa cttccaagga   | 16380 |
| tgagacagtg tcgataccct tggatcatgg aaatcccacc cctagtctta aaccggtcac   | 16440 |
| tttgagcaa gtgttaccg taactccgcg aacagggtgtt aaacgcgaag gtgaagattt    | 16500 |
| gtatcccact atgcaactga tggtaaccaa acgccagaag ttggaggacg ttttgagaa    | 16560 |
| agtaaaagtg gatccagata ttcaacctga ggttaaagtg agaccatta agcaggtagc    | 16620 |
| gcctgggtctg ggggtacaaa ctgtagacat taagattccc actgaaagta tggaagtgca  | 16680 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| aactgaaccc gcaaagccta ctgccacctc cactgaagtg caaacggatc catggatgcc    | 16740 |
| catgcctatt acaactgacg ccgccgggtcc cactcgaaga tcccgcacgaa agtacgggtcc | 16800 |
| agcaagtctg ttgatgcca attatgttgt acacccatct attattccta ctcctgggtta    | 16860 |
| ccgaggcact cgctactatc gcagccgaaa cagtacctcc cgccgtcgcc gcaagacacc    | 16920 |
| tgcaaatcgc agtcgtcgcc gtagacgcac aagcaaaccg actcccggcg ccctgggtgcg   | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc tttgacactg ccgcgtgcgc gttaccatcc    | 17040 |
| gagtatcatc acttaatcaa tgttgccgct gcctccttgc agatatggcc ctcacttgtc    | 17100 |
| gccttcgcgt tcccatcact gggtaccgag gaagaaactc gcgccgtaga agagggatgt    | 17160 |
| tgggacgcgg aatgcgacgc tacaggcgac ggcggtgctat ccgcaagcaa ttgcgggggtg  | 17220 |
| gttttttacc agccttaatt ccaattatcg ctgctgcaat tggcgcgata ccaggcatag    | 17280 |
| cttccgtggc gggttcaggcc tcgcaacgac attgacattg gaaaaaaacg tataaataaa   | 17340 |
| aaaaaaaaaa tacaatggac tctgacactc ctggctcctgt gactatgttt tcttagagat   | 17400 |
| ggaagacatc aatttttcat ccttggctcc gcgacacggc acgaagccgt acatgggcac    | 17460 |
| ctggagcgac atcggcacga gccaaactgaa cggggggcgcc ttcaattgga gcagtatctg  | 17520 |
| gagcgggctt aaaaattttg gctcaaccat aaaaacatac gggaacaaag cttggaacag    | 17580 |
| cagtacagga caggcgctta gaaataaact taaagaccag aacttccaac aaaaagtagt    | 17640 |
| cgatgggata gcttccggca tcaatggagt ggtagatttg gctaaccagg ctgtgcagaa    | 17700 |
| aaagataaac agtcgttttg acccgccgcc agcaaccca ggtgaaatgc aagtggagga     | 17760 |
| agaaaattcct ccgccagaaa aacgaggcga caagcgtccg cgtcccgatt tggaagagac   | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc    | 17880 |
| caccactaga ccgatagccc caatggccac cgggggtgatg aaaccttctc agttgcatcg   | 17940 |
| acccgtcacc ttggatttgc cccctcccc tgctgtact gctgtacccg cttctaagcc      | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccggggggcg ctcctcgtcc   | 18060 |
| aaatgcgcac tggcaaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa   | 18120 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgcctat ctgtgtatat  | 18180 |
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct  | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc aatgggcatac atgcacatcg  | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctggt gcagttcgcc cgcgccacag  | 18360 |
| acacctactt caatctggga aataagttta gaaatccac cgtagcgccg acccacgatg   | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca  | 18480 |
| atacatactc ttacaaagtg cggtaacccc tggccgtggg cgacaacaga gtgctggata  | 18540 |
| tggccagcac gttctttgac attaggggtg tgttgagacag aggtcccagt ttcaaaccct | 18600 |
| attctggtag ggcttacaac tccctggctc cttaaaggcg tccaaataca tctcagtga   | 18660 |
| ttgcagaagg tgtaaaaaat acaactgggtg aggaacacgt aacagaagag gaaaccaata | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag  | 18780 |
| gactcccagt aggttttgaa gtttcagatg aagaaaagta accgatttat gctgataaaa  | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg  | 18900 |
| aaaagtatgg aggcagggtc ctcaaaccgc atactaagat gaaaccatgc tacgggtcct  | 18960 |
| ttgccaaacc tactaatgtg aaaggcggtc aggcaaaaca aaaaacaacg gagcagccaa  | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc  | 19140 |
| atgtagtgta caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat  | 19200 |
| ctatgccccaa cagacccaac tacattggct tcagagataa ctttattgga cttatgtact | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctggtcaagc gtctcagtta aatgcagtgg  | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg  | 19380 |
| acagaaccag atacttttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac | 19440 |
| gtgttattga aaatcatggt gtggaagatg aacttcccaa ctactgtttt ccactggacg  | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgcta   | 19560 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca | 19620 |
| tggaaattaa ccttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat | 19680 |
| atctcccaga ctgtacaaa tacaccccggt ccaatgtcac tcttccagaa aacaaaaaca | 19740 |
| cctacgacta catgaacggg cgggtggtgc cgccatctct agtagacacc tatgtgaaca | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca | 19920 |
| tacaagtgcc tcaaaaattc ttcgtgtta aaaacctgct gcttctcca ggctcctaca   | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt | 20100 |
| tccccatggc tcacaacacc gcttccacc ttgaagccat gctgcggaat gacaccaatg  | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg  | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctggtcat | 20280 |
| ttaccagact gaaaacaaa gaaactccct ctttggggtc tggatttgac ccctactttg  | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc | 20460 |
| ctaacgaatt tgaaataaag cgactgtgg atggcgaagg ctacaacgta gcccaatgca  | 20520 |
| acatgaccaa agactgggtt ttggtacaga tgctcgccaa ctacaacatc ggctatcagg | 20580 |
| gcttctacat tccagaagga tacaagatc gcatgtattc atttttcaga aacttccagc  | 20640 |
| ccatgagcag gcagggtggt gatgaggtca attacaaaga cttcaaggcc gtcgccatac | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc | 20760 |
| aaccttatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcat accgttctcg agcaacttca | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct | 21000 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tcgaagtttt cgacgtggtc agagtgcata agccacaccg cggcatcata gaggcagtct   | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc   | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca   | 21180 |
| gagccattgt ccaagacctg ggttgccgac cctatTTTTT gggaacctac gataagcgct   | 21240 |
| tcccggggtt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg    | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc   | 21360 |
| TTTTgatcc ttttggattc tcggatgata gtctcaaaca gatttaccag tttgaatatg    | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat   | 21480 |
| ctaccacagc cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcattgtcc   | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaaccccacc atgaaattgc   | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca    | 21660 |
| atcaaaaaagc actctaccat tttcttaata cccattcgcc ttatTTTctgc tcccatcgta | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa   | 21780 |
| caacgtgttc aataaacatc actttatTTT tttacatgta tcaaggctct gcattactta   | 21840 |
| tttatTTtaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg  | 21900 |
| ttgcggaaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt  | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca  | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgttt gagcgcgaga gttgcggtac    | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacgggtg  | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cgggggtcatc  | 22200 |
| ttgcaggctc gcctacccat ggcgggcacc caattaggct tgtggttgca atcgcagtgc   | 22260 |
| agggggatca gtatcatctt ggcctgatcc tgtctgattc ctggatacac ggctctcatg   | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcgggtata aaacatcccg  | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcgggcg   | 22440 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tcattgtag ctatttgcac cacacttctg cccagcggt tttgggtgat tttggttcgc    | 22500 |
| tcgggattct cctttaaggc tcgttgtccg ttctcgctgg ccacatccat ctcgataatc  | 22560 |
| tgctccttct gaatcataat attgccatgc aggcacttca gcttgccctc ataatcattg  | 22620 |
| cagccatgag gccacaacgc acagcctgta cattcccaat tatgggtgggc gatctgagaa | 22680 |
| aaagaatgta tcattccctg cagaaatctt cccatcatcg tgctcagtgt cttgtgacta  | 22740 |
| gtgaaagtta actggatgcc tcggtgctcc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtc taagtctgtt atccagcctg  | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc  | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcacttcta | 22980 |
| gcgatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg  | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgttttgt cttccttggc ttcttttttg ggggtatcgg aggaggagga  | 23160 |
| ctgtcgctcc gttccggaga caggaggat tgtgacgttt cgctcaccat taccaactga   | 23220 |
| ctgtcggtag aagaacctga cccacacagg cgacagggtg ttctcttcgg gggcagaggt  | 23280 |
| ggaggcgatt gcgaagggtc gcggtccgac ctggaaggcg gatgactggc agaaccctt   | 23340 |
| ccgcgttcgg ggggtgtgctc cctgtggcgg tcgcttaact gatttccttc gcggctggcc | 23400 |
| attgtgttct ctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat   | 23460 |
| cgccacgagt gccatcacat ctcgtcctca gcgacgagga aaaggagcag agcttaagca  | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gaccgggct   | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa  | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca  | 23760 |
| ccgactacct catagggtt gacggggaag acgcgtcct taaacatcta gcaagacagt    | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccatcagt gtggaagagc  | 23880 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tccccccaaa cgtcagccaa  | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag  | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta  | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag  | 24120 |
| cttccttgga agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg | 24180 |
| caaatgctct gcaaaaggga gaaaatggca tggatgagca tcacagcggt ctggtggaat  | 24240 |
| tggaaggcga taatgccaga ctcgcagtac tcaagcgaag catcgaggtc acacacttcg  | 24300 |
| catatccgcg tgtcaacctg ccccttaaag tcatgacggc ggtcatggac cagttactca  | 24360 |
| ttaagcgcgc aagtccccct tcagaagaca tgcatgaccc agatgcctgt gatgagggta  | 24420 |
| aaccagtggg cagtgatgag cagctaaccg gatggctggg caccgactct cccagggatt  | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tgggtgctgg taccgtagaa ctagagtgtc  | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca  | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatatc taacgtggaa ctcaccaacc  | 24660 |
| tggtttccta catgggtatt ctgcatgaga atcgcctagg acaaagcgtg ctgcacagca  | 24720 |
| ccctgaaggg ggaagccgcg cgtgattaca tccgcgattg tgtctatctg tacctgtgcc  | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag  | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca  | 24900 |
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa  | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcacctgg   | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca  | 25080 |
| cctaccgca gtgcccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact    | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc  | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga  | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt  | 25320 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| cttctcctgg gcaaagtta aaactgaccc cgggactgtg gacctccgcc tacttgcgca  | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc  | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcacccaggg ggcaattctg gcccaattgc | 25500 |
| aagccatcca aaaatcccg caagaatttc tactgaaaaa gggtaagggg gtctaccttg  | 25560 |
| acccccagac cggcgaggaa ctcaacacaa ggttccctca ggatgtccca acgacgagaa | 25620 |
| aacaagaagt tgaaggtgca gccgccgccc ccagaagata tggaggaaga ttgggacagt | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttggag | 25740 |
| gaggaaaacg aggaggcaga ggaggtggaa gaagtaaccg ccgacaaaca gttatcctcg | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcgc ttccaagacc | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcgggggc ataagaatgc catcatctcc | 25980 |
| tgcttgcatg agtgcggggg caacatatcc ttcacgcggc gctacttgct attccaccat | 26040 |
| ggggtgaact ttccgcgcaa tgttttgcat tactaccgtc acctccacag cccctactat | 26100 |
| agccagcaaa tcccggcagt ctcgacagat aaagacagcg gcggcgacct ccaacagaaa | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac | 26220 |
| agccaacgag ccagcgcaaa cccgagagtt aagaaatcgg atctttccaa ccctgtatgc | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg | 26340 |
| ttcgctcacc agaagttggt tgtatcacia gagcgaagat caacttcagc gcactctcga | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcatcctcga catgagtaaa gaaattccca | 26520 |
| cgccttacat gtggagttat caaccccaaa tgggattggc ggcaggcgcc tcccaggact | 26580 |
| actccacccg catgaattgg ctcagcgccg ggcttctat gatttctcga gttaatgata  | 26640 |
| tacgcgccta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca | 26760 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ccactgtatt acttcctcga gacgcccagg ccgaagtcca aatgactaat gcaggtgcgc  | 26820 |
| agtttagctgg cggctccacc ctatgtcgtc acaggcctcg gcataatata aaacgcctga | 26880 |
| tgatcagagg ccgaggtatc cagctcaacg acgagtcggt gagctctccg cttggtctac  | 26940 |
| gaccagacgg aatctttcag attgccggct gcgggagatc ttccttcacc cctcgtcagg  | 27000 |
| ctgttctgac tttggaaaagt tcgtcttcgc aaccccgtc gggcggaatc gggaccgttc  | 27060 |
| aatttgtgga ggagtttact ccctctgtct acttcaaccc cttctccgga tctcctgggc  | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg  | 27180 |
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg  | 27240 |
| ctttcgtgc tttgcccggg aactcattga gttcatctac ttcgaactcc ccaaggatca   | 27300 |
| ccctcaaggt ccggcccacg gagtgcggat ttctatcgaa ggcaaaatag actctcgcct  | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccaggga acaccacggt   | 27420 |
| ttccatctac tgcatttgta atcaccccg attgcatgaa agcctttgct gtcttatgtg   | 27480 |
| tactgagttt aataaaaact gaattaagac tctcctacgg actgccgctt cttcaacccg  | 27540 |
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctgtt aacttcacct  | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttcccta  | 27660 |
| ctaatactac tttcaaaacc ggaggtgagc tccaaggtct tcctacagaa aacccttggg  | 27720 |
| tggaagcggg ctttgtagtg ctaggaattc ttgcggttg gcttgtgatt attctttgct   | 27780 |
| acctatacac accttgcttc actttcttag tgggtgtgtg gtattggttt aaaaaatggg  | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga  | 27900 |
| tccatgtcta gacttcgacc cagaaaactg cacacttact tttgcacccg acacaagccg  | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aatttacctg  | 28020 |
| catggtggga atcaacccca tagttatcac ccagcaaagt ggagatacta agggttgcat  | 28080 |
| tactgtctcc tgcgattcca tcgagtgac ctacaccctg ctgaagaccc tatgcggcct   | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca  | 28200 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttcctc ttcccaactc  | 28260 |
| tgggtattcta aaccccgttc agcggcatac tttctccata ctttaaaggg gatgtcaa  | 28320 |
| tttagctcct ctctgttacc cacaatcttc atgtctttct tcccagatga ccaagagagt | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca | 28440 |
| cccctttata aacccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt | 28500 |
| tcttacttta aaatgtttta cccactaac aaccacaggc ggatctctac agctaaaagt  | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac | 28680 |
| gaatgaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aacccaccg aagccaactg  | 28800 |
| tcaaatacatg aactccagt aatctaataa ttgcaaatta attctaacac tagttaaaac | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaattt | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc | 29040 |
| tactggtgcc attactaatg ctaaaggttt catgcccagc acgactgcct atcctttcaa | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga | 29220 |
| gacatcatat tgtattcgta taacttggtc ctggaacaca ggagatgccc cagaggtgca | 29280 |
| aacctctgct acaaccctag tcacctcccc atttaccttt tactacatca gagaagacga | 29340 |
| ctgacaaata aagtttgcca tcgccaggcc accatggcct tgacctttgc tttactggtg | 29400 |
| gccctcctgg tgctcagctg caagtcaagc tgctctgtgg gctgtgatct gcctcaaacc | 29460 |
| cacagcctgg gtagcaggag gaccttgatg ctctggcac agatgaggag aatctctctt  | 29520 |
| ttctcctgct tgaaggacag acatgacttt ggatttcccc aggaggagt tggcaaccag  | 29580 |
| ttccaaaagg ctgaaacat ccctgtcctc catgagatga tccagcagat cttcaatctc  | 29640 |

eolf-seql (2)

|            |            |            |             |             |            |       |
|------------|------------|------------|-------------|-------------|------------|-------|
| ttcagcacia | aggactcatc | tgctgcttgg | gatgagaccc  | tcctagacia  | attctacact | 29700 |
| gaactctacc | agcagctgaa | tgacctggaa | gcctgtgtga  | tacaggggggt | gggggtgaca | 29760 |
| gagactcccc | tgatgaagga | ggactccatt | ctggctgtga  | ggaaataactt | ccaaagaatc | 29820 |
| actctctatc | tgaaagagaa | gaaatacagc | ccttgtgcct  | gggaggttgt  | cagagcagaa | 29880 |
| atcatgagat | ctttttcttt | gtcaacaaac | ttgcaagaaa  | gtttaagaag  | taaggaagga | 29940 |
| agcggagcta | ctaacttcag | cctgctgaag | caggctggag  | acgtggagga  | gaaccctgga | 30000 |
| cctggccaca | cacggaggca | gggaacatca | ccatccaagt  | gtccatacct  | caatttcttt | 30060 |
| cagctcttgg | tgctggctgg | tctttctcac | ttctgttcag  | gtgttatcca  | cgtgaccaag | 30120 |
| gaagtgaag  | aagtggcaac | gctgtcctgt | ggtcacaatg  | tttctgttga  | agagctggca | 30180 |
| caaactcgca | tctactggca | aaaggagaag | aaaatgggtgc | tgactatgat  | gtctggggac | 30240 |
| atgaatatat | ggcccagta  | caagaaccgg | accatctttg  | atatcactaa  | taacctctcc | 30300 |
| attgtgatcc | tggctctgcg | cccatctgac | gagggcacat  | acgagtgtgt  | tgttctgaag | 30360 |
| tatgaaaaag | acgctttcaa | gcgggaacac | ctggctgaag  | tgacgttatc  | agtcaaagct | 30420 |
| gacttcccta | cacctagtat | atctgacttt | gaaattccaa  | cttctaatat  | tagaaggata | 30480 |
| atttgctcaa | cctctggagg | ttttccagag | cctcacctct  | cctggttgga  | aaatggagaa | 30540 |
| gaattaaatg | ccatcaacac | aacagtttcc | caagatcctg  | aaactgagct  | ctatgctggt | 30600 |
| agcagcaaac | tggatttcaa | tatgacaacc | aaccacagct  | tcatgtgtct  | catcaagtat | 30660 |
| ggacatttaa | gagtgaatca | gaccttcaac | tggaatacaa  | ccaagcaaga  | gcattttcct | 30720 |
| gataacctgc | tcccatcctg | ggccattacc | ttaatctcag  | taaatggaat  | ttttgtgata | 30780 |
| tgctgcctga | cctactgctt | tgccccaaga | tgagagagaa  | gaaggaggaa  | tgagagattg | 30840 |
| agaagggaaa | gtgtacgccc | tgtataagct | agcttgactg  | actgagatac  | agcgtacctt | 30900 |
| cagctcacag | acatgataag | atacattgat | gagtttggac  | aaaccacaac  | tagaatgcag | 30960 |
| tgaaaaaaat | gctttatttg | tgaaaatttg | gatgctattg  | ctttatttgg  | aaccattata | 31020 |
| agctgcaata | aacaagttaa | caacaacaat | tgcatcattt  | ttatgtttca  | ggttcagggg | 31080 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| gaggtgtggg aggtttttta aagcaagtaa aacctctaca aatgtggtag tcgtcagcta   | 31140 |
| tcctgcagga acttgtttat ttgaaaatca attcacaaaa tccgagtagt tattttgcct   | 31200 |
| cccccttccc atttaacaga atacaccaat ctctccccac gcacagcttt aaacatttgg   | 31260 |
| ataccattag atatagacat ggttttagat tccacattcc aaacagtttc agagcgagcc   | 31320 |
| aatctgggggt cagtgataga taaaaatcca tcgggatagt cttttaaaagc gctttcacag | 31380 |
| tccaactgct gcggatgcga ctccggagtc tggatcacgg tcatctggaa gaagaacgat   | 31440 |
| gggaatcata atccgaaaac ggtatcggac gatttgtgtct catcaaacc acaagcagcc   | 31500 |
| gctgtctgcg tcgctccgtg cgactgctgt ttatgggatc aggggtccaca gtgtcctgaa  | 31560 |
| gcatgatttt aatagccctt aacatcaact ttctggtgcg atgcgcgcag caacgcattc   | 31620 |
| tgatttcact caaatctttg cagtaggtac aacacattat tacaatattg ttttaataaac  | 31680 |
| cataattaata agcgctccag caaaaactca tatctgatat aatcgcccct gcatgaccat  | 31740 |
| cataccaaaag tttaatataa attaaatgac gttccctcaa aaacacacta cccacatata  | 31800 |
| tgatctcttt tggcatgtgc atattaacaa tctgtctgta ccatggacaa cgttggttaa   | 31860 |
| tcatgcaacc caatataacc ttccggaacc aactgcca caccgctccc ccagccatgc     | 31920 |
| attgaagtga accctgctga ttacaatgac aatgaagaac ccaattctct cgaccgtgaa   | 31980 |
| tcacttgaga atgaaaaata tctatagtgg cacaacatag acataaatgc atgcatcttc   | 32040 |
| tcataatttt taactcctca ggatttagaa acatatccca gggaatagga agctcttgca   | 32100 |
| gaacagtaaa gctggcagaa caaggaagac cacgaacaca acttacacta tgcatagtca   | 32160 |
| tagtatcaca atctggcaac agcgggtggg cttcagtcat agaagctcgg gtttcatttt   | 32220 |
| cctcacaacg tggtaactgg gctctggtgt aagggtgatg tctggcgcat gatgtcgagc   | 32280 |
| gtgcgcgcaa ccttgtcata atggagttgc ttcctgacat tctcgtattt tgtatagcaa   | 32340 |
| aacgcggccc tggcagaaca cactcttctt cgccttctat cctgccgctt agcgtgttcc   | 32400 |
| gtgtgatagt tcaagtacaa ccacactctt aagttgggtca aaagaatgct ggcttcagtt  | 32460 |
| gtaatcaaaa ctccatcgca tctaatacgtt ctgaggaaat catccaagca atgcaactgg  | 32520 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| attgtgtttc aagcaggaga ggagagggaa gagacggaag aaccatgtta atttttattc | 32580 |
| caaacgatct cgcagtactt caaattgtag atcgcgcaga tggcatctct cgccccact  | 32640 |
| gtgttggtga aaaagcacag ctagatcaaa agaaatgcga ttttcaaggt gctcaacggt | 32700 |
| ggcttccagc aaagcctcca cgcgcacatc caagaacaaa agaataccaa aagaaggagc | 32760 |
| attttctaac tcctcaatca tcatattaca ttctgcacc attcccagat aattttcagc  | 32820 |
| tttccagcct tgaattattc gtgtcagttc ttgtggtaaa tccaatccac acattacaaa | 32880 |
| cagggtcccg agggcgcctt ccaccacat tcttaaacac accctcataa tgacaaaata  | 32940 |
| tcttgctcct gtgtcacctg tagcgaattg agaatggcaa catcaattga catgcccttg | 33000 |
| gctctaagtt cttctttaag ttctagttgt aaaaactctc tcatattatc accaaactgc | 33060 |
| ttagccagaa gcccccgagg aacaagagca ggggacgcta cagtgcagta caagcgcaga | 33120 |
| cctccccaat tggctccagc aaaaacaaga ttggaataag catattggga accgccagta | 33180 |
| atatcatcga agttgctgga aatataatca ggcagagttt cttgtaaaaa ttgaataaaa | 33240 |
| gaaaaatttg ccaaaaaaac attcaaaacc tctgggatgc aaatgcaata ggttaccgcg | 33300 |
| ctgcgctcca acattgttag ttttgaatta gtctgcaaaa ataaaaaaaa aaacaagcgt | 33360 |
| catatcatag tagcctgacg aacagatgga taaatcagtc tttccatcac aagacaagcc | 33420 |
| acagggtctc cagctcgacc ctcgtaaaac ctgtcatcat gattaaacaa cagcaccgaa | 33480 |
| agttcctcgc ggtgaccagc atgaataatt cttgatgaag catacaatcc agacatgtta | 33540 |
| gcatcagtta acgagaaaaa acagccaaca tagcctttgg gtataattat gcttaatcgt | 33600 |
| aagtatagca aagccacccc tcgcggtac aaagtaaaag gcacaggaga ataaaaaata  | 33660 |
| taattatttc tctgctgctg ttcaggcaac gtcgcccccg gtccctctaa atacacatac | 33720 |
| aaagcctcat cagccatggc ttaccagaca aagtacagcg ggcacacaaa gcacaagctc | 33780 |
| taaagtgact ctccaacctc tccacaatat atatatacac aagccctaaa ctgacgtaat | 33840 |
| gggagtaaag tgtaaaaaat cccgccaaac ccaacacaca ccccgaaact gcgtcaccag | 33900 |
| ggaaaagtac agtttcactt ccgcaatccc aacaggcgta acttcctctt tctcacggta | 33960 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cgtgatatcc cactaacttg caacgtcatt ttcccacggt cgcaccgccc ctttttagccg | 34020 |
| ttaacccccac agccaatcac cacacgatcc acacttttta aaatcacctc atttacatat | 34080 |
| tggcaccatt ccatctataa ggtatattat atagataga                         | 34119 |

<210> 117  
 <211> 34131  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> NG-345 virus genome sequence comprising the EnAd genome with a transgene cassette that encodes Flt3 Ligand, MIP1a and IFNa, inserted in the region BY. The transgene cassette contains a 5' SSA, Flt3 Ligand cDNA , P2A peptide sequence, MIP1a cDNA sequence

<400> 117

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| tctatctata taatatacct tatagatgga atggtgccaa tatgtaaatg aggtgatttt  | 60  |
| aaaaagtgtg gatcgtgtgg tgattggctg tggggttaac ggctaaaagg ggcgggtcga  | 120 |
| ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt  | 180 |
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggt atttaacagg  | 240 |
| aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa  | 300 |
| tgaggaaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg | 360 |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt  | 420 |
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtgt cagctgatcg ctagggattt | 480 |
| tatacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc  | 540 |
| tctgcgccgg cagttaata ataaaaaat gagagatttg cgatttctgc ctcaggaaat    | 600 |
| aatctctgct gagactggaa atgaaatatt ggagcttgtg gtgcacgccc tgatgggaga  | 660 |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt  | 720 |
| agaggtagag ggatcggagg attctaata ggaagctgta aatggctttt ttaccgattc   | 780 |
| tatgctttta gctgctaata aagggttaga attagatccg cttttggaca cttttgatac  | 840 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt  | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga  | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt  | 1020 |
| tcagttggat tgcccggagc ttcctggaca tggctgtaag tcttgatgaat ttcacaggaa | 1080 |
| aaatactgga gtaaaggaac tggtatgttc gctttgttat atgagaacgc actgccactt  | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat  | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc  | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg  | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga  | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaaacgtc caagacaata  | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta | 1500 |
| ataaaaaatat gttaactgtt cactggtttt tattgctttt tgggcgggga ctcaggata  | 1560 |
| taagtagaag cagacctgtg tggtagctc ataggagctg gctttcatcc atggaggttt   | 1620 |
| gggccatttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag  | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa  | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgcccagga ctttttgaag  | 1800 |
| ctcttaattt gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt  | 1860 |
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga  | 1920 |
| tcccgcagac tcatttcagc aggggatacg ttttggttt catagccaca gcattgtgga   | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg  | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc  | 2100 |
| aagaggacaa cccgagagcc ggccctggacc ctccagtgga ggaggcggag tagctgactt | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt  | 2220 |
| taagaggggag agggcatcta gtggtactga tgctagatct gagttggctt taagttaa   | 2280 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gagtcgcaga cgtcctgaaa ccattttggtg gcatgagggt cagaaagagg gaagggatga  | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacagggtg aaaacatggt gggtggagcc  | 2400 |
| tgaggatgat tgggagggtgg ccattaaaaa ttatgccaaag atagctttga ggcctgataa | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg   | 2520 |
| ggctgagggtg gtaatagata ctcaagacaa ggcagttatt agatgctgca tgatggatat  | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga   | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt   | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag   | 2760 |
| tttctatgcg tgttggattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa   | 2820 |
| atgcatattt caaagatgta acctgggcat tctgaatgaa ggccaagcaa ggggtccgcca  | 2880 |
| ctgcgcttct acagatactg gatgttttat ttgattaag ggaaatgcca gcgtaaagca    | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctggtgg   | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt   | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt   | 3120 |
| tatgccttac cagtgtaca tgaatcatgt gaaagtgttg ttggaaccag atgccttttc    | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta   | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca   | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac   | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt   | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaaattt gttttttctg tcttgagct  | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtccttca gcccttatct gacagggcgt  | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc   | 3600 |
| gtccaacccg ccaattcttc aacgtgacc tatgctactt taagtcttc acctttggac     | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac   | 3720 |



eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac  | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct  | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa  | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt  | 3960 |
| gtttttattt catttttcgc gcacggtatg ccctagacca ccgatctcta tcattgagaa  | 4020 |
| ctcgggtgat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca  | 4080 |
| ttaggccgtc tttggggtgg agatagctcc attgaaggga ttcatgctcc ggggtagtgt  | 4140 |
| tgtaaatcac ccagtcataa caaggtcgca gtgcatggtg ttgcacaata tcttttagaa  | 4200 |
| gtaggctgat tgccacagat aagcccttgg ttaggtgtt taaaaaccgg ttgagctggg   | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttggattg gatttttaag ttggcaatat  | 4320 |
| tgccccaag atcccgtctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg   | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac  | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg  | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagttagtgc tcctgagtta | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg  | 4620 |
| ttccttcggg ccccgagca tagttccct cacagatttg catttcccaa gctttcagtt    | 4680 |
| ccgaggggtg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg  | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga tttgccacat ccggtggggc  | 4800 |
| cataaatgat tccgattacg ggttgacagt gtagtttag ggaacggcaa ctgccgtctt   | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca  | 4920 |
| aatccattag gaggcgctct cctcctagt atagaagttc ttgtagtgag gaaaagtttt   | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttgagag agtttgctgc aaaagttcta   | 5040 |
| gtctgttcca cagttcagt atgtgttcta tggcatctcg atccagcaga cctcctcgtt   | 5100 |
| tcgcggggtt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag  | 5160 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ggttcgggcc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaaggg  | 5220 |
| gtgtgcgcct gcttgggcgc ttgccagggt gcgcttcaga ctcatcctgc tggtcgaaaa  | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag tttacatga gttcgtagtt   | 5340 |
| gagcgccctc gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatat  | 5400 |
| cgggcagtat aggcatattca gcgcatacaa cttgggcgca aggaaaacgg attctgggga | 5460 |
| gtatgcatct gcgccgcagg aggcgcaaac agtttcacat tccaccagcc aggttaaata  | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatatt ttgatgcgtt tcttaccttt | 5580 |
| ggctctccatg agttcgtgtc ctggttgagt gacaaacagg ctgtccgtgt ccccgtagac | 5640 |
| tgattttaca ggccctcttct ccagtggagt gcctcgggtt tcttcgtaca ggaactctga | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcacaaag gaggctatgt gggaggggta  | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcaccttc  | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc   | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact  | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc  | 6060 |
| tttcatgagg ttttcgtcca tctggtcaga aaacacaatt tttttattgt caagtttggt  | 6120 |
| ggcaaatgat ccatacaggg cgttggataa aagtttggca atggatcgca tggtttggtt  | 6180 |
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag  | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcattctggc acgattctca cttgccaccc | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt  | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag  | 6420 |
| ttcatcggga gggctctgcat ccatggtaaa gattcccgga agtaaatcct tatcaaaata | 6480 |
| gctgatggga gtgggggtcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatatgttca tgtgatggcg ctagcagccc  | 6720 |
| cggacccaag ttggtgcgat tgggtttttc tgttctgtag acgatctggc gaaagatggc  | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggg | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg  | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggatttct tcgcatcct tccagtactc   | 7020 |
| ttctagcgga aacctgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac  | 7080 |
| tgccttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgc tctgaccatg actttgagga attggtattt  | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat  | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaaggta ggtctgtggg   | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg | 7620 |
| ccgtccgact gccatTTTTT ctgggggtgac gcaatagaag gtttgggggt cctgccgcca | 7680 |
| gcgatccac ttgagtttta tggcgaggtc ataggcgatg ttgacgagcc gctggtctcc   | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtttcc acatcgtagg tgagaaagag cttttctgtg cgaggatgag agccaatcgg  | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgcacg gggtgtatct cgtgaatgag ttgtacctgg cttcccttga cgagaaattt  | 8040 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc  | 8100 |
| ctgttcatct tctgtctcga tggtaggtcat gctgacgagc cctcgcggga ggcaagtcca | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag  | 8220 |
| ggtcctgaga cgctgcggac tcaggtagt aggcagtgtc aggagattaa cttgcatgat   | 8280 |
| cttttggagg gcgtgcggga ggttcagata gtacttgatc tcaacgggtc cgttgggtga  | 8340 |
| gatgtcgatg gcttgcaggg ttccgtgtcc cttgggcgct accaccgtgc cttgtttttt  | 8400 |
| cattttggac ggcggtggct ctgttgcttc ttgcatgttt agaagcgggtg tcgagggcgc | 8460 |
| gcaccgggcg gcaggggcgg ctcgggaccc ggcgcatgg ctggcagtgg tacgtcggcg   | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg  | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac  | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt  | 8700 |
| tcttgcacgt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct  | 8760 |
| tcctcttgaa gatctccgcg gcccgctctc tcgacgggtg ccgcgaggtc gttggagatg  | 8820 |
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc  | 8880 |
| acggcccca cgggatctct cgcgcgcgatg accacctggg cgaggttgag ctccacgtgg  | 8940 |
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg  | 9000 |
| tgctcgggtga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc | 9060 |
| agagcttcca agcgctccat ggcctcgtag aagtccacgg caaaattaaa aaactgggag  | 9120 |
| tttcgcgcgg acacggtcaa ctctcttcc agaagacgga taagttcggc gatggtggtg   | 9180 |
| cgcacctcgc gctcgaaagc ccctgggatt tcttcctcaa tctcttctt ttccactaac   | 9240 |
| atctcttcct cttcaggtgg ggctgcagga ggagggggaa cgcggcgacg ccggcggcgc  | 9300 |
| acgggcagac ggtcgatgaa tctttcaatg acctctccgc ggccggcggcg catggtttca | 9360 |
| gtgacggcgc ggccgttctc gcgcggctgc agagtaaaaa caccgccgcg catctcctta  | 9420 |
| aagtggtgac tgggaggttc tccgtttggg agggagaggg cgctgattat acattttatt  | 9480 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| aattggcccg tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa    | 9540  |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct    | 9600  |
| tgtgggcggg ggtggttatg tgttcgggtc gggctcttctg tttcttcttc atctcgggaa   | 9660  |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatgggtg   | 9720  |
| gcgaggagca ccaggtcttt gggctccggct tgctggatac gcaggcgatt ggccattccc   | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg    | 9840  |
| ggcacttctt cctcaccctg tctgccatgc atacgtgtga gtccaaatcc gcgcattggt    | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta    | 9960  |
| agggtggctt gaaagtcacg aaaatccaca aagcggtggt aagctcctgt attaatgggtg   | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggt gaccagggcg cacgagctcg    | 10080 |
| gtgtatttaa ggcggaata ggcgcggggtg tcaaagatgt aatcgttgca ggtgcgcacc    | 10140 |
| agatactggt accctataag aaaatgcggc ggtggttggc ggtagagagg ccatcgttct    | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac    | 10260 |
| ctggacatcc aggtgattcc tgcggcggtg gtagaagccc gaggaaactc gcgtacgcgg    | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgtag gcacggtttg accagtgagg     | 10380 |
| cgcgcgagcgt cattgatgct ctatagacac ggagaaaaatg aaagcggttca gcgactcgac | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcgggtg taccgccggtt cgagacttgt  | 10500 |
| actcgagccg gccggagccg cggctaacgt ggtattggca ctcccgtctc gaccagcct     | 10560 |
| acaaaaatcc aggatacggg atcgagtcgt tttgctggtt tccgaatggc aggggaagtga   | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa    | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact    | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc    | 10800 |
| gaaggactgg cacgtctagg tgcgcttca cccgagcggc atccgcgagt tcaactgaaa     | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag    | 10920 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gagccggagg agatgcgagc ttcccgccttt aacgcgggtc gtgagctgcg tcacggtttg | 10980 |
| gaccgaagac gagtggttcg ggacgaggat ttcgaagttg atgaaatgac agggatcagt  | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag  | 11100 |
| gaagagcgta acttccaaaa gtcttttaaat aatcatgtgc gaaccctgat tgcccgcgaa | 11160 |
| gaagttaccc ttggtttgat gcatttgtgg gatttgcgtg aagctatcat tcagaaccct  | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtggtgc aacacagcag agacaatgag  | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt  | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg | 11400 |
| gctgccatca attactcggg tttagacttg ggaaaaatatt acgctcgcaa aatctacaag | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg | 11520 |
| ctcaaggctt tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc  | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa  | 11640 |
| agagctctga ctggagctgg aaccgaggggt gagaattact tcgacatggg agctgacttg | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac  | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac  | 11820 |
| aacccgtgtt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct  | 11880 |
| gcagagccag ccgtccggca ttaactcctc ggacgatttg acccaggcca tgcaacgtat  | 11940 |
| catggcgctg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct  | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggtcct | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa agctattcgt ccagatgagg ccggactggt  | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaatct  | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagggt tccagcgtga | 12240 |
| tgccaacctg gggtcgctgg tggcgtaaaa tgctttcttg agtactcagc ctgctaattg  | 12300 |
| gccgcgtggg caacaggatt atactaactt ttttaagtgc ttgagactga tggatatcaga | 12360 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| agtacctcag agcgaagtgt atcagtccgg tcctgattac ttctttcaga ctagcagaca   | 12420 |
| gggcttgagc acggtaaatc tgagccaagc ttttaaaaaac cttaaagggtt tgtggggagt | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actccccgct   | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctatctt  | 12600 |
| gggttaccta ctaaacctgt atcgcggaagc catagggcaa agtcagggtgg acgagcagac | 12660 |
| ctatcaagaa attaccaag tcagtcgagc tttgggacag gaagacactg gcagtttgga    | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaag atccctcctc aatatgctct   | 12780 |
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat   | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag   | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc   | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgcactggc tgccccacc    | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaata gacggatttc tgtgggacga  | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg   | 13140 |
| cgatagaatg cattcttctg catcgctgtc cgggggtcatg ggtgctaccg cggctgagcc  | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga   | 13260 |
| agtgggtaga ataagtcgcc cgagtttaaat gggcggaagag gagtatctaa acgattcctt | 13320 |
| gctcagaccg gcaagagaaa aaaatttccc aaacaatgga atagaaagt tgggtggataa   | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat   | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga   | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa   | 13560 |
| cccgtttgct catttgcgcc ctgccttggg tggatatgtt taaaaaaaaa taaaaaaaaa   | 13620 |
| actaccaag gccatggcga cgagcgtacg ttcgttcttc tttattatct gtgtctagta    | 13680 |
| taatgaggcg agtcgtgcta ggccggagcgg tgggtgtatcc ggagggtcct cctccttcgt | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcgggtgat gcaatcccca ctggaggctc  | 13800 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cctttgtgcc tccgcgatac ctggcaccta cggagggcag aaacagcatt cgttattcgg  | 13860 |
| aactggcacc tcagtacgat accaccaggt tgtatctggt ggacaacaag tcggcggaca  | 13920 |
| ttgcttctct gaactatcag aatgaccaca gcaacttctt gaccacgggtg gtgcaaaaca | 13980 |
| atgactttac ccctacggaa gccagcaccc agaccattaa ctttgatgaa cgatcgcggt  | 14040 |
| ggggcgggtca gctaaagacc atcatgcata ctaacatgcc aaacgtgaac gagtatatgt | 14100 |
| ttagtaacaa gttcaaagcg cgtgtgatgg tgtccagaaa acctcccgac ggtgctgcag  | 14160 |
| ttggggatac ttatgatcac aagcaggata ttttgaaata tgagtgggtt gagtttactt  | 14220 |
| tgccagaagg caacttttca gttactatga ctattgattt gatgaacaat gccatcatag  | 14280 |
| ataattactt gaaagtgggt agacagaatg gagtgcttga aagtgacatt ggtgttaagt  | 14340 |
| tcgacaccag gaacttcaag ctgggatggg atcccgaac caagttgatc atgcctggag   | 14400 |
| tgtatacgta tgaagccttc catcctgaca ttgtcttact gcctggctgc ggagtggatt  | 14460 |
| ttaccgagag tcgtttgagc aaccttcttg gtatcagaaa aaaacagcca tttcaagagg  | 14520 |
| gttttaagat tttgtatgaa gatttagaag gtggtaatat tccggccctc ttggatgtag  | 14580 |
| atgcctatga gaacagtaag aaagaacaaa aagccaaaat agaagctgct acagctgctg  | 14640 |
| cagaagctaa ggcaaacata gttgccagcg actctacaag gggtgctaac gctggagagg  | 14700 |
| tcagaggaga caattttgcg ccaacacctg ttccgactgc agaatcatta ttggccgatg  | 14760 |
| tgtctgaagg aacggacgtg aaactcacta ttcaacctgt agaaaaagat agtaagaata  | 14820 |
| gaagctataa tgtgttgga gacaaaatca acacagccta tcgcagttgg tatctttcgt   | 14880 |
| acaattatgg cgatcccgaa aaaggagtgc gttcctggac attgctcacc acctcagatg  | 14940 |
| tcacctgcgg agcagagcag gtctactggt cgcttccaga catgatgaag gatcctgtca  | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggt ggggtgcagag cttatgcccg | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca  | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg  | 15180 |
| cgcccacat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc   | 15240 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cggtgcgag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca    | 15300 |
| cctgtcccta cgtgtacaag gacttgggca tagtcgcacc gcgcgtcctt tcaagccgca   | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg   | 15420 |
| tctgcgcgt ccaagcaaga tgtacggagg cgcacgcaaa cgttctaccc aacatcctgt    | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg   | 15540 |
| aaccaccgtc gatgatgtaa tcgatcagggt gggtgccgac gcccgttaatt atactcctac | 15600 |
| tgcgcttaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta   | 15660 |
| tgctcgacgt aagagccggc gaaggcgcgt tgccagacgc caccgagcta cactgcat     | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag   | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag cgccggcagg tcccgcaggc aagcagccgc   | 15840 |
| tgctcgacgc gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt    | 15900 |
| gcgtgacgt gccaccggc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa     | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa   | 16020 |
| ggaagaaatg ctgcagggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa  | 16080 |
| aaaacccgc aaaatcaagc ggggttaaaaa ggacaaaaaa gaagaggaag atggcgatga   | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga gcggtgcaat ggctgggcg    | 16200 |
| caaagttcga catgtgttga gacctggaac ttcgggtggtc ttacacccg gcgagcgttc   | 16260 |
| aagcgctact ttttaagcgtt cctatgatga ggtgtacggg gatgatgata ttcttgagca  | 16320 |
| ggcggctgac cgattaggcg agtttgctta tggcaagcgt agtagaataa cttccaagga   | 16380 |
| tgagacagtgc tcgataccct tggatcatgg aaatcccacc ctagtctta aaccggtcac   | 16440 |
| tttgcagcaa gtgttaccgc taactccgcg aacagggtgtt aaacgcgaag gtgaagattt  | 16500 |
| gtatcccact atgcaactga tggtaaccaa acgccagaag ttggaggacg ttttggagaa   | 16560 |
| agtaaaaagt gatccagata ttcaacctga ggttaaagt agaccatta agcaggtagc     | 16620 |
| gcctgggtctg ggggtacaaa ctgtagacat taagattccc actgaaagta tgggaagtgc  | 16680 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| aactgaaccc gcaaagccta ctgccacctc cactgaagtg caaacggatc catggatgcc   | 16740 |
| catgcctatt acaactgacg ccgccggtcc cactcgaaga tcccgcacgaa agtacgggtcc | 16800 |
| agcaagtctg ttgatgccc aattatgttgt acacccatct attattccta ctcttggtta   | 16860 |
| ccgaggcact cgctactatc gcagccgaaa cagtacctcc cgccgtcgcc gcaagacacc   | 16920 |
| tgcaaatcgc agtcgtcgcc gtagacgcac aagcaaaccg actcccggcg ccctgggtgcg  | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc tttagacttg ccgcgtcgcc gttaccatcc   | 17040 |
| gagtatcatc acttaatcaa tgttgccgct gcctccttgc agatatggcc ctacttgtc    | 17100 |
| gccttcgctg tcccatcact ggttaccgag gaagaaactc gcgccgtaga agagggatgt   | 17160 |
| tgggacgcgg aatgcgacgc tacaggcgac ggctgtctat ccgcaagcaa ttgcgggggtg  | 17220 |
| gttttttacc agccttaatt ccaattatcg ctgctgcaat tggcgcgata ccaggcatag   | 17280 |
| cttccgtggc gggttcaggcc tcgcaacgac attgacattg gaaaaaacg tataaataaa   | 17340 |
| aaaaaaaaaa tacaatggac tctgacactc ctggctctgt gactatgttt tcttagagat   | 17400 |
| ggaagacatc aatttttcat ccttggctcc gcgacacggc acgaagccgt acatgggcac   | 17460 |
| ctggagcgac atcggcacga gccaaactgaa cggggggcgcc ttcaattgga gcagtatctg | 17520 |
| gagcgggctt aaaaattttg gctcaaccat aaaaacatac gggaacaaag cttggaacag   | 17580 |
| cagtacagga caggcgctta gaaataaact taaagaccag aacttccaac aaaaagtagt   | 17640 |
| cgatgggata gcttccggca tcaatggagt ggtagatttg gctaaccagg ctgtgcagaa   | 17700 |
| aaagataaac agtcgttttg acccgccgcc agcaaccca ggtgaaatgc aagtggagga    | 17760 |
| agaaaattcct ccgccagaaa aacgaggcga caagcgtccg cgtcccattg tggaagagac  | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc   | 17880 |
| caccactaga ccgatagccc caatggccac cgggggtgatg aaaccttctc agttgcatcg  | 17940 |
| accggtcacc ttggatttgc cccctcccc tgctgtact gctgtacccg cttctaagcc     | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccggggggcg ctctcgtcc   | 18060 |
| aaatgcgcac tggcaaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa  | 18120 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgccat ctgtgtatat   | 18180 |
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct  | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc aatgggcatac atgcacatcg  | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctggt gcagttcgcc cgcgccacag  | 18360 |
| acacctactt caatctggga aataagttaa gaaatccac cgtagcgccg acccacgatg   | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca  | 18480 |
| atacatactt ttacaaagt cggtagaccc tggccgtggg cgacaacaga gtgctggata   | 18540 |
| tggccagcac gttctttgac attaggggtg tgttgagac aggtcccagt ttcaaaccct   | 18600 |
| attctgggtac ggcttacaac tccctggctc cttaaaggcg tccaaataca tctcagtgga | 18660 |
| ttgcagaagg tgtaaaaaat acaactgggtg aggaacacgt aacagaagag gaaaccaata | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag  | 18780 |
| gactcccagt aggtttggaa gtttcagatg aagaaaagta accgatttat gctgataaaa  | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg  | 18900 |
| aaaagtatgg aggcagggtc ctcaaaccgc atactaagat gaaacctatg tacgggtcct  | 18960 |
| ttgccaaacc tactaatgtg aaaggcggtc aggcaaaaca aaaaacaacg gagcagccaa  | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc  | 19140 |
| atgtagtgta caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat  | 19200 |
| ctatgccccaa cagacccaac tacattggct tcagagataa ctttattgga cttatgtact | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctggtcaagc gtctcagtta aatgcagtgg  | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggag  | 19380 |
| acagaaccag atacttttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac | 19440 |
| gtgttattga aaatcatggt gtggaagatg aacttcccaa ctactgtttt ccactggacg  | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgccta  | 19560 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca  | 19620 |
| tggaaattaa ccttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat  | 19680 |
| atctcccaga ctcgtacaaa tacaccccggt ccaatgtcac tcttccagaa aacaaaaaca | 19740 |
| cctacgacta catgaacggg cgggtgggtgc cgccatctct agtagacacc tatgtgaaca | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta  | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca  | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca  | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt  | 20100 |
| tccccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg  | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg   | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctgggtcat | 20280 |
| ttaccagact gaaaacaaaa gaaactccct ctttggggtc tggatttgac ccctactttg  | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |
| ctaacgaatt tgaaataaag cgactgtgg atggcgaagg ctacaacgta gcccaatgca   | 20520 |
| acatgaccaa agactgggtt ttggtacaga tgctcgccaa ctacaacatc ggctatcagg  | 20580 |
| gcttctacat tccagaagga tacaagatc gcatgtattc atttttcaga aacttccagc   | 20640 |
| ccatgagcag gcaggtggtt gatgaggtca attacaaaga cttcaaggcc gtcgccatac  | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccctatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcat accgttctcg agcaacttca  | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg  | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct  | 21000 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcacatc gaggcagtct    | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc  | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca  | 21180 |
| gagccattgt ccaagacctg ggttgccgac cctatTTTTT gggaacctac gataagcgct  | 21240 |
| tcccggggtt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg   | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc  | 21360 |
| TTTTTgatcc TTTTggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg  | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat  | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcattgtcc   | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaacccacc atgaaattgc   | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca   | 21660 |
| atcaaaaagc actctaccat tttcttaata cccattcgcc ttatTTTcgc tcccatcgta  | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa  | 21780 |
| caacgtgttc aataaacatc actttatTTT ttacatgta tcaaggctct gcattactta   | 21840 |
| tttatTTaca agtcgaatgg gttctgacga gaatcagaat gaccgcagg cagtgatacg   | 21900 |
| ttgcgggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgcttt gagcgcgaga gttgcggtac  | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacgggtg | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cggggtcatc  | 22200 |
| ttgcagggtct gcctacccat ggccgggcacc caattaggct tgtggttgca atcgcagtg | 22260 |
| aggggggatca gtatcatctt ggctgatcc tgtctgattc ctggatacac ggctctcatg  | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcgggtata aaacatccc  | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcgggcg  | 22440 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tcattgttag ctatttgcac cacacttctg ccccagcggg tttgggtgat tttggttcgc  | 22500 |
| tcgggattct cctttaaggc tcgttggtccg ttctcgctgg ccacatccat ctcgataatc | 22560 |
| tgctccttct gaatcataat attgccatgc aggcaacttca gcttgccctc ataatcattg | 22620 |
| cagccatgag gccacaacgc acagcctgta cattcccaat tatgggtgggc gatctgagaa | 22680 |
| aaagaatgta tcattccctg cagaaatctt cccatcatcg tgctcagtgt cttgtgacta  | 22740 |
| gtgaaagtta actggatgcc tcggtgctcc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtt taagtctgtt atccagcctg  | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc  | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcactttta | 22980 |
| gcgatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg  | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgtttggt cttccttggc ttcttttttg ggggtatcgg aggaggagga  | 23160 |
| ctgtcgctcc gttccggaga caggaggagat tgtgacgttt cgctcaccat taccaactga | 23220 |
| ctgtcggtag aagaacctga cccacacagg cgacagggtg ttctcttcgg gggcagagg   | 23280 |
| ggaggcgatt gcgaagggtc gcggtccgac ctggaaggcg gatgactggc agaaccctt   | 23340 |
| ccgcgttcgg ggggtgtgct cctgtggcgg tcgcttaact gatttccttc gcggctggcc  | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |
| cgccacgagt gccatcacat ctgctcctca gcgacgagga aaaggagcag agcttaagca  | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gaccgggct   | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa  | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca  | 23760 |
| ccgactacct catagggtt gacgggggaag acgcgtcct taaacatcta gcaagacagt   | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccatcagt gtggaagagc  | 23880 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tccccccaaa cgtcagccaa  | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag  | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta  | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag  | 24120 |
| cttccttgga agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg | 24180 |
| caaatgctct gcaaaaggga gaaaatggca tggatgagca tcacagcggt ctggtggaat  | 24240 |
| tggaaggcga taatgccaga ctgcgagtac tcaagcgaag catcgagggtc acacacttcg | 24300 |
| catatcccg tgtcaacctg ccccttaaag tcatgacggc ggcatggac cagttactca    | 24360 |
| ttaagcgcg aagtccccct tcagaagaca tgcattgaccc agatgcctgt gatgagggtg  | 24420 |
| aaccagtggc cagtgatgag cagctaaccg gatggctggg caccgactct cccagggatt  | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tgggtgctggg taccgtagaa ctagagtgtc | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaaact cgaagagaat ctgcactaca | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatatc taacgtggaa ctcaccaacc  | 24660 |
| tggtttccta catgggtatt ctgcatgaga atcgcctagg acaaagcgtg ctgcacagca  | 24720 |
| ccctgaagg ggaagccgc cgtgattaca tccgcgattg tgtctatctg tacctgtgcc    | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag  | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca  | 24900 |
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa  | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcattctgg  | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca  | 25080 |
| cctaccgcga gtgccccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact  | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc  | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga  | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcatgggt   | 25320 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cttctcctgg gcaaagttaa aaactgaccc cgggactgtg gacctccgcc tacttgcgca  | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc   | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcacccaggg ggcaattctg gcccaattgc  | 25500 |
| aagccatcca aaaatcccg ccaagaatttc tactgaaaaa gggtaagggg gtctaccttg  | 25560 |
| acccccagac cggcgaggaa ctcaacacaa ggttcctca ggatgtccca acgacgagaa   | 25620 |
| aacaagaagt tgaagggtgca gccgccgccc ccagaagata tggaggaaga ttgggacagt | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttgag   | 25740 |
| gaggaaaacg aggaggcaga ggaggtggaa gaagtaaccg ccgacaaaca gttatcctcg  | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt  | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcgc ttccaagacc  | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcgggggc ataagaatgc catcatctcc  | 25980 |
| tgcttgcatg agtgcggggg caacatatcc ttcacgcggc gctacttgct attccaccat  | 26040 |
| ggggtgaact ttccgcgcaa tgttttgcat tactaccgtc acctccacag cccctactat  | 26100 |
| agccagcaaa tcccggcagt ctcgacagat aaagacagcg gcggcgacct ccaacagaaa  | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac  | 26220 |
| agccaacgag ccagcgcaaa cccgagagtt aagaaatcgg atctttccaa ccctgtatgc  | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |
| ttcgctcacc agaagttggt tgtatcacia gagcgaagat caacttcagc gcactctcga  | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac  | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcatcctcga catgagtaaa gaaattccca  | 26520 |
| cgccttacat gtggagttat caaccccaaa tgggattggc ggcaggcgcc tcccaggact  | 26580 |
| actccacccg catgaattgg ctcagcgccg ggcttctat gatttctcga gttaatgata   | 26640 |
| tacgcgccta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc  | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca  | 26760 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ccactgtatt acttcctcga gacgcccagg ccgaagtcca aatgactaat gcaggtgcgc  | 26820 |
| agttagctgg cggctccacc ctatgtcgtc acaggcctcg gcataatata aaacgcctga  | 26880 |
| tgatcagagg ccgaggtatc cagctcaacg acgagtcggt gagctctccg cttggtctac  | 26940 |
| gaccagacgg aatctttcag attgccggct gcgggagatc ttccttcacc cctcgtcagg  | 27000 |
| ctgttctgac tttggaaaagt tcgtcttcgc aaccccgtc gggcggaatc gggaccgttc  | 27060 |
| aatttgtgga ggagtttact ccctctgtct acttcaaccc cttctccgga tctcctgggc  | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg  | 27180 |
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg  | 27240 |
| ctttcgtgc tttgcccggg aactcattga gttcatctac ttcgaactcc ccaaggatca   | 27300 |
| ccctcaaggt ccggcccacg gagtgcggat ttctatcgaa ggcaaaatag actctcgcct  | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccagggaa acaccacggt  | 27420 |
| ttccatctac tgcatttgta atcaccccg attgcatgaa agcctttgct gtcttatgtg   | 27480 |
| tactgagttt aataaaaaact gaattaagac tctcctacgg actgccgctt cttcaaccgc | 27540 |
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctgtt aacttcacct  | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttccta   | 27660 |
| ctaatactac tttcaaaacc ggaggtgagc tccaaggtct tcctacagaa aacccttggg  | 27720 |
| tggaagcggg cttgttagtg ctaggaattc ttgcgggtgg gcttgtgatt attctttgct  | 27780 |
| acctatacac accttgcttc actttcttag tgggtgttggt gtattggttt aaaaaatggg | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga  | 27900 |
| tccatgtcta gacttcgacc cagaaaaactg cacacttact tttgcacccg acacaagccg | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aatttacctg  | 28020 |
| catggtggga atcaaccca tagttatcac ccagcaaagt ggagatacta agggttgcat   | 28080 |
| tactgtctcc tgcgattcca tcgagtgac ctacaccctg ctgaagaccc tatgcggcct   | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca  | 28200 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttccctc ttcccaactc  | 28260 |
| tggtattcta aaccccgttc agcggcatac tttctccata ctttaaaggg gatgtcaa    | 28320 |
| tttagctcct ctctgttacc cacaatcttc atgtctttct tcccagatga ccaagagagt  | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca  | 28440 |
| cccctttata aacccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt  | 28500 |
| tcttacttta aaatgtttta cccactaac aaccacaggc ggatctctac agctaaaagt   | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac  | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac  | 28680 |
| gaatgaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat  | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aaccccaccg aagccaactg  | 28800 |
| tcaaatacatg aactccagtg aatctaataa ttgcaaatta attctaacac tagttaaaac | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct  | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaattt  | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc  | 29040 |
| tactggtgcc attactaatg ctaaaggttt catgcccagc acgactgcct atcctttcaa  | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga  | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga  | 29220 |
| gacatcatat tgtattcgta taacttggtc ctggaacaca ggagatgccc cagaggtgca  | 29280 |
| aacctctgct acaaccctag tcacctcccc atttaccttt tactacatca gagaagacga  | 29340 |
| ctgacaaata aagtttgcca tcgccaggcc accatgacag tgctggcgcc agcctggagc  | 29400 |
| ccaacaacct atctcctcct gctgctgctg ctgagctcgg gactcagtgg gacccaggac  | 29460 |
| tgctccttcc aacacagccc catctcctcc gacttcgctg tcaaaatccg tgagctgtct  | 29520 |
| gactacctgc ttcaagatta cccagtcacc gtggcctcca acctccagga cgaggagctc  | 29580 |
| tgcgggggcc tctggcggct ggtcctggca cagcgctgga tggagcggct caagactgtc  | 29640 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gctgggtcca agatgcaagg cttgctggag cgcgtgaaca cggagataca ctttgtcacc  | 29700 |
| aaatgtgcct ttcagcccc cccagctgt cttcgcttcg tccagaccaa catctcccgc    | 29760 |
| ctcctacagg agacctccga gcagctgggtg gcgctgaagc cctggatcac tcgccagaac | 29820 |
| ttctcccggg gcctggagct gcagtgtcag cccgactcct caaccctgcc acccccatgg  | 29880 |
| agtccccggc ccctggaggc cacagccccg ggaagcggag ctactaactt cagcctgctg  | 29940 |
| aagcaggctg gagacgtgga ggagaaccct ggacctcagg tctccactgc tgcccttgcc  | 30000 |
| gtcctcctct gcaccatggc tctctgcaac caggctcctt ctgcaccact tgctgctgac  | 30060 |
| acgccgaccg cctgctgctt cagctacacc tcccagacaga ttccacagaa tttcatagct | 30120 |
| gactactttg agacgagcag ccagtgtctc aagcccagtg tcatcttcct aaccaagaga  | 30180 |
| ggccggcagg tctgtgctga cccagtgag gagtgggtcc agaaatacgt cagtgcctg    | 30240 |
| gagctgagtg ccggaagcgg agagggcaga ggaagtctgc taacatgcgg tgacgtcgag  | 30300 |
| gagaatcctg gacctgcctt gacctttgct ttactgggtg ccctcctggg gctcagctgc  | 30360 |
| aagtcaagct gctctgtggg ctgtgatctg cctcaaacc acagcctggg tagcaggagg   | 30420 |
| accttgatgc tcctggcaca gatgaggaga atctctcttt tctcctgctt gaaggacaga  | 30480 |
| catgactttg gatttcccca ggaggagttt ggcaaccagt tccaaaaggc tgaaaccatc  | 30540 |
| cctgtcctcc atgagatgat ccagcagatc ttcaatctct tcagcacaaa ggactcatct  | 30600 |
| gctgcttggg atgagaccct cctagacaaa ttctacactg aactctacca gcagctgaat  | 30660 |
| gacctggaag cctgtgtgat acaggggggtg ggggtgacag agactcccct gatgaaggag | 30720 |
| gactccattc tggctgtgag gaaatacttc caaagaatca ctctctatct gaaagagaag  | 30780 |
| aaatacagcc cttgtgcctg ggaggttgtc agagcagaaa tcatgagatc tttttctttg  | 30840 |
| tcaacaaact tgcaagaaag tttaagaagt aaggaataag ctagcttgac tgactgagat  | 30900 |
| acagcgtacc ttcagctcac agacatgata agatacattg atgagtttgg acaaaccaca  | 30960 |
| actagaatgc agtgaaaaaa atgctttatt tgtgaaattt gtgatgctat tgctttattt  | 31020 |
| gtaaccatta taagctgcaa taaacaagtt aacaacaaca attgcattca ttttatgttt  | 31080 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| caggttcagg gggagggtgtg ggagggttttt taaagcaagt aaaacctcta caaatgtggt | 31140 |
| agtcgtcagc tatcctgcag gaacttgttt atttgaaaat caattcacaa aatccgagta   | 31200 |
| gttatttttgc ctcccccttc ccatttaaca gaatacacca atctctcccc acgcacagct  | 31260 |
| ttaaacattt ggataccatt agatatagac atggtttttag attccacatt ccaaacagtt  | 31320 |
| tcagagcgag ccaatctggg gtcagtgata gataaaaaatc catcgggata gtctttttaa  | 31380 |
| gcgctttcac agtccaactg ctgcggatgc gactccggag tctggatcac ggtcatctgg   | 31440 |
| aagaagaacg atgggaatca taatccgaaa acggtatcgg acgatttgtgt ctcatcaaac  | 31500 |
| ccacaagcag ccgctgtctg cgctcgtccg tgcgactgct gtttatggga tcagggtcca   | 31560 |
| cagtgtcctg aagcatgatt ttaatagccc ttaacatcaa ctttctgggtg cgatgcgcgc  | 31620 |
| agcaacgcat tctgatttca ctcaaacttt tgcagtaggt acaacacatt attacaatat   | 31680 |
| tgtttaataa accataatta aaagcgctcc agccaaaact catatctgat ataatcgccc   | 31740 |
| ctgcatgacc atcatacca agtttaatat aaattaaatg acgttccctc aaaaacacac    | 31800 |
| taccacata catgatctct tttggcatgt gcatattaac aatctgtctg taccatggac    | 31860 |
| aacgttgggtt aatcatgcaa cccaatataa ctttccggaa ccacactgcc aacaccgctc  | 31920 |
| ccccagccat gcattgaagt gaaccctgct gattacaatg acaatgaaga acccaattct   | 31980 |
| ctcgaccgtg aatcacttga gaatgaaaaa tatctatagt ggcacaacat agacataaat   | 32040 |
| gcatgcatct tctcataatt tttaactcct caggatttag aaacatatcc cagggaatag   | 32100 |
| gaagctcttg cagaacagta aagctggcag aacaaggaag accacgaaca caacttacac   | 32160 |
| tatgcatagt catagtatca caatctggca acagcgggtg gtcttcagtc atagaagctc   | 32220 |
| gggtttcatt ttcctcacaa cgtggtaact gggctctggt gtaagggtga tgtctggcgc   | 32280 |
| atgatgtcga gcgtgcgcgc aaccttgtca taatggagtt gcttcctgac attctcgtat   | 32340 |
| tttgatatagc aaaacgcggc cctggcagaa cacactcttc ttcgccttct atcctgccgc  | 32400 |
| ttagcgtgtt ccgtgtgata gttcaagtac aaccacactc ttaagttggg caaaagaatg   | 32460 |
| ctggcttcag ttgtaatcaa aactccatcg catctaactg ttctgaggaa atcatccaag   | 32520 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| caatgcaact ggattgtgtt tcaagcagga gaggagaggg aagagacgga agaaccatgt   | 32580 |
| taatTTTTat tccaaacgat ctgcgagtac ttcaaattgt agatcgcgca gatggcatct   | 32640 |
| ctgccccca ctgtgttggg gaaaaagcac agctagatca aaagaaatgc gattttcaag    | 32700 |
| gtgctcaacg gtggcttcca gcaaagcctc cacgcgcaca tccaagaaca aaagaatacc   | 32760 |
| aaaagaagga gcattttcta actcctcaat catcatatta cattcctgca ccattcccag   | 32820 |
| ataatTTTca gctttccagc cttgaattat tcgtgtcagt tcttgtggta aatccaatcc   | 32880 |
| acacattaca aacagggtccc ggagggcgcc ctccaccacc attcttaaac acaccctcat  | 32940 |
| aatgacaaaa tatcttgctc ctgtgtcacc tgtagcgaat tgagaatggc aacatcaatt   | 33000 |
| gacatgccct tggctctaag ttcttcttta agttctagtt gtaaaaaactc tctcatatta  | 33060 |
| tcacaaaact gcttagccag aagccccccg ggaacaagag caggggacgc tacagtgcag   | 33120 |
| tacaagcgca gacctccca attggctcca gcaaaaaaca gattggaata agcatattgg    | 33180 |
| gaaccgccag taatatcatc gaagttgctg gaaatataat caggcagagt ttcttgtaaa   | 33240 |
| aattgaataa aagaaaaatt tgccaaaaaa acattcaaaa cctctgggat gcaaatgcaa   | 33300 |
| taggttaccg cgctgcgctc caacattgtt agttttgaat tagtctgcaa aaataaaaaa   | 33360 |
| aaaaacaagc gtcatatcat agtagcctga cgaacagatg gataaatcag tctttccatc   | 33420 |
| acaagacaag ccacagggtc tccagctcga cctcgtaaa acctgtcatc atgattaaac    | 33480 |
| aacagcaccg aaagttcctc gcggtgacca gcatgaataa ttcttgatga agcatacaat   | 33540 |
| ccagacatgt tagcatcagt taacgagaaa aaacagccaa catagccttt ggggtataatt  | 33600 |
| atgcttaatc gtaagtatag caaagccacc cctcgcggat acaaagtaaa aggcacagga   | 33660 |
| gaataaaaaa tataattatt tctctgctgc tgttcaggca acgtcgcccc cggtccctct   | 33720 |
| aaatacacat acaaagcctc atcagccatg gcttaccaga caaagtacag cgggcacaca   | 33780 |
| aagcacaagc tctaaagtga ctctccaacc tctccacaat atatatatatac acaagcccta | 33840 |
| aactgacgta atgggagtaa agtgtaaaaa atcccgccaa acccaacaca cccccgaaa    | 33900 |
| ctgcgtcacc agggaaaagt acagtttcac ttccgcaatc ccaacaggcg taacttcctc   | 33960 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| tttctcacgg tacgtgatat ccactaact tgcaacgtca ttttcccacg gtcgcaccgc  | 34020 |
| cccttttagc cgtaaaccac acagccaatc accacacgat ccacactttt taaaatcacc | 34080 |
| tcattttacat attggcacca ttccatctat aaggatatatt atatagatag a        | 34131 |

<210> 118  
 <211> 34432  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> NG-346 virus genome sequence comprising a transgene cassette that encodes Flt3 Ligand, MIP1a and CD80, employing SSA and P2A sequence, inserted in the region BY

|                                                                      |     |
|----------------------------------------------------------------------|-----|
| <400> 118                                                            |     |
| tctatctata taatatacct tatagatgga atgggtgcaa tatgtaaatg aggtgatttt    | 60  |
| aaaaagtgtg gatcgtgtgg tgattggctg tgggggttaac ggctaaaagg ggcgggtgcga  | 120 |
| ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt    | 180 |
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggg atttaacagg    | 240 |
| aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa    | 300 |
| tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg    | 360 |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt    | 420 |
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtg cagctgatcg ctaggggtatt   | 480 |
| tatacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc    | 540 |
| tctgcgccgg cagtttaata ataaaaaaaaat gagagatttg cgattttctgc ctcaggaaat | 600 |
| aatctctgct gagactggaa atgaaatatt ggagcttgtg gtgcacgccc tgatgggaga    | 660 |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt    | 720 |
| agaggtagag ggatcggagg attctaata ggaagctgta aatggctttt ttaccgattc     | 780 |
| tatgctttta gctgctaata aagggtaga attagatccg cttttggaca cttttgatac     | 840 |
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt    | 900 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga  | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt  | 1020 |
| tcagttggat tgcccggagc ttcctggaca tggctgtaag tcttgtgaat ttcacaggaa  | 1080 |
| aaatactgga gtaaaggaac tgttatgttc gctttgttat atgagaacgc actgccactt  | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat  | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc  | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg  | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga  | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaacgtc caagacaata   | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta | 1500 |
| ataaaaatat gttaactgtt cactggtttt tattgctttt tgggcgggga ctcaggtata  | 1560 |
| taagtagaag cagacctgtg tggtagctc ataggagctg gctttcatcc atggaggttt   | 1620 |
| gggccatttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag  | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa  | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgccagga ctttttgaag   | 1800 |
| ctcttaattt gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt  | 1860 |
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga  | 1920 |
| tccgcagac tcatttcagc aggggatacg ttttggtttt catagccaca gcattgtgga   | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg  | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc  | 2100 |
| aagaggacaa cccgagagcc ggcctggacc ctccagtgga ggaggcggag tagctgactt  | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt  | 2220 |
| taagagggag agggcatcta gtggtactga tgctagatct gagttggctt taagtttaat  | 2280 |
| gagtcgcaga cgtcctgaaa ccatttggtg gcatgagggt cagaaagagg gaagggatga  | 2340 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| agtttctgta ttgcaggaga aatattcact ggaacagggtg aaaacatgtt ggttggagcc  | 2400 |
| tgaggatgat tgggagggtgg ccattaaaaa ttatgccaaag atagctttga ggcctgataa | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg   | 2520 |
| ggctgagggtg gtaatagata ctcaagacaa ggcagttatt agatgctgca tgatggatat  | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga   | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt   | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag   | 2760 |
| tttctatgcg tgttggattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa   | 2820 |
| atgcatatth caaagatgta acctgggcat tctgaatgaa ggcgaagcaa ggggtccgcca  | 2880 |
| ctgctgcttct acagatactg gatgttttat tttgattaag ggaaatgcca gcgtaaagca  | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctgggtg   | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt   | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt   | 3120 |
| tatgccttac cagtgtaaaca tgaatcatgt gaaagtgttg ttggaaccag atgccttttc  | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta   | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca   | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac   | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt   | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaaattt gttttttctg tcttgagct  | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtcttca gcccttatct gacagggcgt   | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc   | 3600 |
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagtcttc acctttggac    | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac   | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac   | 3780 |



eolf-seql (2)

|                                                                   |      |
|-------------------------------------------------------------------|------|
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt | 3960 |
| gtttttattt catttttcgc gcacggtatg ccctagacca ccgatctcta tcattgagaa | 4020 |
| ctcgggtgat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca | 4080 |
| ttaggccgtc tttgggggtg agatagctcc attgaaggga ttcatgctcc ggggtagtgt | 4140 |
| tgtaaatac ccagtcataa caaggctgca gtgcatggtg ttgcacaata tcttttagaa  | 4200 |
| gtaggctgat tgccacagat aagcccttgg ttaggtgtt tacaaccgg ttgagctggg   | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttggattg gatttttaag ttggcaatat | 4320 |
| tgccgccaag atcccgctct gggttcatgt tatgaaggac caccaagacg gtgtatccgg | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagttatgt tcctgagtta | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg | 4620 |
| ttccttcggg ccccgagca tagttcccct cacagatttg catttccaa gctttcagtt   | 4680 |
| ccgaggggtg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga tttgccacat ccggtggggc | 4800 |
| cataaatgat tccgattacg ggttgcaggt ggtagtttag ggaacggcaa ctgccgtctt | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca | 4920 |
| aatccattag gaggcgctct cctcctagt atagaagttc ttgtagtgag gaaaagtttt  | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttggagag agtttgctgc aaaagttcta | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt | 5100 |
| tcgcgggttt ggacggctcc tggaataggg tatgagacga tggcgtcca gcgtgccag   | 5160 |
| ggttcggtcc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaaggg | 5220 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| gtgtgcgccct gcttgggcgc ttgccagggt gcgcttcaga ctcacccctgc tggtcgaaaa | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag tttaccatga gttcgtagtt   | 5340 |
| gagcgccctcg gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatac  | 5400 |
| cgggcagtat aggcatattca gcgcatacaa cttgggcgca aggaaaacgg attctggggga | 5460 |
| gtatgcatct gcgccgcagg aggcgcaaac agtttcacat tccaccagcc aggttaaadc   | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatattt ttgatgcgtt tcttaccttt | 5580 |
| ggctctccatg agttcgtgtc ctcgttgagt gacaaacagg ctgtccgtgt ccccgtagac  | 5640 |
| tgattttaca ggccctttct ccagtggagt gcctcggctt tcttcgtaca ggaactctga   | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcacaaaag gaggctatgt gggaggggta  | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcacccctc  | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc  | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc    | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact   | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc   | 6060 |
| tttcatgagg ttttctcca tctggtcaga aaacacaatt tttttattgt caagtttgg     | 6120 |
| ggcaaatgat ccatacaggg cggttgataa aagtttggca atggatcgca tggtttgggt   | 6180 |
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag   | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcacatggc acgattctca cttgccaccc   | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt   | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag   | 6420 |
| ttcatcggga gggctctgcat ccatggtaaa gattcccga agtaaadcct tatcaaaata   | 6480 |
| gctgatggga gtgggggtcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc  | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc   | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg   | 6660 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc   | 6720 |
| cggacccaag ttggtgcgat tgggtttttc tgttctgtag acgatctggc gaaagatggc  | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggc  | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg  | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggatttct tcgcgatcct tccagtactc  | 7020 |
| ttctagcggg aacccgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac  | 7080 |
| tgctttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgc tctgaccatg actttgagga attggtatth  | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat  | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaaggtta ggtctgtggg  | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg | 7620 |
| ccgtccgact gccatttttt ctgggggtgac gcaatagaag gtttgggggt cctgccgcca | 7680 |
| gcgatccac ttgagtttta tggcgaggtc ataggcgatg ttgacgagcc gctggtctcc   | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtttcc acatcgtagg tgagaaagag cttttctgtg cgaggatgag agccaatcgg  | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgacag ggttgatatc cgtgaatgag ttgtacctgg cttcccttga cgagaaatth  | 8040 |
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgctth actatgttgt ctgcatcggc  | 8100 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| ctgttcatct tctgtctcga tgggtggatcat gctgacgagc cctcgcggga ggcaagtcca | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag   | 8220 |
| ggctcctgaga cgctgcggac tcaggttagt aggcagtgtc aggagattaa cttgcatgat  | 8280 |
| cttttggagg gcgtgcggga ggttcagata gtacttgatc tcaacgggtc cgttgggtgga  | 8340 |
| gatgtcgatg gcttgcaggg ttccgtgtcc cttgggcgct accaccgtgc cttgttttt    | 8400 |
| cattttggac ggcggtggct ctgttgcttc ttgcatgttt agaagcgggtg tcgagggcgc  | 8460 |
| gcaccgggcg gcaggggcgg ctccgggaccc ggcggcagtg ctggcagtggt tacgtcggcg | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg   | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaaagta ccggccccgt gagcttgaac   | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt   | 8700 |
| tcttgacgt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct    | 8760 |
| tcctcttgaa gatctccgcg gcccgtctc tcgacgggtg ccgcgaggtc gttggagatg    | 8820 |
| cgcccaatga gttgagagaa tgcatcatg cccgcctcgt tccagacgcg gctgtagacc    | 8880 |
| acggccccca cgggatctct cgcgcgcatg accacctggg cgagggttgag ctccacgtgg  | 8940 |
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg   | 9000 |
| tgctcgggtga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc  | 9060 |
| agagcttcca agcgtccat ggctcgtag aagtccacgg caaaattaaa aaactgggag     | 9120 |
| tttcgcgcgg acacggtcaa ctctcttcc agaagacgga taagttcggc gatggtggtg    | 9180 |
| cgcacctcgc gctcgaagc ccctgggatt tcttcctcaa tctcttcttc ttccactaac    | 9240 |
| atctcttcct cttcaggtgg ggctgcagga ggagggggaa cgcggcgacg ccggcggcgc   | 9300 |
| acgggcagac ggtcgatgaa tctttcaatg acctctccgc ggcggcggcg catggtttca   | 9360 |
| gtgacggcgc ggccgttctc gcgcggtcgc agagtaaaaa caccgccgcg catctcctta   | 9420 |
| aagtggtgac tgggaggttc tccgtttggg agggagaggg cgctgattat acattttatt   | 9480 |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa   | 9540 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| aaccttttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct | 9600  |
| tgtgggcggg ggtgggttatg tggtcggctt gggtcttctg tttcttcttc atctcgggaa | 9660  |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatgggtg | 9720  |
| gcgaggagca ccaggctctt gggtccggct tgctggatac gcaggcgatt ggccattccc  | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg  | 9840  |
| ggcacttctt cctcaccctg tctgccatgc atacgtgtga gtccaaatcc gcgcattgggt | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta  | 9960  |
| agggtggctt gaaagtcatc aaaatccaca aagcggtggt aagctcctgt attaatgggtg | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggt gaccagggcg cacgagctcg  | 10080 |
| gtgtatttaa ggcgcaata ggcgcggggtg tcaaagatgt aatcgttgca ggtgcgcacc  | 10140 |
| agatactggt accctataag aaaatgcggc ggtggttggc ggtagagagg ccatcgttct  | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac  | 10260 |
| ctggacatcc aggtgattcc tgcggcggtg gtagaagccc gaggaaactc gcgtacgcgg  | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgttag gcacggtttg accagtgagg  | 10380 |
| cgcgcgagc cattgatgct ctatagacac ggagaaaatg aaagcgttca gcgactcgac   | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcgggtg taccggtt cgagacttgt   | 10500 |
| actcgagccg gccggagccg cggctaactg ggtattggca ctcccgtctc gaccagcct   | 10560 |
| acaaaaatcc aggatacga atcgagtcgt tttgctgggt tccgaatggc agggaagtga   | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgccccaa   | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact  | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc  | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa  | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag  | 10920 |
| gagccggagg agatgcgagc ttcccgtttt aacgcgggtc gtgagctgcg tcacggtttg  | 10980 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagttg atgaaatgac agggatcagt  | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag  | 11100 |
| gaagagcgta acttccaaaa gtcttttaaat aatcatgtgc gaaccctgat tgcccgcgaa | 11160 |
| gaagttaccc ttggtttgat gcatttgtgg gatttgatgg aagctatcat tcagaaccct  | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtggtgc aacacagcag agacaatgag  | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatggtt gtatgatctt  | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg | 11400 |
| gctgccatca attactcggg tttgagcttg ggaaaatatt acgctcgcaa aatctacaag  | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg | 11520 |
| ctcaaggctt tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc  | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa  | 11640 |
| agagctctga ctggagctgg aaccgagggt gagaattact tcgacatggg agctgacttg  | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac  | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac  | 11820 |
| aaccctgttt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct  | 11880 |
| gcagagccag ccgtccggca ttaactcctc ggacgattgg acccaggcca tgcaacgtat  | 11940 |
| catggcgttg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct  | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggctct | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa agctattcgt ccagatgagg ccggactggt  | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaattt  | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagg tccagcgtga   | 12240 |
| tgccaacctg ggttcgctgg tggcgtaaaa tgctttcttg agtactcagc ctgctaattg  | 12300 |
| gccgcgtggt caacaggatt atactaactt ttttaagtgt ttgagactga tggatcaga   | 12360 |
| agtacctcag agcgaagtgt atcagtcagg tcctgattac ttctttcaga ctagcagaca  | 12420 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gggcttgacg acggtaaadc tgagccaagc ttttaaaaac cttaaagggt tgtggggagt  | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actcccgct   | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctatct  | 12600 |
| gggttaccta ctaaacctgt atcgcaagc catagggcaa agtcagggtg acgagcagac   | 12660 |
| ctatcaagaa attaccaag tcagtcgagc tttgggacag gaagacactg gcagtttgga   | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaag atccctcctc aatatgctct  | 12780 |
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat  | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag  | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc  | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgcactggc tgccccacc   | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgacccta atgacggatttc tgtgggacga  | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg  | 13140 |
| cgatagaatg cattcttctg catcgctgtc cgggggtcatg ggtgctaccg cggctgagcc | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga  | 13260 |
| agtgggtaga ataagtcgcc cgagttta atggcggaagag gagtatctaa acgattcctt  | 13320 |
| gctcagaccg gcaagagaaa aaaatttccc aaacaatgga atagaaaagt tgggtggataa | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat  | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga  | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa  | 13560 |
| cccgtttgct catttgcgcc ctgcgttggg tggatatgtt taaaaaaaaa taaaaaaaaa  | 13620 |
| actaccaag gccatggcga cgagcgtacg ttcgttcttc tttattatct gtgtctagta   | 13680 |
| taatgaggcg agtcgtgcta ggaggagcgg tgggtgatcc ggagggtcct cctccttcgt  | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcgggtgat gcaatcccca ctggaggctc | 13800 |
| cctttgtgcc tccgcgatac ctggcaccta cggagggcag aaacagcatt cgttattcgg  | 13860 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| aactggcacc tcagtacgat accaccaggt tgtatctggt ggacaacaag tcggcggaca   | 13920 |
| ttgcttctct gaactatcag aatgaccaca gcaacttctt gaccacgggtg gtgcaaaaaca | 13980 |
| atgactttac ccctacggaa gccagcaccc agaccattaa ctttgatgaa cgatcgcggt   | 14040 |
| ggggcgggtca gctaaagacc atcatgcata ctaacatgcc aaacgtgaac gagtatatgt  | 14100 |
| ttagtaacaa gttcaaagcg cgtgtgatgg tgtccagaaa acctcccgac ggtgctgcag   | 14160 |
| ttggggatac ttatgatcac aagcaggata ttttgaaata tgagtgggtt gagtttactt   | 14220 |
| tgccagaagg caacttttca gttactatga ctattgattt gatgaacaat gccatcatag   | 14280 |
| ataattactt gaaagtgggt agacagaatg gagtgcttga aagtgacatt ggtgttaagt   | 14340 |
| tcgacaccag gaacttcaag ctgggatggg atcccgaac caagttgatc atgcctggag    | 14400 |
| tgtatacgta tgaagccttc catcctgaca ttgtcttact gcctggctgc ggagtggatt   | 14460 |
| ttaccgagag tcgtttgagc aaccttcttg gtatcagaaa aaaacagcca tttcaagagg   | 14520 |
| gttttaagat tttgtatgaa gatttagaag gtggtaatat tccggccctc ttggatgtag   | 14580 |
| atgcctatga gaacagtaag aaagaacaaa aagccaaaat agaagctgct acagctgctg   | 14640 |
| cagaagctaa ggcaaacata gttgccagcg actctacaag ggttgctaac gctggagagg   | 14700 |
| tcagaggaga caattttgcg ccaacacctg ttccgactgc agaatcatta ttggccgatg   | 14760 |
| tgtctgaagg aacggacgtg aaactcacta ttcaacctgt agaaaaagat agtaagaata   | 14820 |
| gaagctataa tgtgttgga gacaaaatca acacagccta tcgcagttgg tatctttcgt    | 14880 |
| acaattatgg cgatcccgaa aaaggagtg gttcctggac attgctcacc acctcagatg    | 14940 |
| tcacctgcgg agcagagcag gtctactggt cgcttcaga catgatgaag gatcctgtca    | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggt gggtgcagag cttatgccc    | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca   | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg   | 15180 |
| cgcccacat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc    | 15240 |
| cgttgcgcag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca   | 15300 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cctgtcccta cgtgtacaag gcactgggca tagtcgcacc gcgcgtcctt tcaagccgca   | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg   | 15420 |
| tctgcgcgct ccaagcaaga tgtacggagg cgcacgcaaa cgttctaccc aacatcctgt   | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg   | 15540 |
| aaccaccgtc gatgatgtaa tcgatcaggt ggttgccgac gcccgttaatt atactcctac  | 15600 |
| tgcgccctaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta  | 15660 |
| tgctcgacgt aagagccggc gaaggcgcac tgccagacgc caccgagcta ccactgccat   | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag   | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag cgccggcagg tcccgcaggc aagcagccgc   | 15840 |
| tgctgcagcg gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt    | 15900 |
| gcgtgacgct gccaccggc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa    | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa   | 16020 |
| ggaagaaatg ctgcaggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa   | 16080 |
| aaaacccgc aaaatcaagc gggttaaaaa ggacaaaaaa gaagaggaag atggcgatga    | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga cgcgtgcaat ggcgtgggcg   | 16200 |
| caaagtctga catgtgttga gacctggaac ttcgggtggtc ttacacccg gcgagcggtc   | 16260 |
| aagcgctact ttttaagcgtt cctatgatga ggtgtacggg gatgatgata ttcttgagca  | 16320 |
| ggcggctgac cgattaggcg agtttgctta tggcaagcgt agtagaataa cttccaagga   | 16380 |
| tgagacagtg tcgataccct tggatcatgg aaatcccacc ctagtctta aaccggtcac    | 16440 |
| tttgcagcaa gtgttacccg taactccgcg aacaggtgtt aaacgcgaag gtgaagattt   | 16500 |
| gtatcccact atgcaactga tggtaaccaa acgccagaag ttggaggacg ttttggagaa   | 16560 |
| agtaaaaagt gatccagata ttcaacctga ggttaaagt agaccatta agcaggtagc     | 16620 |
| gcctgggtctg ggggtacaaa ctgtagacat taagattccc actgaaaagta tgggaagtga | 16680 |
| aactgaaccc gcaaagccta ctgccacctc cactgaagtg caaacggatc catggatgcc   | 16740 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| catgcctatt acaactgacg ccgccggtcc cactcgaaga tcccgcacgaa agtacgggtcc | 16800 |
| agcaagtctg ttgatgcca attatgttgt acacccatct attattccta ctcttggtta    | 16860 |
| ccgaggcact cgctactatc gcagccgaaa cagtacctcc cgccgtcgcc gcaagacacc   | 16920 |
| tgcaaatcgc agtcgtcgcc gtagacgcac aagcaaaccg actcccggcg ccctgggtgcg  | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc tttgacactg ccgcgtcgcc gttaccatcc   | 17040 |
| gagtatcatc acttaataca tgttgccgct gcctccttgc agatatggcc ctacttgtc    | 17100 |
| gccttcgcgt tcccatcact ggttaccgag gaagaaactc gcgccgtaga agagggatgt   | 17160 |
| tgggacgcgg aatgcgacgc tacaggcgac ggcggtgctat ccgcaagcaa ttgcgggggtg | 17220 |
| gttttttacc agccttaatt ccaattatcg ctgctgcaat tggcgcgata ccaggcatag   | 17280 |
| cttccgtggc ggttcaggcc tcgcaacgac attgacattg gaaaaaacg tataaataaa    | 17340 |
| aaaaaaaaaa tacaatggac tctgacactc ctggtcctgt gactatgttt tcttagagat   | 17400 |
| ggaagacatc aatttttcat ccttggctcc gcgacacggc acgaagccgt acatgggcac   | 17460 |
| ctggagcgac atcggcacga gccaaactgaa cgggggcgcc ttcaattgga gcagtatctg  | 17520 |
| gagcgggctt aaaaattttg gctcaaccat aaaaacatac gggaacaaag cttggaacag   | 17580 |
| cagtacagga caggcgctta gaaataaact taaagaccag aacttccaac aaaaagtagt   | 17640 |
| cgatgggata gcttccggca tcaatggagt ggtagatttg gctaaccagg ctgtgcagaa   | 17700 |
| aaagataaac agtcgttttg acccgccgcc agcaacccca ggtgaaatgc aagtggagga   | 17760 |
| agaaattcct ccgccagaaa aacgaggcga caagcgtccg cgtcccgatt tggaagagac   | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc   | 17880 |
| caccactaga ccgatagccc caatggccac cgggggtgatg aaaccttctc agttgcatcg  | 17940 |
| accgctcacc ttggatttgc cccctcccc tgctgtctact gctgtacccg cttctaagcc   | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccggggggcg ctctcgtcc   | 18060 |
| aaatgcgcac tggcaaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa  | 18120 |
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgcctat ctgtgtatat   | 18180 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct  | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc aatgggcatac atgcacatcg  | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctggt gcagttcgcc cgcgccacag  | 18360 |
| acacctactt caatctggga aataagttta gaaatccac cgtagcgccg acccacgatg   | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca  | 18480 |
| atacatactt ttacaaagtg cggtagaccc tggccgtggg cgacaacaga gtgctggata  | 18540 |
| tggccagcac gttctttgac attaggggtg tgttggacag aggtcccagt ttcaaaccct  | 18600 |
| attctggtag ggcttacaac tccctggctc ctaaaggcgc tccaaataca tctcagtga   | 18660 |
| ttgcagaagg tgtaaaaaat acaactgggtg aggaacacgt aacagaagag gaaaccaata | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag  | 18780 |
| gactcccagt aggtttggaa gtttcagatg aagaaagtaa accgatttat gctgataaaa  | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg  | 18900 |
| aaaagtatgg aggcagggtc ctcaaaccgc atactaagat gaaaccatgc tacgggtcct  | 18960 |
| ttgccaaacc tactaatgtg aaaggcggtc aggcaaaaca aaaaacaacg gagcagccaa  | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc  | 19140 |
| atgtagtgta caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat  | 19200 |
| ctatgccccaa cagaccaac tacattggct tcagagataa ctttattgga cttatgtact  | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctggtcaagc gtctcagtta aatgcagtgg  | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg  | 19380 |
| acagaaccag atacttttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac | 19440 |
| gtgttattga aaatcatggt gtggaagatg aacttcccaa ctactgtttt cactggacg   | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgccta  | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcc   | 19620 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tggaattaa ccttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat   | 19680 |
| atctcccaga ctgtacaaa tacaccccggt ccaatgtcac tcttccagaa aacaaaaaca  | 19740 |
| cctacgacta catgaacggg cgggtgggtgc cgccatctct agtagacacc tatgtgaaca | 19800 |
| ttggtgccag gtggctctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca  | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca  | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt  | 20100 |
| tcccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg   | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg   | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctgggtcat | 20280 |
| ttaccagact gaaaaccaa gaaactccct ctttggggtc tggatttgac ccctactttg   | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |
| ctaacgaatt tgaaataaag cgactgtgg atggcgaagg ctacaacgta gcccaatgca   | 20520 |
| acatgaccaa agactgggtc ttggtacaga tgctcgccaa ctacaacatc ggctatcagg  | 20580 |
| gcttctacat tccagaagga tacaagatc gcatgtattc atttttcaga aacttccagc   | 20640 |
| ccatgagcag gcagggtggt gatgaggtca attacaaaga cttcaaggcc gtcgccatac  | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccctatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcat accgttctcg agcaacttca  | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg  | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct  | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct   | 21060 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc  | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca  | 21180 |
| gagccattgt ccaagacctg ggttgccggac cctatttttt gggaacctac gataagcgct | 21240 |
| tcccgggggtt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg  | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc  | 21360 |
| tttttgatcc ttttggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg  | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat  | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcatgttcc   | 21540 |
| ttcacgcctt tgtgactgg cctgaccgtc ccatggacgg aaaccccacc atgaaattgc   | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca   | 21660 |
| atcaaaaagc actctaccat tttcttaata cccattcgcc ttattttcgc tcccatcgta  | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa  | 21780 |
| caacgtgttc aataaacatc actttatttt ttacatgta tcaaggctct gcattactta   | 21840 |
| tttatttaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg  | 21900 |
| ttgcggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt  | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgcttt gagcgcgaga gttgcggtac  | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacgggtg | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cggggtcatc  | 22200 |
| ttgcaggctc gcctacccat ggccggcacc caattaggct tgtggttgca atcgcagtg   | 22260 |
| agggggatca gtatcatctt ggcctgatcc tgtctgattc ctggatacac ggctctcatg  | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcgggtata aaacatcccg | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcggg    | 22440 |
| tcattgttag ctatttgcac cacacttctg ccccagcggg tttgggtgat tttggttcgc  | 22500 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tcgggattct cctttaaggc tcgttggtccg ttctcgctgg ccacatccat ctcgataatc | 22560 |
| tgctccttct gaatcataat attgccatgc aggcacttca gcttgccctc ataatcattg  | 22620 |
| cagccatgag gccacaacgc acagcctgta cattcccaat tatggtgggc gatctgagaa  | 22680 |
| aaagaatgta tcattccctg cagaaatctt cccatcatcg tgctcagtgt cttgtgacta  | 22740 |
| gtgaaagtta actggatgcc tcggtgctcc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtc taagttcggt atccagcctg  | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc  | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcactttta | 22980 |
| gcgatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg  | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgtttggt cttccttggc ttcttttttg ggggtatcgg aggaggagga  | 23160 |
| ctgtcgctcc gttccggaga caggaggat tgtgacgtt cgctcaccat taccaactga    | 23220 |
| ctgtcggtag aagaacctga cccacacagg cgacagggtg ttctcttcgg gggcagaggt  | 23280 |
| ggaggcgatt gcgaagggtc gcggtccgac ctggaaggcg gatgactggc agaaccctt   | 23340 |
| ccgcgttcgg ggggtgtgct cctgtggcgg tcgcttaact gatttccttc gcggctggcc  | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |
| cgccacgagt gccatcacat ctcgtcctca gcgacgagga aaaggagcag agcttaagca  | 23520 |
| ttccaccgcc cagtctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc   | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gaccgggct   | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa  | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca  | 23760 |
| ccgactacct catagggtt gacggggaag acgcgtcct taaacatcta gcaagacagt    | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccacagt gtggaagagc   | 23880 |
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tcccccaaa cgtcagccaa   | 23940 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag    | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta    | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag    | 24120 |
| cttccttgga agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg   | 24180 |
| caaatgctct gcaaaaggga gaaaatggca tggatgagca tcacagcggt ctggtggaat    | 24240 |
| tggaaggcga taatgccaga ctgcagtac tcaagcgaag catcgagggtc acacacttcg    | 24300 |
| catatccgc tgtcaacctg cccctaaag tcatgacggc ggtcatggac cagttactca      | 24360 |
| ttaagcgcgc aagtccccctt tcagaagaca tgcattgaccc agatgcctgt gatgagggtta | 24420 |
| aaccagtggg cagtgatgag cagctaaccg gatggctggg caccgactct cccagggtt     | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tgggtgctggt taccgtagaa ctagagtgtc   | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca    | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatatc taacgtggaa ctcaccaacc    | 24660 |
| tggtttccta catgggtatt ctgcatgaga atcgccatagg acaaagcgtg ctgcacagca   | 24720 |
| ccctgaaggg ggaagccgc cgtgattaca tccgcgattg tgtctatctg tacctgtgcc     | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag    | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca    | 24900 |
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa    | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcattctgg    | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca    | 25080 |
| cctaccgcga gtgcccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact     | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc    | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga    | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt    | 25320 |
| cttctcctgg gcaaagttaa aaactgaccc cgggactgtg gacctccgcc tacttgcgca    | 25380 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc   | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcaccagggg ggcaattctg gcccaattgc  | 25500 |
| aagccatcca aaaatcccg ccaagaatttc tactgaaaaa gggtaagggg gtctaccttg  | 25560 |
| acccccagac cggcgaggaa ctcaacacaa ggttccctca ggatgtccca acgacgagaa  | 25620 |
| aacaagaagt tgaagggtgca gccgccgccc ccagaagata tggaggaaga ttgggacagt | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttggag  | 25740 |
| gaggaaaacg aggaggcaga ggaggtggaa gaagtaaccg ccgacaaaca gttatcctcg  | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt  | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcgc ttccaagacc  | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcggggggc ataagaatgc catcatctcc | 25980 |
| tgcttgcatg agtgcggggg caacatatcc ttcacgcggc gctacttgct attccaccat  | 26040 |
| ggggtgaact ttccgcgcaa tgttttgcat tactaccgtc acctccacag cccctactat  | 26100 |
| agccagcaaa tcccggcagt ctcgacagat aaagacagcg gcggcgacct ccaacagaaa  | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac  | 26220 |
| agccaacgag ccagcgcaaa cccgagagtt aagaaatcgg atctttccaa ccctgtatgc  | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |
| ttcgctcacc agaagttggt tgtatcacia gagcgaagat caacttcagc gcactctcga  | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac  | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcatcctcga catgagtaaa gaaattccca  | 26520 |
| cgccttacat gtggagttat caaccccaaa tgggattggc ggcaggcgcc tcccaggact  | 26580 |
| actccacccg catgaattgg ctcagcgccg ggccttctat gatttctcga gttaatgata  | 26640 |
| tacgcgcta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc   | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca  | 26760 |
| ccactgtatt acttctcga gacgcccagg ccgaagtcca aatgactaat gcaggtgcgc   | 26820 |



eolf-seql (2)

|            |             |             |             |             |             |       |
|------------|-------------|-------------|-------------|-------------|-------------|-------|
| agttagctgg | cggctccacc  | ctatgtcgtc  | acaggcctcg  | gcataatata  | aaacgcctga  | 26880 |
| tgatcagagg | ccgaggtatc  | cagctcaacg  | acgagtcggt  | gagctctccg  | cttgggtctac | 26940 |
| gaccagacgg | aatctttcag  | attgccggct  | gcgggagatc  | ttccttcacc  | cctcgtcagg  | 27000 |
| ctgttctgac | tttggaagt   | tcgtcttcgc  | aaccccgctc  | gggcggaatc  | gggaccgttc  | 27060 |
| aatttgtgga | ggagtttact  | ccctctgtct  | acttcaaccc  | cttctccgga  | tctcctgggc  | 27120 |
| attacccgga | cgagttcata  | ccgaacttcg  | acgcgattag  | cgagtcagtg  | gacggctacg  | 27180 |
| attgatgtct | ggtgacgcgg  | ctgagctatc  | tcggctgcga  | catctagacc  | actgccgccg  | 27240 |
| ctttcgctgc | tttgcccggg  | aactcattga  | gttcatctac  | ttcgaactcc  | ccaaggatca  | 27300 |
| ccctcaaggt | ccggcccacg  | gagtgcggat  | ttctatcgaa  | ggcaaaaatag | actctcgcct  | 27360 |
| gcaacgaatt | ttctcccagc  | ggcccgtgct  | gatcgagcga  | gaccagggaa  | acaccacggt  | 27420 |
| ttccatctac | tgcatttgta  | atcaccccgg  | attgcatgaa  | agcctttgct  | gtcttatgtg  | 27480 |
| tactgagttt | aataaaaaact | gaattaagac  | tctcctacgg  | actgccgctt  | cttcaacccg  | 27540 |
| gattttacaa | ccagaagaac  | gaaacttttc  | ctgtcgtcca  | ggactctggt  | aacttcacct  | 27600 |
| ttcctactca | caaactagaa  | gctcaacgac  | tacaccgctt  | ttccagaagc  | attttcccta  | 27660 |
| ctaatactac | tttcaaaaacc | ggaggtgagc  | tccaaggtct  | tcctacagaa  | aacccttggg  | 27720 |
| tggaagcggg | ccttgtagtg  | ctaggaattc  | ttgcgggtgg  | gcttggtgatt | attctttgct  | 27780 |
| acctatacac | accttgcttc  | actttcttag  | tggtgttggtg | gtattggttt  | aaaaaatggg  | 27840 |
| gcccatacta | gtcttgcttg  | ttttactttc  | gcttttggaa  | ccgggttctg  | ccaattacga  | 27900 |
| tccatgtcta | gacttcgacc  | cagaaaaactg | cacacttact  | tttgcacccg  | acacaagccg  | 27960 |
| catctgtgga | gttcatcgcc  | tctcttacga  | acttggcccc  | caacgacaaa  | aatttacctg  | 28020 |
| catggtggga | atcaacccca  | tagttatcac  | ccagcaaagt  | ggagatacta  | agggttgcac  | 28080 |
| tcactgctcc | tgcgattcca  | tcgagtgcac  | ctacaccctg  | ctgaagaccc  | tatgcggcct  | 28140 |
| aagagacctg | ctaccaatga  | attaaaaaat  | gattaataaaa | aaatcactta  | cttgaaatca  | 28200 |
| gcaataaggt | ctctgttgaa  | attttctccc  | agcagcacct  | cacttccctc  | ttcccaactc  | 28260 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| tggtattcta aacccccgttc agcggcatac tttctccata ctttaaaggg gatgtcaa  | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt  | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca | 28440 |
| cccccttata aacccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt | 28500 |
| tcttacttta aaatgtttaa cccactaac aaccacaggc ggatctctac agctaaaagt  | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac | 28680 |
| gaatgaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aacccaccg aagccaactg  | 28800 |
| tcaaactcatg aactccagtg aatctaataa ttgcaaatta attctaacac tagttaaac | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaattt | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc | 29040 |
| tactggtgcc attactaatg ctaaaggttt catgcccagc acgactgcct atcctttcaa | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga | 29220 |
| gacatcatat tgtattcgta taacttggtc ctggaacaca ggagatgccc cagaggtgca | 29280 |
| aacctctgct acaaccctag tcacctcccc atttaccttt tactacatca gagaagacga | 29340 |
| ctgacaaata aagtttgca tcgccaggcc accatgacag tgctggcgcc agcctggagc  | 29400 |
| ccaacaacct atctcctcct gctgctgctg ctgagctcgg gactcagtgg gacccaggac | 29460 |
| tgctccttcc aacacagccc catctcctcc gacttcgctg tcaaaatccg tgagctgtct | 29520 |
| gactacctgc ttcaagatta cccagtcacc gtggcctcca acctccagga cgaggagctc | 29580 |
| tgcgggggcc tctggcggct ggtcctggca cagcgctgga tggagcggct caagactgtc | 29640 |
| gctgggtcca agatgaagg cttgctggag cgcgtgaaca cggagataca ctttgtcacc  | 29700 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| aaatgtgcct ttcagcccc cccagctgt cttcgcttcg tccagaccaa catctcccgc    | 29760 |
| ctcctacagg agacctccga gcagctgggtg gcgctgaagc cctggatcac tcgccagaac | 29820 |
| ttctcccggg gcctggagct gcagtgtcag cccgactcct caaccctgcc acccccatgg  | 29880 |
| agtccccggc ccctggaggc cacagccccg ggaagcggag ctactaactt cagcctgctg  | 29940 |
| aagcaggctg gagacgtgga ggagaacctt ggacctcagg tctccactgc tgcccttgcc  | 30000 |
| gtcctcctct gcaccatggc tctctgcaac caggctcctt ctgcaccact tgctgctgac  | 30060 |
| acgccgaccg cctgctgctt cagctacacc tcccgcacaga ttccacagaa tttcatagct | 30120 |
| gactactttg agacgagcag ccagtgtctc aagcccagtg tcatcttcct aaccaagaga  | 30180 |
| ggccggcagg tctgtgctga cccagtgag gagtgggtcc agaaatacgt cagtgcctg    | 30240 |
| gagctgagtg ccggaagcgg agagggcaga ggaagtctgc taacatgcgg tgacgtcgag  | 30300 |
| gagaatcctg gacctggcca cacacggagg cagggaacat caccatccaa gtgtccatac  | 30360 |
| ctcaatttct ttcagctctt ggtgctggct ggtctttctc acttctgttc aggtgttatc  | 30420 |
| cacgtgacca aggaagtgaa agaagtggca acgctgtcct gtggtcacaa tgtttctgtt  | 30480 |
| gaagagctgg cacaaactcg catctactgg caaaaggaga agaaaatggg gctgactatg  | 30540 |
| atgtctgggg acatgaatat atggcccgag tacaagaacc ggaccatctt tgatatcact  | 30600 |
| aataacctct ccatttgtat cctggctctg cgcccatctg acgagggcac atacgagtgt  | 30660 |
| gttgttctga agtatgaaaa agacgctttc aagcgggaac acctggctga agtgacgtta  | 30720 |
| tcagtcaaag ctgacttccc tacacctagt atatctgact ttgaaattcc aacttcta    | 30780 |
| attagaagga taatttgctc aacctctgga ggttttccag agcctcacct ctcttggttg  | 30840 |
| gaaaatggag aagaattaaa tgccatcaac acaacagttt cccaagatcc tgaaactgag  | 30900 |
| ctctatgctg ttagcagcaa actggatttc aatatgacaa ccaaccacag cttcatgtgt  | 30960 |
| ctcatcaagt atggacattt aagagtgaat cagaccttca actggaatac aaccaagcaa  | 31020 |
| gagcattttc ctgataacct gctcccatcc tgggccatta cttaatctc agtaaatgga   | 31080 |
| atTTTTgtga tatgctgcct gacctactgc tttgccccaa gatgcagaga gagaaggagg  | 31140 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| aatgagagat tgagaaggga aagtgtacgc cctgtataag ctagcttgac tgactgagat  | 31200 |
| acagcgtacc ttcagctcac agacatgata agatacattg atgagtttgg acaaaccaca  | 31260 |
| actagaatgc agtgaaaaaa atgcttttatt tgtgaaattt gtgatgctat tgctttat   | 31320 |
| gtaaccatta taagctgcaa taaacaagtt aacaacaaca attgcattca ttttatgttt  | 31380 |
| caggttcagg gggagggtgt ggagggtttt taaagcaagt aaaacctcta caaatgtggt  | 31440 |
| agtcgtcagc tatcctgcag gaacttggtt atttgaaaat caattcaca aatccgagta   | 31500 |
| gttattttgc ctccccctt ccatTTaaca gaatacacca atctctcccc acgcacagct   | 31560 |
| ttaaacattt ggataccatt agatatagac atggtttttag attccacatt ccaaacagtt | 31620 |
| tcagagcgag ccaatctggg gtcagtgata gataaaaaatc catcgggata gtcttttaaa | 31680 |
| gcgctttcac agtccaactg ctgcggatgc gactccggag tctggatcac ggcatcttg   | 31740 |
| aagaagaacg atgggaatca taatccgaaa acggtatcgg acgattgtgt ctcatcaaac  | 31800 |
| ccacaagcag ccgctgtctg cgtcgctccg tgcgactgct gtttatggga tcagggtcca  | 31860 |
| cagtgtcctg aagcatgatt ttaatagccc ttaacatcaa ctttctgggtg cgatgcgcgc | 31920 |
| agcaacgcat tctgatttca ctcaaattct tgcagtaggt acaacacatt attacaatat  | 31980 |
| tgtttaataa accataatta aaagcgctcc agccaaaact catatctgat ataatcgccc  | 32040 |
| ctgcatgacc atcataccaa agtttaatat aaattaaatg acgttccctc aaaaacacac  | 32100 |
| taccacata catgatctct tttggcatgt gcatattaac aatctgtctg taccatggac   | 32160 |
| aacgttggtt aatcatgcaa cccaatataa ctttccggaa ccacactgcc aacaccgctc  | 32220 |
| ccccagccat gcattgaagt gaaccctgct gattacaatg acaatgaaga acccaattct  | 32280 |
| ctcgaccgtg aatcacttga gaatgaaaaa tatctatagt ggcacaacat agacataaat  | 32340 |
| gcatgcatct tctcataatt tttaactcct caggatttag aaacatatcc cagggaatag  | 32400 |
| gaagctcttg cagaacagta aagctggcag aacaaggaag accacgaaca caacttacac  | 32460 |
| tatgcatagt catagtatca caatctggca acagcgggtg gtcttcagtc atagaagctc  | 32520 |
| gggtttcatt ttcctcaca cgtggtaact gggctctggt gtaagggtga tgtctggcgc   | 32580 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| atgatgtcga gcggtgcgcgc aaccttgtca taatggagtt gcttcctgac attctcgtat | 32640 |
| tttgtatagc aaaacgcggc cctggcagaa cacactcttc ttcgccttct atcctgccgc  | 32700 |
| ttagcgtggt ccgtgtgata gttcaagtac aaccacactc ttaagttggg caaaagaatg  | 32760 |
| ctggcttcag ttgtaatcaa aactccatcg catctaatacg ttctgaggaa atcatccaag | 32820 |
| caatgcaact ggattgtggt tcaagcagga gaggagaggg aagagacgga agaaccatgt  | 32880 |
| taatttttat tccaaacgat ctgcagtagc ttcaaattgt agatcgcgca gatggcatct  | 32940 |
| ctgccccca ctgtgttggt gaaaaagcac agctagatca aaagaaatgc gattttcaag   | 33000 |
| gtgctcaacg gtggcttcca gcaaagcctc cacgcgcaca tccaagaaca aaagaatacc  | 33060 |
| aaaagaagga gcattttcta actcctcaat catcatatta cattcctgca ccattcccag  | 33120 |
| ataattttca gctttccagc cttgaattat tcgtgtcagt tcttgtggta aatccaatcc  | 33180 |
| acacattaca aacagggtccc ggagggcgcc ctccaccacc attcttaaac acaccctcat | 33240 |
| aatgacaaaa tatcttgctc ctgtgtcacc tgtagcgaat tgagaatggc aacatcaatt  | 33300 |
| gacatgccct tggctctaag ttcttcttta agttctagtt gtaaaaactc tctcatatta  | 33360 |
| tcaccaaact gcttagccag aagcccccg ggaacaagag caggggacgc tacagtgcag   | 33420 |
| tacaagcgca gacctccca attggctcca gcaaaaaaca gattggaata agcatattgg   | 33480 |
| gaaccgccag taatatcatc gaagttgctg gaaatataat caggcagagt ttcttgtaaa  | 33540 |
| aattgaataa aagaaaaatt tgccaaaaaa acattcaaaa cctctgggat gcaaatgcaa  | 33600 |
| taggttaccg cgctgcgctc caacattggt agttttgaat tagtctgcaa aaataaaaaa  | 33660 |
| aaaaacaagc gtcatatcat agtagcctga cgaacagatg gataaatcag tctttccatc  | 33720 |
| acaagacaag ccacagggtc tccagctcga cctcgtaaa acctgtcatc atgattaaac   | 33780 |
| aacagcaccg aaagttcctc gcggtgacca gcatgaataa ttcttgatga agcatacaat  | 33840 |
| ccagacatgt tagcatcagt taacgagaaa aaacagccaa catagccttt ggggtataatt | 33900 |
| atgcttaatc gtaagtatag caaagccacc cctcgcggat acaaagtaaa aggcacagga  | 33960 |
| gaataaaaaa tataattatt tctctgctgc tgttcaggca acgtcgcccc cggtcctct   | 34020 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| aaatacacat acaaagcctc atcagccatg gcttaccaga caaagtacag cgggcacaca | 34080 |
| aagcacaagc tctaaagtga ctctccaacc tctccacaat atatataac acaagcccta  | 34140 |
| aactgacgta atgggagtaa agtgtaaaaa atcccgccaa acccaacaca caccgccaaa | 34200 |
| ctgcgtcacc agggaaaagt acagtttcac ttccgcaatc ccaacaggcg taacttcctc | 34260 |
| tttctcacgg tacgtgatat ccactaact tgcaacgtca ttttcccacg gtcgcaccgc  | 34320 |
| cccttttagc cgttaacccc acagccaatc accacacgat ccacactttt taaaatcacc | 34380 |
| tcatttacat attggcacca ttccatctat aaggatatatt atatagatag ga        | 34432 |

<210> 119  
 <211> 34458  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> NG-347 virus genome sequence comprising a transgene cassette encoding IFNa, MIP1a and CD80, employing SSA and a P2A sequence, inserted in the region BY

|                                                                     |     |
|---------------------------------------------------------------------|-----|
| <400> 119                                                           |     |
| tctatctata taatatacct tatagatgga atggtgcca tatgtaaatg aggtgatttt    | 60  |
| aaaaagtgtg gatcgtgtgg tgattggctg tgggggttaac ggctaaaagg ggcgggtgcga | 120 |
| ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt   | 180 |
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggg atttaacagg   | 240 |
| aatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa    | 300 |
| tgagggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg  | 360 |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt   | 420 |
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtg cagctgatcg ctagggattt   | 480 |
| tatacctcag ggtttggtgc aagaggccac tcttgagtgc cagcgagaag agttttctcc   | 540 |
| tctgcgccgg cagtttaata ataaaaaat gagagatttg cgatttctgc ctgaggaaat    | 600 |
| aatctctgct gagactggaa atgaaatatt ggagcttggtg gtgcacgccc tgatgggaga  | 660 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| cgatccggag ccacctgtgc agcttttttga gcctcctacg cttcaggaac tgtatgattt  | 720  |
| agaggtagag ggatcggagg attcctaata ggaagctgta aatggctttt ttaccgattc   | 780  |
| tatgcttttta gctgctaata aaggggttaga attagatccg cttttggaca cttttgatac | 840  |
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagtccgt    | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga   | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt   | 1020 |
| tcagttggat tgcccgagc ttcctggaca tggctgtaag tcttgtgaat ttcacaggaa    | 1080 |
| aaatactgga gtaaaggaa tgttatgttc gctttgttat atgagaacgc actgccactt    | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat   | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc   | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg   | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga   | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaacgtc caagacaata    | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta  | 1500 |
| ataaaaaatat gttaactgtt cactggtttt tattgctttt tgggcgggga ctcaggtata  | 1560 |
| taagtagaag cagacctgtg tggtagctc ataggagctg gctttcatcc atggaggttt    | 1620 |
| gggccatttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag   | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa   | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgccagga ctttttgaag    | 1800 |
| ctcttaattt gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt   | 1860 |
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga   | 1920 |
| tcccgcagac tcatttcagc aggggatacg ttttggtttt catagccaca gcattgtgga   | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg   | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc   | 2100 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| aagaggacaa cccgagagcc ggcctggacc ctccagtgga ggaggcggag tagctgactt  | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt  | 2220 |
| taagaggggag agggcatcta gtggtactga tgctagatct gagttggctt taagtttaat | 2280 |
| gagtcgcaga cgtcctgaaa ccatttggtg gcatgagggt cagaaagagg gaagggatga  | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacagggt aaaacatgtt ggttggagcc  | 2400 |
| tgaggatgat tgggaggtgg ccattaaaaa ttatgccaag atagctttga ggcctgataa  | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg  | 2520 |
| ggctgagggtg gtaatagata ctcaagacaa ggcagttatt agatgctgca tgatggatat | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga  | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt  | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag  | 2760 |
| tttctatgcg tgttggattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa  | 2820 |
| atgcatattt caaagatgta acctgggcat tctgaatgaa ggcgaagcaa ggggtccgcca | 2880 |
| ctgcgcttct acagatactg gatgttttat ttgattaag ggaaatgcca gcgtaaagca   | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctgggtg  | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt  | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt  | 3120 |
| tatgccttac cagtgtaaca tgaatcatgt gaaagtgttg ttggaaccag atgccttttc  | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta  | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca  | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccgat catttggtta ttgcccgcac   | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt  | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaaattt gttttttctg tcttgagct | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtcttca gcccttatct gacagggcgt  | 3540 |



eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc  | 3600 |
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagttcttc acctttggac  | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac  | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac  | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct  | 3840 |
| cagcagggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt  | 3960 |
| gtttttattt catttttcgc gcacggtatg ccctagacca ccgatctcta tcattgagaa  | 4020 |
| ctcgggtggat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca | 4080 |
| ttaggccgtc tttgggggtgg agatagctcc attgaaggga ttcatgctcc ggggtagtgt | 4140 |
| tgtaaatcac ccagtcataa caaggtcgca gtgcatgggt ttgcacaata tcttttagaa  | 4200 |
| gtaggctgat tgccacagat aagcccttgg tgtaggtgtt tacaacccgg ttgagctggg  | 4260 |
| atgggtgcat tcgggggtgaa attatgtgca ttttggattg gatttttaag ttggcaatat | 4320 |
| tgccgccaag atcccgctctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac  | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg  | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagttatgt tcctgagtta  | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg  | 4620 |
| ttccttcggg ccccgagca tagttcccct cacagatttg catttcccaa gctttcagtt   | 4680 |
| ccgagggttg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg  | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga tttgccacat ccggtggggc  | 4800 |
| cataaatgat tccgattacg gggtgcaggt ggtagtttag ggaacggcaa ctgccgtctt  | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca  | 4920 |
| aatccattag gaggcgctct cctcctagtg atagaagttc ttgtagtgag gaaaagtttt  | 4980 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tcagcggttt cagaccgtca gccatgggca ttttggagag agtttgctgc aaaagttcta  | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt  | 5100 |
| tcgcggggtt ggacgggtcc tggaataggg tatgagacga tgggcgtcca gcgctgccag  | 5160 |
| ggttcgggtcc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaaggg | 5220 |
| gtgtgcgctt gcttgggcgc ttgccagggt gcgcttcaga ctcacctgc tggtcgaaaa   | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag ttaccatga gttcgtagtt   | 5340 |
| gagcgcctcg gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatat  | 5400 |
| cgggcagtat aggcatttca gcgcatacaa cttgggcgca aggaaaacgg attctgggga  | 5460 |
| gtatgcatct gcgccgcagg aggcgcaaac agtttcacat tccaccagcc aggttaaatc  | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatttt ttgatgcgtt tcttaccttt | 5580 |
| ggctctcatg agttcgtgtc ctcgttgagt gacaaacagg ctgtccgtgt ccccgtagac  | 5640 |
| tgattttaca ggctcttct ccagtggagt gcctcggctt tcttcgtaca ggaactctga   | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcacaaag gaggctatgt gggaggggta  | 5760 |
| gcgatcgttg tcaaccagggt ggtccacctt ttccaaagta tgcaaacaca tgtcacctc  | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc   | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact  | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc  | 6060 |
| tttcatgagg ttttctcca tctggtcaga aaacacaatt tttttattgt caagtttgg    | 6120 |
| ggcaaatgat ccatacagggt cggttgataa aagtttggca atggatcgca tggtttggtt | 6180 |
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag  | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcacatggc acgattctca cttgccaccc  | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt  | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag  | 6420 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ttcatcggga gggctctgcat ccatggtaaa gattcccgga agtaaactct tatcaaaata | 6480 |
| gctgatggga gtggggctcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc   | 6720 |
| cggacccaag ttggtgcgat tgggtttttc tgttctgtag acgatctggc gaaagatggc  | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaagt gggcataaga ttcttgaagc ttggttacca gttcggcgg   | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg  | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggatttct tcgcatcct tccagtactc   | 7020 |
| ttctagcgga aaccgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac   | 7080 |
| tgccttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgc tctgaccatg actttgagga attggtat    | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat  | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaaggtta ggtctgtggg  | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg | 7620 |
| ccgtccgact gccatTTTTT ctgggggtgac gcaatagaag gtttgggggt cctgccgcca | 7680 |
| gcgatccac ttgagtttta tggcgaggtc ataggcgatg ttgacgagcc gctggtctcc   | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtttcc acatcgtagg tgagaaagag cttttctgtg cgaggatgag agccaatcgg  | 7860 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgacacg gggtgtatct cgtgaatgag ttgtacctgg cttcccttga cgagaaat   | 8040 |
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc  | 8100 |
| ctgttcatct tctgtctcga tgggtggtcat gctgacgagc cctcgcggga ggcaagtcca | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag  | 8220 |
| ggtcctgaga cgctgcggac tcaggtagt aggcagtgtc aggagattaa cttgcatgat   | 8280 |
| cttttgagg gcgtgcggga gggtcagata gtacttgatc tcaacgggtc cgttggtgga   | 8340 |
| gatgtcgatg gcttgacagg ttccgtgtcc cttgggcgct accaccgtgc cttgttttt   | 8400 |
| cattttggac ggcggtggct ctgttgcttc ttgcatgttt agaagcgggtg tcgaggcg   | 8460 |
| gcaccgggcg gcaggggcgg ctcgggaccc ggcgcatgg ctggcagtgg tacgtcggcg   | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg  | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac  | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt  | 8700 |
| tcttgacagt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct  | 8760 |
| tcctcttgaa gatctccgcg gcccgctctc tcgacgggtg ccgcgaggtc gttggagatg  | 8820 |
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc  | 8880 |
| acggcccca cgggatctct cgcgcgcatg accacctggg cgagggtgag ctccacgtgg   | 8940 |
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg  | 9000 |
| tgctcggatga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc | 9060 |
| agagcttcca agcgctccat ggcctcgtag aagtccacgg caaaattaaa aaactgggag  | 9120 |
| tttcgcgcgg acacggtcaa ctctcttcc agaagacgga taagttcggc gatggtggtg   | 9180 |
| cgcacctcgc gctcgaaaag ccctgggatt tcttctcaa tctcttctt ttccactaac    | 9240 |
| atctcttcct cttcagggtg ggctgcagga ggagggggaa cgcggcgacg ccggcggcg   | 9300 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| acgggcagac ggtc gatgaa tctttcaatg acctctccgc ggcggcggcg catggtttca  | 9360  |
| gtgacggcgc ggccgttctc gcgcggctgc agagtaaaaa caccgccgcg catctcctta   | 9420  |
| aagtggtgac tgggagggttc tccgtttggg agggagaggg cgctgattat acattttatt  | 9480  |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa   | 9540  |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct   | 9600  |
| tgtgggcggg ggtggttatg tggtcggctc gggctcttctg tttcttcttc atctcgggaa  | 9660  |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatggtg   | 9720  |
| gcgaggagca ccaggctctt gggctccggt tgctggatac gcaggcgatt ggccattccc   | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg   | 9840  |
| ggcacttctt cctcaccctg tctgccatgc atacgtgtga gtccaaatcc gcgcattggt   | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta   | 9960  |
| agggtggctt gaaagtcatc aaaatccaca aagcggtggt aagctcctgt attaatggtg   | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggt gaccagggcg cacgagctcg   | 10080 |
| gtgtatttaa ggcgcggaata ggcgcggggtg tcaaagatgt aatcgttgca ggtgcgcacc | 10140 |
| agatactggt accctataag aaaatgcggc ggtggttggc ggtagagagg ccatcgttct   | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac   | 10260 |
| ctggacatcc aggtgattcc tgcggcggta gtagaagccc gaggaaactc gcgtacgcgg   | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgtag gcacggtttg accagtgagg    | 10380 |
| gcgcgcagc cattgatgct ctatagacac ggagaaaatg aaagcgttca gcgactcgac    | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcgggtg taccgcgggt cgagacttgt  | 10500 |
| actcgagccg gccggagccg cggctaactg ggtattggca ctcccgtctc gaccagcct    | 10560 |
| acaaaaatcc aggatacga atcgagtcgt tttgctggtt tccgaatggc agggaagtga    | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa   | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact   | 10740 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc  | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa  | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag  | 10920 |
| gagccggagg agatgcgagc ttcccgcctt aacgcgggtc gtgagctgcg tcacggtttg  | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagttg atgaaatgac agggatcagt  | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag  | 11100 |
| gaagagcgta acttccaaaa gtcttttaaat aatcatgtgc gaaccctgat tgccgcgaa  | 11160 |
| gaagttaccc ttggtttgat gcattttgtg gatattgatg aagctatcat tcagaaccct  | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtggtgc aacacagcag agacaatgag  | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt  | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg | 11400 |
| gctgccatca attactcggg tttagacttg ggaaaatatt acgctcgcaa aatctacaag  | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg | 11520 |
| ctcaagggtc tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc  | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa  | 11640 |
| agagctctga ctggagctgg aaccgagggt gagaattact tcgacatggg agctgacttg  | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac  | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac  | 11820 |
| aacccgtgtt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct  | 11880 |
| gcagagccag ccgtccggca ttaactcctc ggacgattgg acccaggcca tgcaacgtat  | 11940 |
| catggcgttg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct  | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggctct | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa agctattcgt ccagatgagg ccggactggg  | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaat    | 12180 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaaggt tccagcgtga  | 12240 |
| tgccaacctg ggttcgctgg tggcgtaaag tgctttcttg agtactcagc ctgctaattg  | 12300 |
| gccgcgtggg caacaggatt atactaactt ttttaagtgt ttgagactga tggatatcaga | 12360 |
| agtacctcag agcgaagtgt atcagtcagg tcctgattac ttcttttcaga ctagcagaca | 12420 |
| gggcttgtag acggtaaatc tgagccaagc ttttaaaaaac cttaaagggt tgtggggagt | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actccccgct  | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctatct  | 12600 |
| gggttaccta ctaaacctgt atcgcgaagc catagggcaa agtcagggtg acgagcagac  | 12660 |
| ctatcaagaa attaccaag tcagtcgcgc tttgggacag gaagacactg gcagtttgga   | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaag atccctcctc aatatgctct  | 12780 |
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat  | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag  | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc  | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaag ccgcactggc tgccccacc   | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaag gacggatttc tgtgggacga  | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg  | 13140 |
| cgatagaatg cattcttctg catcgctgtc cgggggtcatg ggtgctaccg cggctgagcc | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga  | 13260 |
| agtgggtaga ataagtcgcc cgagtttaag gggcgaagag gagtatctaa acgattcctt  | 13320 |
| gctcagaccg gcaagagaaa aaaatttccc aaacaatgga atagaaaagt tgggtggataa | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat  | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga  | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa  | 13560 |
| cccgtttgct catttgcgcc ctcgcttggg tggatatgtt taaaaaaaaa taaaaaaaaa  | 13620 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| actcaccaag gccatggcga cgagcgtacg ttcgttcttc tttattatct gtgtctagta   | 13680 |
| taatgaggcg agtcgtgcta ggcggagcgg tgggtgtatcc ggagggtcct cctccttcgt  | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcgggtgat gcaatcccca ctggaggctc  | 13800 |
| cctttgtgcc tccgcgatac ctggcaccta cggagggcag aaacagcatt cgttattcgg   | 13860 |
| aactggcacc tcagtacgat accaccaggt tgtatctggt ggacaacaag tcggcggaca   | 13920 |
| ttgcttctct gaactatcag aatgaccaca gcaacttctt gaccacgggtg gtgcaaaaaca | 13980 |
| atgactttac ccctacggaa gccagcacc agaccattaa ctttgatgaa cgatcgcggt    | 14040 |
| ggggcgggtca gctaaagacc atcatgcata ctaacatgcc aaacgtgaac gagtatatgt  | 14100 |
| ttagtaacaa gttcaaagcg cgtgtgatgg tgtccagaaa acctcccgaac ggtgctgcag  | 14160 |
| ttggggatac ttatgatcac aagcaggata ttttgaaata tgagtgggtc gagtttactt   | 14220 |
| tgccagaagg caacttttca gttactatga ctattgattt gatgaacaat gccatcatag   | 14280 |
| ataattactt gaaagtgggt agacagaatg gagtgcttga aagtgacatt ggtgttaagt   | 14340 |
| tcgacaccag gaacttcaag ctgggatggg atcccgaaac caagttgatc atgcctggag   | 14400 |
| tgtatacgta tgaagccttc catcctgaca ttgtcttact gcctggctgc ggagtggatt   | 14460 |
| ttaccgagag tcgtttgagc aaccttcttg gtatcagaaa aaaacagcca tttcaagagg   | 14520 |
| gttttaagat tttgtatgaa gatttagaag gtggtaatat tccggccctc ttggatgtag   | 14580 |
| atgcctatga gaacagtaag aaagaacaaa aagccaaaat agaagctgct acagctgctg   | 14640 |
| cagaagctaa ggcaaacata gttgccagcg actctacaag ggttgctaac gctggagagg   | 14700 |
| tcagaggaga caattttgcg ccaacacctg ttccgactgc agaatcatta ttggccgatg   | 14760 |
| tgtctgaagg aacggacgtg aaactcacta ttcaacctgt agaaaaagat agtaagaata   | 14820 |
| gaagctataa tgtgttggaa gacaaaatca acacagccta tcgcagttgg tatctttcgt   | 14880 |
| acaattatgg cgatcccga aaaggagtgc gttcctggac attgctcacc acctcagatg    | 14940 |
| tcacctgcgg agcagagcag gtctactggt cgcttccaga catgatgaag gatcctgtca   | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggt ggggtgcagag cttatgccccg | 15060 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca   | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg   | 15180 |
| cgcccacccat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc  | 15240 |
| cgttgcgag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca    | 15300 |
| cctgtcccta cgtgtacaag gcactgggca tagtcgcacc gcgcgtcctt tcaagccgca   | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg   | 15420 |
| tctgcgcgct ccaagcaaga tgtacggagg cgacgcaaa cgttctaccc aacatcctgt    | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg   | 15540 |
| aaccaccgtc gatgatgtaa tcgatcaggt ggttgccgac gcccgtaatt atactcctac   | 15600 |
| tgcgccata tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta    | 15660 |
| tgctcgacgt aagagccggc gaaggcgcac tgccagacgc caccgagcta cactgccat    | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag   | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag gcccgccagg tcccgaggc aagcagccgc    | 15840 |
| tgctgcagcg gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt    | 15900 |
| gcgtgacgct gccaccggtc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa   | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa   | 16020 |
| ggaagaaatg ctgcaggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa   | 16080 |
| aaaaccccg c aaaatcaagc ggggttaaaaa ggacaaaaaa gaagaggaag atggcgatga | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga cgcgtgcaat ggcgtggcg    | 16200 |
| caaagtgcga catgtgttga gacctggaac ttcggtggtc ttacacccg gcgagcgctc    | 16260 |
| aagcgctact tttaagcggt cctatgatga ggtgtacggg gatgatgata ttcttgagca   | 16320 |
| ggcggctgac cgattaggcg agtttgctta tggcaagcgt agtagaataa cttccaagga   | 16380 |
| tgagacagtg tcgataccct tggatcatgg aaatcccacc ctagtctta aaccggtcac    | 16440 |
| tttgagcaa gtgttaccgg taactccg cgc aacaggtgtt aaacgcgaag gtgaagattt  | 16500 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| gtatcccact atgcaactga tggtagccaa acgccagaag ttggaggacg ttttggagaa   | 16560 |
| agtaaaaagtg gatccagata ttcaacctga gggttaaagt agacccatta agcaggtagc  | 16620 |
| gcctgggtctg ggggtacaaa ctgtagacat taagattccc actgaaagta tggaagtgc   | 16680 |
| aactgaaccc gcaaagccta ctgccacctc cactgaagtg caaacggatc catggatgcc   | 16740 |
| catgcctatt acaactgacg ccgccgggtcc cactcgaaga tcccgcgaa agtacgggtcc  | 16800 |
| agcaagtctg ttgatgccc attatgttgt acacccatct attattccta ctcttggtta    | 16860 |
| ccgaggcact cgctactatc gcagccgaaa cagtacctcc cgccgtcgcc gcaagacacc   | 16920 |
| tgcaaatcgc agtcgtcgcc gtagacgcac aagcaaaccg actcccggcg ccctgggtgcg  | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc tttgacactg ccgcgtcgcc gttaccatcc   | 17040 |
| gagtatcatc acttaataca tgttgccgct gcctccttgc agatatggcc ctacttgtc    | 17100 |
| gccttcgcgt tcccatcact ggttaccgag gaagaaactc gcgccgtaga agagggatgt   | 17160 |
| tgggacgcgg aatgcgacgc tacaggcgac ggcggtgctat ccgcaagcaa ttgcgggggtg | 17220 |
| gttttttacc agccttaatt ccaattatcg ctgctgcaat tggcgcgata ccaggcatag   | 17280 |
| cttccgtggc gggttcaggcc tcgcaacgac attgacattg gaaaaaacg tataaataaa   | 17340 |
| aaaaaaaaaa tacaatggac tctgacactc ctggtcctgt gactatgttt tcttagagat   | 17400 |
| ggaagacatc aatttttcat ccttggctcc gcgacacggc acgaagccgt acatgggcac   | 17460 |
| ctggagcgac atcggcacga gccaaactgaa cggggggcgcc ttcaattgga gcagtatctg | 17520 |
| gagcgggctt aaaaattttg gctcaacatc aaaaacatac gggaacaaag cttggaacag   | 17580 |
| cagtacagga caggcgctta gaaataaact taaagaccag aacttccaac aaaaagtagt   | 17640 |
| cgatgggata gcttccggca tcaatggagt ggtagatttg gctaaccagg ctgtgcagaa   | 17700 |
| aaagataaac agtcgttttg acccgccgcc agcaacccca ggtgaaatgc aagtggagga   | 17760 |
| agaaattcct ccgccagaaa aacgaggcga caagcgccg cgccccgatt tggaagagac    | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc   | 17880 |
| caccactaga ccgatagccc caatggccac cgggggtgatg aaaccttctc agttgcatcg  | 17940 |

eolf-seql (2)

|                                   |                                   |       |
|-----------------------------------|-----------------------------------|-------|
| acccgtcacc ttggatttgc cccctcccc   | tgctgtact gctgtacccg cttctaagcc   | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc  | caggtcacgt cccgggggcg ctcctcgtcc  | 18060 |
| aaatgcgcac tggcaaaaata ctctgaacag | catcgtgggt ctaggcgtgc aaagtgtaaa  | 18120 |
| acgccgtcgc tgcttttaat taaatatgga  | gtagcgctta acttgcctat ctgtgtatat  | 18180 |
| gtgtcattac acgccgtcac agcagcagag  | gaaaaaagga agaggtcgtg cgtcgacgct  | 18240 |
| gagttacttt caagatggcc accccatcga  | tgctgcccc aatgggcatac atgcacatcg  | 18300 |
| ccggacagga tgcttcggag tacctgagtc  | cgggtctggt gcagttcgcc cgcgccacag  | 18360 |
| acacctactt caatctggga aataagttta  | gaaatccac cgtagcgccg acccacgatg   | 18420 |
| tgaccaccga ccgtagccag cggctcatgt  | tgcgcttcgt gcccgttgac cgggaggaca  | 18480 |
| atacatactc ttacaaagtgc cggtagcccc | tggccgtggg cgacaacaga gtgctggata  | 18540 |
| tggccagcac gttctttgac attaggggtg  | tgttggacag aggtcccagt ttcaaaccct  | 18600 |
| attctggtac ggcttacaac tccctggctc  | ctaaaggcgc tccaaataca tctcagtgga  | 18660 |
| ttgcagaagg tgtaaaaaat acaactgggtg | aggaacacgt aacagaagag gaaaccaata  | 18720 |
| ctactactta cacttttggc aatgctcctg  | taaaagctga agctgaaatt acaaaagaag  | 18780 |
| gactcccagt aggttttgaa gtttcagatg  | aagaaagtaa accgatttat gctgataaaa  | 18840 |
| catatcagcc agaacctcag ctgggagatg  | aaacttggac tgaccttgat ggaaaaaccg  | 18900 |
| aaaagtatgg aggcagggtc ctcaaaccgc  | atactaagat gaaacctatgc tacgggtcct | 18960 |
| ttgccaacc tactaatgtg aaaggcggtc   | aggcaaaaca aaaaacaacg gagcagccaa  | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg | agttttttga tgcggcatcg cagaaaacaa  | 19080 |
| acttaagtcc taaaattgtc atgtatgcag  | aaaatgtaaa tttggaaact ccagacactc  | 19140 |
| atgtagtgta caaacctgga acagaagaca  | caagttccga agctaatttg ggacaacaat  | 19200 |
| ctatgcccac cagacccaac tacattggct  | tcagagataa ctttattgga cttatgtact  | 19260 |
| ataacagtac tggtaacatg ggggtgctgg  | ctggtcaagc gtctcagtta aatgcagtgg  | 19320 |
| ttgacttgca ggacagaaac acagaacttt  | cttaccaact cttgcttgac tctctgggcg  | 19380 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| acagaaccag atactttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac  | 19440 |
| gtgttattga aaatcatggt gtggaagatg aacttcccaa ctactgtttt ccactggacg  | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgcta   | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca  | 19620 |
| tggaaattaa ctttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat  | 19680 |
| atctcccaga ctctgtaaaa tacaccccggt ccaatgtcac tcttccagaa aacaaaaaca | 19740 |
| cctacgacta catgaacggg cgggtggtgc cgccatctct agtagacacc tatgtgaaca  | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta  | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca  | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca  | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt  | 20100 |
| tccccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg  | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg   | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctggcat   | 20280 |
| ttaccagact gaaaacaaaa gaaactccct ctttggggtc tggatttgac ccctactttg  | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |
| ctaacgaatt tgaaataaag cgcaactgtg atggcgaagg ctacaacgta gcccaatgca  | 20520 |
| acatgaccaa agactgggtc ttggtacaga tgctcgccaa ctacaacatc ggctatcagg  | 20580 |
| gcttctacat tccagaagga taaaagatc gcatgtattc atttttcaga aacttccagc   | 20640 |
| ccatgagcag gcagggtggt gatgaggatc attacaaaga cttcaaggcc gtcgccatac  | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccttatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcat accgttctcg agcaacttca  | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg  | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct  | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct   | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc  | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca  | 21180 |
| gagccattgt ccaagacctg ggttgcggac cctatTTTTT gggaacctac gataagcgct  | 21240 |
| tcccgggggt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg   | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc  | 21360 |
| tttttgatcc ttttggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg  | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat  | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcatgttcc   | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaaccccacc atgaaattgc  | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca   | 21660 |
| atcaaaaagc actctaccat tttcttaata cccattcgcc ttatTTTctgc tcccatcgta | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa  | 21780 |
| caacgtgttc aataaacatc actttatttt ttacatgta tcaaggctct gcattactta   | 21840 |
| tttatttaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg  | 21900 |
| ttgcggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt  | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgcttt gagcgcgaga gttgcggtac  | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacggtg  | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cgggggtcatc | 22200 |
| ttgcagggtc gcctacccat ggccgggcacc caattaggct tgtggttgca atcgcaggtc | 22260 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| agggggatca gtatcatctt ggcctgatcc tgtctgattc ctggatacac ggctctcatg  | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcggtata aaacatcccg  | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcgggcg  | 22440 |
| tcattgttag ctatttgcac cacacttctg ccccagcggg tttgggtgat tttggttcgc  | 22500 |
| tcgggattct cctttaaggc tcgttgtccg ttctcgctgg ccacatccat ctcgataatc  | 22560 |
| tgctccttct gaatcataat attgccatgc aggcaattca gcttgccctc ataattcattg | 22620 |
| cagccatgag gccacaacgc acagcctgta cattccaat tatggtgggc gatctgagaa   | 22680 |
| aaagaatgta tcattcccctg cagaaatctt cccatcatcg tgctcagtgt cttgtgacta | 22740 |
| gtgaaagtta actggatgcc tcgggtgctcc tcgtttacgt actggtgaca gatgcgcttg | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtc taagtctgtt atccagcctg  | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc  | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcattctta | 22980 |
| gcatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg   | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgtttggt cttccttggc ttctttttgg ggggtatcgg aggaggagga  | 23160 |
| ctgtcgctcc gttccggaga caggaggat tgtgacgttt cgctcaccat taccaactga   | 23220 |
| ctgtcggtag aagaacctga cccacacagg cgacagggtg ttctcttcgg gggcagagg   | 23280 |
| ggaggcgatt gcgaagggt gcggtccgac ctggaaggcg gatgactggc agaaccctt    | 23340 |
| ccgcgttcgg ggggtgtgct cctgtggcgg tcgcttaact gatttccttc gcggctggcc  | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |
| cgccacgagt gccatcacat ctcgtcctca gcgacgagga aaaggagcag agcttaagca  | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gaccgggct   | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa  | 23700 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| actgccccaaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca  | 23760 |
| ccgactacct catagggcctt gacggggaag acgcgctcct taaacatcta gcaagacagt  | 23820 |
| cgctcatagt caaggatgca ttatttgaca gaactgaagt gcccacagc gtggaagagc    | 23880 |
| tcagccgcgc ctacgagcctt aacctctttt cacctcgtac tccccccaaa cgtcagccaa  | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag   | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta   | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag   | 24120 |
| cttccttga agaggttcca aagatcttcg agggctctgg caataatgag actcgggccg    | 24180 |
| caaatgctct gcaaaaaggga gaaaatggca tggatgagca tcacagcgctt ctggtggaat | 24240 |
| tggaaggcga taatgccaga ctgcagtagc tcaagcgaag catcgaggct acacacttcg   | 24300 |
| catatccgc tgtcaacctg cccctaaag tcatgacggc ggtcatggac cagttactca     | 24360 |
| ttaagcgcg aagtccccct tcagaagaca tgcatgaccc agatgcctgt gatgagggtta   | 24420 |
| aaccagtggc cagtgatgag cagctaacc gatggctggg caccgactct cccagggtt     | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tgggtgctgg taccgtagaa ctagagtgtc   | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca   | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatc taacgtggaa ctcaccaacc     | 24660 |
| tggtttccta catgggtatt ctgcatgaga atcgccatagg acaaagcgtg ctgcacagca  | 24720 |
| ccctgaaggg ggaagccgc cgtgattaca tccgcgattg tgtctatctg tacctgtgcc    | 24780 |
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag   | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca   | 24900 |
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa   | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcaccttg    | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca   | 25080 |
| cctaccgcga gtgccccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact   | 25140 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc  | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga  | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt  | 25320 |
| cttctcctgg gcaaagttaa aaactgaccc cgggactgtg gacctccgcc tacttgcgca  | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc   | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcaccagggg ggcaattctg gccaattgc   | 25500 |
| aagccatcca aaaatccgc caagaatttc tactgaaaaa gggtaagggg gtctaccttg   | 25560 |
| acccccagac cggcgaggaa ctcaacacaa ggttccctca ggatgtccca acgacgagaa  | 25620 |
| aacaagaagt tgaagggtgca gccgccgccc ccagaagata tggaggaaga ttgggacagt | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttgag   | 25740 |
| gaggaaaacg aggaggcaga ggaggtggaa gaagtaaccg ccgacaaaca gttatcctcg  | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt  | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcgc ttccaagacc  | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcgggggc ataagaatgc catcatctcc  | 25980 |
| tgcttgcag agtgcggggg caacatatcc ttcacgcggc gctacttgct attccaccat   | 26040 |
| gggggtgaact ttccgcgcaa tgttttgcag tactaccgtc acctccacag cccctactat | 26100 |
| agccagcaaa tcccggcagt ctcgacagat aaagacagcg gcggcgacct ccaacagaaa  | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac  | 26220 |
| agccaacgag ccagcgcaaa ccgagagtt aagaaatcgg atctttccaa ccctgtatgc   | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |
| ttcgctcacc agaagttggt tgtatcacia gagcgaagat caacttcagc gcactctcga  | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac  | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcacctcga catgagtaaa gaaattccca   | 26520 |
| cgctttacat gtggagttat caaccccaaa tgggattggc ggcaggcgcc tcccaggact  | 26580 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| actccacccg catgaattgg ctcagcgccg ggctttctat gattttctga gttaatgata   | 26640 |
| tacgcgcta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc    | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca   | 26760 |
| ccactgtatt acttcctcga gacgcccagg ccgaagtcca aatgactaat gcagggtgcgc  | 26820 |
| agttagctgg cggctccacc ctatgtcgtc acaggcctcg gcataatata aaacgcctga   | 26880 |
| tgatcagagg ccgagggtatc cagctcaacg acgagtcggt gagctctccg cttggtctac  | 26940 |
| gaccagacgg aatctttcag attgccggct gcgggagatc ttccttcacc cctcgtcagg   | 27000 |
| ctgttctgac tttggaaaagt tcgtcttcgc aaccccgctc gggcggaatc gggaccgttc  | 27060 |
| aatttgtgga ggagtttact ccctctgtct acttcaaccc cttctccgga tctcctgggc   | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg   | 27180 |
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg   | 27240 |
| ctttcgctgc tttgcccggg aactcattga gttcatctac ttcgaactcc ccaaggatca   | 27300 |
| ccctcaaggt ccggcccacg gagtgcggtat ttctatcgaa ggcaaaaatag actctcgctt | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccagggaac acaccacggt  | 27420 |
| ttccatctac tgcatttgta atcaccccg attgcatgaa agcctttgct gtcttatgtg    | 27480 |
| tactgagttt aataaaaaact gaattaagac tctcctacgg actgccgctt cttcaacccg  | 27540 |
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctgtt aacttcacct   | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttcccta   | 27660 |
| ctaatactac tttcaaaacc ggaggtgagc tccaaggctt tcctacagaa aacccttggg   | 27720 |
| tggaagcggg ccttgtagtg ctaggaattc ttgcgggtgg gcttgtgatt attctttgct   | 27780 |
| acctatacac accttgcttc actttcttag tgggtgtgtg gtattggttt aaaaaatggg   | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga   | 27900 |
| tccatgtcta gacttcgacc cagaaaaactg cacacttact tttgcacccg acacaagccg  | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aatttacctg   | 28020 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| catggtggga atcaacccca tagttatcac ccagcaaagt ggagatacta agggttgcat  | 28080 |
| tcactgctcc tgcgattcca tcgagtgcac ctacaccctg ctgaagaccc tatgcggcct  | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca  | 28200 |
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttcctc ttcccaactc   | 28260 |
| tggtattcta aaccccggtc agcggcatac tttctccata ctttaaaggg gatgtcaa    | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt   | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca  | 28440 |
| cccccttata aaccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt   | 28500 |
| tcttacttta aaatgttta cccactaac aaccacaggc ggatctctac agctaaaagt    | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac  | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac  | 28680 |
| gaatgaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat  | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aacccaccg aagccaactg   | 28800 |
| tcaaatacatg aactccagt aatctaata ttgcaaatta attctaacac tagttaaac    | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct  | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaattt  | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc  | 29040 |
| tactggtgcc attactaatg ctaaagggtt catgcccagc acgactgcct atcctttcaa  | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga  | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga  | 29220 |
| gacatcatat tgtattcgta taacttggtc ctggaacaca ggagatgccc cagagggtgca | 29280 |
| aacctctgct acaaccctag tcacctcccc atttaccttt tactacatca gagaagacga  | 29340 |
| ctgacaaata aagtttgcga tcgccaggcc accatggcct tgacctttgc tttactggtg  | 29400 |
| gccctcctgg tgctcagctg caagtcaagc tgctctgtgg gctgtgatct gcctcaaacc  | 29460 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cacagcctgg gtagcaggag gaccttgatg ctcctggcac agatgaggag aatctctctt  | 29520 |
| ttctcctgct tgaaggacag acatgacttt ggatttcccc aggaggagtt tggcaaccag  | 29580 |
| ttccaaaagg ctgaaaccat ccctgtcctc catgagatga tccagcagat cttcaatctc  | 29640 |
| ttcagcacia aggactcatc tgctgcttgg gatgagaccc tcctagacaa attctacact  | 29700 |
| gaactctacc agcagctgaa tgacctggaa gcctgtgtga tacagggggg gggggtgaca  | 29760 |
| gagactcccc tgatgaagga ggactccatt ctggctgtga ggaaatactt ccaaagaatc  | 29820 |
| actctctatc tgaaagagaa gaaatacagc ccttgtgcct gggagggttg cagagcagaa  | 29880 |
| atcatgagat ctttttcttt gtcaacaaac ttgcaagaaa gtttaagaag taaggaagga  | 29940 |
| agcggagcta ctaacttcag cctgctgaag caggctggag acgtggagga gaaccttgga  | 30000 |
| cctcaggtct ccactgctgc ccttgccgtc ctcctctgca ccatggctct ctgcaaccag  | 30060 |
| gtcctctctg caccacttgc tgctgacacg ccgaccgcct gctgcttcag ctacacctcc  | 30120 |
| cgacagattc cacagaattt catagctgac tactttgaga cgagcagcca gtgctccaag  | 30180 |
| cccagtgtca tcttcctaac caagagaggc cggcaggtct gtgctgaccc cagtgaggag  | 30240 |
| tgggtccaga aatacgtcag tgacctggag ctgagtgccg gaagcggaga gggcagagga  | 30300 |
| agtctgctaa catgcggtga cgtcgaggag aatcctggac ctggccacac acggaggcag  | 30360 |
| ggaacatcac catccaagt tccatacctc aatttctttc agctcttggt gctggctggt   | 30420 |
| ctttctcact tctgttcagg tgttatccac gtgaccaagg aagtgaagaa agtggcaacg  | 30480 |
| ctgtcctgtg gtcacaatgt ttctgttgaa gagctggcac aaactcgcat ctactggcaa  | 30540 |
| aaggagaaga aaatgggtgct gactatgatg tctggggaca tgaatatatg gcccaggtac | 30600 |
| aagaaccgga ccatctttga tatcactaat aacctctcca ttgtgatcct ggctctgcgc  | 30660 |
| ccatctgacg agggcacata cgagtgtgtt gttctgaagt atgaaaaaga cgctttcaag  | 30720 |
| cgggaacacc tggctgaagt gacgttatca gtcaaagctg acttccttac acctagtata  | 30780 |
| tctgactttg aaattccaac ttctaataatt agaaggataa tttgctcaac ctctggaggt | 30840 |
| tttccagagc ctcacctctc ctggttgga aatggagaag aattaaatgc catcaacaca   | 30900 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| acagtttccc aagatcctga aactgagctc tatgtctgtta gcagcaaact ggatttcaat  | 30960 |
| atgacaacca accacagctt catgtgtctc atcaagtatg gacatttaag agtgaatcag   | 31020 |
| accttcaact ggaatacaac caagcaagag cattttcctg ataacctgct cccatcctgg   | 31080 |
| gccattacct taatctcagt aaatggaatt tttgtgatat gctgcctgac ctactgcttt   | 31140 |
| gccccaaagat gcagagagag aaggaggaat gagagattga gaagggaag tgtacgcctt   | 31200 |
| gtataagcta gcttgactga ctgagataca gcgtaccttc agctcacaga catgataaga   | 31260 |
| tacattgatg agtttggaca aaccacaact agaatgcagt gaaaaaaaaatg ctttatttgt | 31320 |
| gaaatttgtg atgctattgc tttatttgtg accattataa gctgcaataa acaagttaac   | 31380 |
| aacaacaatt gcattcattt tatgtttcag gttcaggggg aggtgtggga ggttttttaa   | 31440 |
| agcaagtaaa acctctacaa atgtggtagt cgtcagctat cctgcaggaa cttgtttatt   | 31500 |
| tgaaaatcaa ttcacaaaat ccgagtagtt attttgcctc ccccttccca tttaacagaa   | 31560 |
| tacaccaatc tctccccacg cacagcttta aacatttga taccattaga tatagacatg    | 31620 |
| gttttagatt ccacattcca aacagtttca gagcgagcca atctgggggtc agtgatagat  | 31680 |
| aaaaatccat cgggatagtc ttttaaagcg ctttcacagt ccaactgctg cggatgcgac   | 31740 |
| tccggagtct ggatcacggt catctggaag aagaacgatg ggaatcataa tccgaaaacg   | 31800 |
| gtatcggacg atttgtctc atcaaacca caagcagccg ctgtctgcgt cgctccgtgc     | 31860 |
| gactgctgtt tatgggatca gggtcacag tgcctgaag catgatttta atagccctta     | 31920 |
| acatcaactt tctggtgcga tgcgcgcagc aacgcattct gatttcactc aaatctttgc   | 31980 |
| agtaggtaca acacattatt acaatattgt ttaataaacc ataattaaaa gcgctccagc   | 32040 |
| caaaactcat atctgatata atcgcccctg catgaccatc ataccaaagt ttaatataaa   | 32100 |
| ttaaatgacg ttccctcaaa aacacactac ccacatacat gatctctttt ggcatgtgca   | 32160 |
| tattaacaat ctgtctgtac catggacaac gttgggttaat catgcaaccc aatataacct  | 32220 |
| tccggaacca cactgccaac accgctcccc cagccatgca ttgaagtga ccctgctgat    | 32280 |
| tacaatgaca atgaagaacc caattctctc gaccgtgaat cacttgagaa tgaaaaatat   | 32340 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ctatagtggc acaacataga cataaatgca tgcattcttct cataatTTTT aactcctcag | 32400 |
| gatttagaaa catatcccag ggaataggaa gctcttgagc aacagtaaag ctggcagaac  | 32460 |
| aaggaagacc acgaacacaa cttacactat gcatagtcac agtatcacia tctggcaaca  | 32520 |
| gcgggtgggc ttcatgcata gaagctcggg tttcattttc ctcacaacgt ggtaactggg  | 32580 |
| ctctgggtga aggggtgatgt ctggcgcatg atgtcgagcg tgcgcgcaac cttgtcataa | 32640 |
| tggagttgct tcctgacatt ctcgtatttt gtatagcaaa acgcggccct ggcaaacac   | 32700 |
| actcttcttc gccttctatc ctgccgctta gcgtgttccg tgtgatagtt caagtacaac  | 32760 |
| cacactctta agttggtaa aagaatgctg gcttcagttg taatcaaaac tccatcgcat   | 32820 |
| ctaactgttc tgaggaaaac atccaagcaa tgcaactgga ttgtgtttca agcaggagag  | 32880 |
| gagaggggaag agacggaaga accatgttaa tttttattcc aaacgatctc gcagtacttc | 32940 |
| aaattgtaga tcgcgcagat ggcatctctc gccccactg tgttggtgaa aaagcacagc   | 33000 |
| tagatcaaaa gaaatgcgat tttcaagggt ctcaacgggt gcttccagca aagcctccac  | 33060 |
| gcgcacatcc aagaacaaaa gaataccaaa agaaggagca ttttctaact cctcaatcat  | 33120 |
| catattacat tcctgcacca ttcccagata attttcagct ttccagcctt gaattattcg  | 33180 |
| tgtcagttct tgtggtaaat ccaatccaca cattacaaac aggtcccgga gggcgccctc  | 33240 |
| caccaccatt cttaaacaca ccttcataat gacaaaatat cttgctcctg tgtcacctgt  | 33300 |
| agcgaattga gaatggcaac atcaattgac atgcccttgg ctctaagttc ttctttaagt  | 33360 |
| tctagttgta aaaactctct catattatca ccaaactgct tagccagaag cccccggga   | 33420 |
| acaagagcag gggacgctac agtgcagtac aagcgagac ctccccaatt ggctccagca   | 33480 |
| aaaacaagat tggaataagc atattgggaa ccgccagtaa tatcatcgaa gttgctggaa  | 33540 |
| atataatcag gcagagtttc ttgtaaaaat tgaataaaag aaaaatttgc caaaaaaaca  | 33600 |
| ttcaaaacct ctgggatgca aatgcaatag gttaccgcgc tgcgctcaa cattgttagt   | 33660 |
| tttgaattag tctgcaaaaa taataaaaaa aacaagcgtc atatcatagt agcctgacga  | 33720 |
| acagatggat aaatcagtct ttccatcaca agacaagcca cagggtctcc agctcgaccc  | 33780 |

eolf-seql (2)

|            |             |            |            |            |            |       |
|------------|-------------|------------|------------|------------|------------|-------|
| tcgtaaaacc | tgatcatcatg | attaaacaac | agcaccgaaa | gttcctcgcg | gtgaccagca | 33840 |
| tgaataattc | ttgatgaagc  | atacaatcca | gacatgttag | catcagttaa | cgagaaaaaa | 33900 |
| cagccaacat | agcctttggg  | tataattatg | cttaatcgta | agtatagcaa | agccaccctt | 33960 |
| cgcggatata | aagtaaaagg  | cacaggagaa | taaaaaatat | aattatttct | ctgctgctgt | 34020 |
| tcaggcaacg | tcgccccggg  | tccctctaaa | tacacataca | aagcctcatc | agccatggct | 34080 |
| taccagacaa | agtacagcgg  | gcacacaaag | cacaagctct | aaagtgactc | tccaacctct | 34140 |
| ccacaatata | tatatacaca  | agccctaaac | tgacgtaatg | ggagtaaagt | gtaaaaaatc | 34200 |
| ccgccaacc  | caacacacac  | cccgaactg  | cgtcaccagg | gaaaagtaca | gtttcacttc | 34260 |
| cgcaatccca | acaggcgtaa  | cttcctcttt | ctcacggtag | gtgatatccc | actaacttgc | 34320 |
| aacgtcattt | tcccacggtc  | gcaccgcccc | ttttagccgt | taaccccaca | gccaatcacc | 34380 |
| acacgatcca | cactttttta  | aatcacctca | tttacatatt | ggcaccattc | catctataag | 34440 |
| gtatattata | tagataga    |            |            |            |            | 34458 |

<210> 120

<211> 981

<212> DNA

<213> Artificial Sequence

<220>

<223> E3 REGION FROM ENAD

<400> 120

|            |            |             |            |            |            |     |
|------------|------------|-------------|------------|------------|------------|-----|
| atgtctggtg | acgcggctga | gctatctcgg  | ctgcgacatc | tagaccactg | ccgccgcttt | 60  |
| cgctgctttg | cccgggaact | cattgagttc  | atctacttcg | aactcccca  | ggatcacctt | 120 |
| caaggtccgg | cccacggagt | gcggatttct  | atcgaaggca | aaatagactc | tcgcctgcaa | 180 |
| cgaattttct | cccagcggcc | cgctgctgatc | gagcgagacc | agggaacac  | cacggtttcc | 240 |
| atctactgca | tttgtaatca | ccccggattg  | catgaaagcc | tttgctgtct | tatgtgtact | 300 |
| gagtttaata | aaaactgaat | taagactctc  | ctacggactg | ccgcttcttc | aaccggatt  | 360 |
| ttacaaccag | aagaacgaaa | cttttcctgt  | cgccaggac  | tctgttaact | tcacctttcc | 420 |

eolf-seql (2)

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| tactcacaaa ctagaagctc aacgactaca ccgctttttcc agaagcattt tccctactaa | 480 |
| tactacttttc aaaaccggag gtgagctcca aggtcttcct acagaaaacc cttgggtgga | 540 |
| agcgggcctt gtagtgctag gaattcttgc ggggtgggctt gtgattattc tttgctacct | 600 |
| atacacacct tgcttcactt tcttagtggt gttgtggtat tggtttaaaa aatggggccc  | 660 |
| atactagtct tgcttgtttt actttcgctt ttggaaccgg gttctgccaa ttacgatcca  | 720 |
| tgtctagact tcgaccaga aaactgcaca cttacttttg caccgacac aagccgcatc    | 780 |
| tgtggagttc atgcctctc ttacgaactt ggccccaac gacaaaaatt tacctgcatg    | 840 |
| gtgggaatca accccatagt tatcaccag caaagtggag atactaaggg ttgcattcac   | 900 |
| tgctcctgcg attccatcga gtgcacctac accctgctga agaccctatg cggcctaaga  | 960 |
| gacctgctac caatgaatta a                                            | 981 |

<210> 121  
 <211> 34  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> A NON-CODING SEQUENCE SUITABLE FOR INCLUSION INTO BY

|                                       |    |
|---------------------------------------|----|
| <400> 121                             |    |
| caaataaagt ttaacttggt tatttgaaaa tcaa | 34 |

<210> 122  
 <211> 34522  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> NG-348 virus genome sequence comprising a transgene cassette that encoding a membrane-anchored chimeric form an anti-human CD3e scFv, and CD80 inserted in the region BY

|                                                                     |     |
|---------------------------------------------------------------------|-----|
| <400> 122                                                           |     |
| tctatctata taatatacct tatagatgga atgggtgcaa tatgtaaatg aggtgatttt   | 60  |
| aaaaagtgtg gatcgtgtgg tgattggctg tgggggttaac ggctaaaagg ggcgggtgcga | 120 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt   | 180  |
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggg atttaacagg   | 240  |
| aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa   | 300  |
| tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg   | 360  |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt   | 420  |
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtgt cagctgatcg ctaggggtatt | 480  |
| tatacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc   | 540  |
| tctgcgccgg cagtttaata ataaaaaaaaat gagagatttg cgatttctgc ctcaggaaat | 600  |
| aatctctgct gagactggaa atgaaatatt ggagcttggt gtgcacgccc tgatgggaga   | 660  |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt   | 720  |
| agaggtagag ggatcggagg attctaata ggaagctgta aatggctttt ttaccgattc    | 780  |
| tatgctttta gctgctaata aagggttaga attagatccg cttttggaca cttttgatac   | 840  |
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt   | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga   | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt   | 1020 |
| tcagttggat tgcccggagc ttcttggaaca tggctgtaag tcttgatgaat ttcacaggaa | 1080 |
| aaatactgga gtaaaggaa tgttatgttc gctttgttat atgagaacgc actgccactt    | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat   | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc   | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg   | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga   | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaaacgtc caagacaata   | 1440 |
| agtgttccat atccgtgttt acttaagggt acgtcaatat ttgtgtgaca gtgcaatgta   | 1500 |
| ataaaaaatat gttaactggt cactgggtttt tattgctttt tgggcgggga ctcaggtata | 1560 |



eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| taagtagaag cagacctgtg tggtagctc ataggagctg gctttcatcc atggaggttt    | 1620 |
| gggccatttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag   | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa   | 1740 |
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgcccagga ctttttgaag   | 1800 |
| ctcttaattt ggcccatcag gttcacttta aagaaaaagt tttatcagtt ttagactttt   | 1860 |
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga   | 1920 |
| tcccgagac tcatttcagc aggggatacg ttttggattt catagccaca gcattgtgga    | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg   | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc   | 2100 |
| aagaggacaa cccgagagcc ggcctggacc ctccagtgga ggaggcggag tagctgactt   | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt   | 2220 |
| taagaggagagg agggcatcta gtggtactga tgctagatct gagttggctt taagtttaat | 2280 |
| gagtcgcaga cgtcctgaaa ccatttggtg gcatgaggtt cagaaagagg gaagggatga   | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacaggtg aaaacatgtt ggttggagcc   | 2400 |
| tgaggatgat tgggaggtgg ccattaataaa ttatgccaa atagctttga ggcctgataa   | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tggtacatat ctggaaatgg   | 2520 |
| ggctgaggtg gtaatagata ctcaagacaa ggcagttatt agatgctgca tgatggatat   | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga   | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt   | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag   | 2760 |
| tttctatgcg tgttggattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa   | 2820 |
| atgcatattt caaagatgta acctgggcat tctgaatgaa ggcgaagcaa ggggcccca    | 2880 |
| ctgcgcttct acagatactg gatgttttat tttgattaag ggaaatgcca gcgtaaagca   | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctgggtg   | 3000 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt  | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt  | 3120 |
| tatgccttac cagtgtaca tgaatcatgt gaaagtgttg ttggaaccag atgccttttc   | 3180 |
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta  | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccaggttcca  | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac  | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt  | 3420 |
| tggggtggga ttttcagatg gacagattga gtaaaaattt gtttttctg tcttcagct    | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtcttca gcccttatct gacagggcgt  | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc  | 3600 |
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagttcttc acctttggac  | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac  | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac  | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct  | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgtg tcggcacggc aaagtctaaa   | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt  | 3960 |
| gtttttatth catttttcgc gcacggtatg ccctagacca ccgatctcta tcattgagaa  | 4020 |
| ctcggtggtat tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca | 4080 |
| ttaggccgtc tttggggtgg agatagctcc attgaaggga ttcattgctcc ggggtagtgt | 4140 |
| tgtaaatcac ccagtcataa caaggctgca gtgcatgggtg ttgcacaata tcttttagaa | 4200 |
| gtaggctgat tgccacagat aagcccttgg ttaggtgtt tacaaccgg ttgagctggg    | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttggttg gatttttaag ttggcaatat   | 4320 |
| tgccgccaag atcccgctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg   | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac  | 4440 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ccttgtgtcc tccaagatth tccatgcact catccatgat aatagcaatg gggccgtggg  | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagttatgt tcctgagtha  | 4560 |
| aatcatcata agccatttha atgaatttgg ggcggagagt accagattgg ggtatgaatg  | 4620 |
| ttccttcggg ccccgagca tagttcccct cacagatttg catttccaa gctttcagtt    | 4680 |
| ccgagggtgg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg  | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga tttgccacat ccggtggggc  | 4800 |
| cataaatgat tccgattacg ggttgcaggt ggtagtttag ggaacggcaa ctgccgtctt  | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcataatt tcccgcacca  | 4920 |
| aatccattag gaggcgctct cctcctagtg atagaagttc ttgtagtgag gaaaagtttt  | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttgagag agtttgctgc aaaagttcta   | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt  | 5100 |
| tcgcgggttt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag  | 5160 |
| ggttcgggtcc ttccagggtc tcagtgttcg agtcagggtt gtttccgtca cagtgaaggg | 5220 |
| gtgtgcgcct gcttgggcgc ttgccagggt gcgcttcaga ctcatcctgc tggtcgaaaa  | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag ttaccatga gttcgtagtt   | 5340 |
| gagcgccctg gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatc   | 5400 |
| cgggcagtat aggcatttca gcgcatacaa cttgggcgca aggaaaacgg attctggggg  | 5460 |
| gtatgcatct gcgccgagg aggcgcaaac agtttcacat tccaccagcc aggttaaadc   | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccataattt ttgatgcgtt tcttaccttt | 5580 |
| ggtctccatg agttcgtgtc ctcgttgagt gacaaacagg ctgtccgtgt ccccgtagac  | 5640 |
| tgattttaca ggctctttct ccagtggagt gcctcgggtc tcttcgtaca ggaactctga  | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcaciaag gaggctatgt gggaggggta  | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcacctc   | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc | 5880 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgctgtc  | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact  | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc  | 6060 |
| tttcatgagg ttttcgtcca tctggtcaga aaacacaatt tttttattgt caagtttggg  | 6120 |
| ggcaaatgat ccatacaggg cggttgataa aagtttggca atggatcgca tggtttgggt  | 6180 |
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag  | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcattctggc acgattctca cttgccaccc | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt  | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag  | 6420 |
| ttcatcggga ggggtctgcat ccatggtaaa gattcccga agtaaactct tatcaaaata  | 6480 |
| gctgatggga gtgggggtcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc   | 6720 |
| cggacccaag ttggtgcgat tgggtttttc tgttctgtag acgatctggc gaaagatggc  | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggt  | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggttg  | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggattctt tcgcgatcct tccagtactc  | 7020 |
| ttctagcgga aacccgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac  | 7080 |
| tgctttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgtc tctgaccatg actttgagga attggtattt | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggttg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat | 7320 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaagggtta ggtctgtggg | 7500 |
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtt ttgtaactgg tcccgggtact gacgaaaatg | 7620 |
| ccgtccgact gccatTTTTT ctgggggtgac gcaatagaag gtttgggggt cctgccgcca | 7680 |
| gcgatcccac ttgagtttta tggcgagggtc ataggcgatg ttgacgagcc gctggtctcc | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtttcc acatcgtagg tgagaaaagag cttttctgtg cgaggatgag agccaatcgg | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgcacg ggttgatatc cgtgaatgag ttgtacctgg cttcccttga cgagaaattt  | 8040 |
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc  | 8100 |
| ctgttcatct tctgtctcga tgggtggcat gctgacgagc cctcgcgga ggcaagtcca   | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag  | 8220 |
| ggtcctgaga cgctgcggac tcaggtagt aggcagtgct aggagattaa cttgcatgat   | 8280 |
| cttttgagg gcgtgcggga ggttcagata gtacttgatc tcaacgggtc cgttggtgga   | 8340 |
| gatgtcgatg gcttgcaagg ttccgtgtcc cttgggcgct accaccgtgc cttgttttt   | 8400 |
| cattttggac ggcggtggct ctgttgcttc ttgcatgttt agaagcgggtg tcgaggcg   | 8460 |
| gcaccgggcg gcaggggcgg ctcgggaccc ggcggcattg ctggcagtgg tacgtcggcg  | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg  | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac  | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt  | 8700 |
| tcttgcacgt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct  | 8760 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| tcctcttgaa gatctccgcg gcccgcctctc tcgacgggtgg ccgcgagggtc gttggagatg | 8820  |
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc    | 8880  |
| acggccccca cgggatctct cgcgcgcatg accacctggg cgaggttgag ctccacgtgg    | 8940  |
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg    | 9000  |
| tgctcggatga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc   | 9060  |
| agagcttcca agcgctccat ggccctcgtag aagtccacgg caaaattaaa aaactgggag   | 9120  |
| tttcgcgcgg acacggtcaa ctctctttcc agaagacgga taagttcggc gatggtggtg    | 9180  |
| cgcacctcgc gctcgaaagc ccctgggatt tcttctcaa tctcttcttc ttccactaac     | 9240  |
| atctcttcct cttcagggtgg ggctgcagga ggagggggaa cgcggcgacg ccggcggcgc   | 9300  |
| acgggcagac ggtcgatgaa tctttcaatg acctctccgc ggcggcggcg catggtttca    | 9360  |
| gtgacggcgc ggccgttctc gcgcggctgc agagtaaaaa caccgccgcg catctcctta    | 9420  |
| aagtggatgac tgggaggttc tccgtttggg agggagaggg cgctgattat acattttatt   | 9480  |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa    | 9540  |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct    | 9600  |
| tgtgggcggg ggtggttatg tggtcggctt gggtcttctg tttcttcttc atctcgggaa    | 9660  |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatggtg    | 9720  |
| gcgaggagca ccaggctctt gggtccggct tgctggatac gcaggcgatt ggccattccc    | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg    | 9840  |
| ggcacttctt cctcaccctg tctgccatgc atacgtgtga gtccaaatcc gcgcattggt    | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta    | 9960  |
| agggtggctt gaaagtcac aaaatccaca aagcgggtgg aagctcctgt attaatggtg     | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggt gaccagggcg cacgagctcg    | 10080 |
| gtgtatttaa ggcgcaata ggcgcggtg tcaaagatgt aatcgttgca ggtgcgcacc      | 10140 |
| agatactggt accctataag aaaatgcggc ggtggttggc ggtagagagg ccatcgttct    | 10200 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac   | 10260 |
| ctggacatcc aggtgattcc tgcggcggta gtagaagccc gaggaaactc gcgtacgcgg   | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcattgtag gcacggtttg accagtgagg   | 10380 |
| cgcgcgcagt cattgatgct ctatagacac ggagaaaatg aaagcgttca gcgactcgac   | 10440 |
| tccgtagcct ggaggaacgt gaacgggttg ggtcgcggtg taccggtt cgagacttgt     | 10500 |
| actcgagccg gccggagccg cggctaactg ggtattggca ctcccgtctc gaccagcct    | 10560 |
| acaaaaatcc aggatacggg atcgagtcgt tttgctggtt tccgaatggc aggggaagtga  | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa   | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact   | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc   | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa   | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag   | 10920 |
| gagccggagg agatgcgagc ttcccgtttt aacgcgggtc gtgagctgcg tcacggtttg   | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagttg atgaaatgac agggatcagt   | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag   | 11100 |
| gaagagcgta acttccaaaa gtcttttaaat aatcatgtgc gaaccctgat tgcccgcgaa  | 11160 |
| gaagttaccc ttggtttgat gcatttgtgg gattttagtg aagctatcat tcagaaccct   | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtggtgc aacacagcag agacaatgag   | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt   | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg  | 11400 |
| gctgccatca attactcggg tttgagcttg ggaaaatatt acgctcgcaa aatctacaag   | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg gggttctacat gcgcatgacg | 11520 |
| ctcaaggctt tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc   | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa   | 11640 |

eolf-seql (2)

|                                   |                                   |       |
|-----------------------------------|-----------------------------------|-------|
| agagctctga ctggagctgg aaccgagggg  | gagaattact tcgacatggg agctgacttg  | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc  | gccgcgacgg caggatgtga gcttccttac  | 11760 |
| atagaagagg cggatgaagg cgaggaggaa  | gagggcgagt acttggaaga ctgatggcac  | 11820 |
| aacccgtgtt ttttgctaga tggaaacagca | agcaccggat cccgcaatgc gggcggcgct  | 11880 |
| gcagagccag ccgtccggca ttaactcctc  | ggacgattgg acccaggcca tgcaacgtat  | 11940 |
| catggcgttg acgactcgca accccgaagc  | ctttagacag caaccccagg ccaaccgtct  | 12000 |
| atcggccatc atggaagctg tagtgccttc  | ccgctctaata cccactcatg agaaggctct | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa  | agctattcgt ccagatgagg ccggactggg  | 12120 |
| atacaacgct ctcttagaac gcgtggctcg  | ctacaacagt agcaatgtgc aaaccaatth  | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc  | cgtgtctcag cgcgaaagggt tccagcgtga | 12240 |
| tgccaacctg ggttcgctgg tggcgtaaaa  | tgctttcttg agtactcagc ctgctaattg  | 12300 |
| gccgcgtggg caacaggatt atactaactt  | tttaagtgtt ttgagactga tggatcaga   | 12360 |
| agtacctcag agcgaagtgt atcagtccgg  | tcctgattac ttctttcaga ctagcagaca  | 12420 |
| gggcttgtag acggtaaatac tgagccaagc | ttttaaaaac cttaaagggtt tgtggggagt | 12480 |
| gcatgccccg gtaggagaaaa gagcaaccgt | gtctagcttg ttaactccga actccgcct   | 12540 |
| attattactg ttggtagctc ctttcaccga  | cagcggtagc atcgaccgta attcctatth  | 12600 |
| gggttaccta ctaaacctgt atcgcgaaagc | catagggcaa agtcagggtgg acgagcagac | 12660 |
| ctatcaagaa attaccaag tcagtcgcgc   | tttgggacag gaagacactg gcagtttgga  | 12720 |
| agccactctg aacttcttgc ttaccaatcg  | gtctcaaaaag atccctcctc aatatgctct | 12780 |
| tactgcggag gaggagagga tccttagata  | tgtgcagcag agcgtgggat tgthtctgat  | 12840 |
| gcaagagggg gcaactccga ctgcagcact  | ggacatgaca gcgcgaaata tggagcccag  | 12900 |
| catgtatgcc agtaaccgac ctttcattaa  | caaactgctg gactacttgc acagagctgc  | 12960 |
| cgctatgaac tctgattatt tcaccaatgc  | catcttaaac ccgcactggc tgccccacc   | 13020 |
| tggthtctac acgggcgaat atgacatgcc  | cgaccctaata gacggatttc tgtgggacga | 13080 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg  | 13140 |
| cgatagaatg cattcttctg catcgctgtc cgggggtcatg ggtgctaccg cggctgagcc | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga  | 13260 |
| agtgggtaga ataagtcgcc cgagtttaat gggcgaagag gagtatctaa acgattcctt  | 13320 |
| gctcagaccg gcaagagaaa aaaatttccc aaacaatgga atagaaagtt tgggtggataa | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat  | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga  | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa  | 13560 |
| cccgtttgct catttgcgcc ctgccttggg tggatatgtt taaaaaaaaa taaaaaaaaa  | 13620 |
| actcaccaag gccatggcga cgagcgtacg ttcgttcttc tttattatct gtgtctagta  | 13680 |
| taatgaggcg agtcgtgcta ggcggagcgg tgggtgtatcc ggagggtcct cctccttcgt | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcggtgat gcaatcccca ctggaggctc  | 13800 |
| cctttgtgcc tccgcgatac ctggcaccta cggagggcag aaacagcatt cgttattcgg  | 13860 |
| aactggcacc tcagtacgat accaccaggt tgtatctggg ggacaacaag tcggcggaca  | 13920 |
| ttgcttctct gaactatcag aatgaccaca gcaacttctt gaccacgggtg gtgcaaaaca | 13980 |
| atgactttac ccctacggaa gccagcacc agaccattaa ctttgatgaa cgatcgcggt   | 14040 |
| ggggcgggtca gctaaagacc atcatgcata ctaacatgcc aaacgtgaac gagtatatgt | 14100 |
| ttagtaacaa gttcaaagcg cgtgtgatgg tgtccagaaa acctcccgac ggtgctgcag  | 14160 |
| ttggggatac ttatgatcac aagcaggata ttttgaaata tgagtgggtc gagtttactt  | 14220 |
| tgccagaagg caacttttca gttactatga ctattgattt gatgaacaat gccatcatag  | 14280 |
| ataattactt gaaagtgggt agacagaatg gagtgcttga aagtgacatt ggtgttaagt  | 14340 |
| tcgacaccag gaacttcaag ctgggatggg atcccgaac caagttgatc atgcctggag   | 14400 |
| tgtatacgta tgaagccttc catcctgaca ttgtcttact gcctggctgc ggagtggatt  | 14460 |
| ttaccgagag tcgtttgagc aaccttcttg gtatcagaaa aaaacagcca tttcaagagg  | 14520 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| gttttaagat tttgtatgaa gatttagaag gtggtaatat tccggccctc ttggatgtag  | 14580 |
| atgcctatga gaacagtaag aaagaacaaa aagccaaaat agaagctgct acagctgctg  | 14640 |
| cagaagctaa ggcaaacata gttgccagcg actctacaag ggttgctaac gctggagagg  | 14700 |
| tcagaggaga caattttgcg ccaacacctg ttccgactgc agaatcatta ttggccgatg  | 14760 |
| tgtctgaagg aacggacgtg aaactcacta ttcaacctgt agaaaaagat agtaagaata  | 14820 |
| gaagctataa tgtgttgga gacaaaatca acacagccta tcgcagttgg tatctttcgt   | 14880 |
| acaattatgg cgatcccgaa aaaggagtg gttcctggac attgctcacc acctcagatg   | 14940 |
| tcacctgcgg agcagagcag gtctactggg cgcttccaga catgatgaag gatcctgtca  | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggg gggcgcagag cttatgccc   | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca  | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg  | 15180 |
| cgcccacat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc   | 15240 |
| cggtgcgcag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca  | 15300 |
| cctgtcccta cgtgtacaag gcaactgggca tagtcgcacc gcgcgtcctt tcaagccgca | 15360 |
| ctttctaataa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg | 15420 |
| tctgcgcgct ccaagcaaga tgtacggagg cgcacgcaaa cgcttctacc aacatcctgt  | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg  | 15540 |
| aaccaccgtc gatgatgtaa tcgatcaggt ggttgccgac gcccgtaatt atactcctac  | 15600 |
| tgcgcttaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta  | 15660 |
| tgctcgacgt aagagccggc gaaggcgcgt tgccagacgc caccgagcta ccaactgcat  | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag  | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag gccggcagg tcccgaggc aagcagccgc    | 15840 |
| tgtcgacgcg gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt   | 15900 |
| gcgtgacgct gccaccggc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa   | 15960 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa   | 16020 |
| ggaagaaatg ctgcagggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa  | 16080 |
| aaaacccccgc aaaatcaagc ggggttaaaaa ggacaaaaaa gaagaggaag atggcgatga | 16140 |
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga cgcgtgcaat ggcggtggcg   | 16200 |
| caaagttcga catgtgttga gacctggaac ttcgggtggtc tttacacccg gcgagcggtc  | 16260 |
| aagcgctact ttttaagcgtt cctatgatga ggtgtacggg gatgatgata ttcttgagca  | 16320 |
| ggcggctgac cgattaggcg agtttgctta tggcaagcgt agtagaataa cttccaagga   | 16380 |
| tgagacagtg tcgataccct tggatcatgg aaatcccacc cctagtctta aaccggtcac   | 16440 |
| tttgcagcaa gtgttaccg taactccgcg aacagggtgtt aaacgcgaag gtgaagattt   | 16500 |
| gtatcccact atgcaactga tggtagccaa acgccagaag ttggaggacg ttttggagaa   | 16560 |
| agtaaaagtg gatccagata ttcaacctga ggtaaagt agaccatta agcaggtagc      | 16620 |
| gcctgggtctg ggggtacaaa ctgtagacat taagattccc actgaaagta tggaagtgca  | 16680 |
| aactgaaccc gcaaagccta ctgccacctc cactgaagtg caaacggatc catggatgcc   | 16740 |
| catgcctatt acaactgacg ccgccgggtcc cactcgaaga tcccgcgaa agtacgggtcc  | 16800 |
| agcaagtctg ttgatgcca attatgttgt acacccatct attattccta ctcttggtta    | 16860 |
| ccgaggcact cgctactatc gcagccgaaa cagtacctcc cgccgtcgcc gcaagacacc   | 16920 |
| tgcaaatcgc agtcgtcgcc gtagacgcac aagcaaaccg actcccggcg ccctgggtgcg  | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc tttgacactg ccgcgtgcgc gttaccatcc   | 17040 |
| gagtatcatc acttaatcaa tgttgccgct gcctccttgc agatatggcc ctcaattgtc   | 17100 |
| gccttcgcgt tcccatcact ggttaccgag gaagaaaactc gcgccgtaga agagggatgt  | 17160 |
| tgggacgcgg aatgcgacgc tacaggcgac ggcggtgctat ccgcaagcaa ttgcgggggtg | 17220 |
| gttttttacc agccttaatt ccaattatcg ctgctgcaat tggcgcgata ccaggcatag   | 17280 |
| cttccgtggc gggttcaggcc tcgcaacgac attgacattg gaaaaaacg tataaataaa   | 17340 |
| aaaaaaaaa tacaatggac tctgacactc ctggtcctgt gactatgttt tcttagagat    | 17400 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| ggaagacatc aatttttcat ccttggtccc gcgacacggc acgaagccgt acatgggcac   | 17460 |
| ctggagcgac atcggcacga gccaaactgaa cggggggcgcc ttcaattgga gcagtatctg | 17520 |
| gagcgggctt aaaaattttg gctcaaccat aaaaacatac gggaacaaag cttggaacag   | 17580 |
| cagtacagga caggcgctta gaaataaact taaagaccag aacttccaac aaaaagtagt   | 17640 |
| cgatgggata gcttccggca tcaatggagt ggtagatttg gctaaccagg ctgtgcagaa   | 17700 |
| aaagataaac agtcgttttg acccgccgcc agcaacccca ggtgaaatgc aagtggagga   | 17760 |
| agaaattcct ccgccagaaa aacgaggcga caagcgccg cgtcccgatt tggaagagac    | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc   | 17880 |
| caccactaga ccgatagccc caatggccac cgggggtgatg aaaccttctc agttgcatcg  | 17940 |
| acccgtcacc ttggatttgc cccctcccc tgctgtact gctgtacccg cttctaagcc     | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccggggggcg ctcctcgtcc  | 18060 |
| aaatgcgcac tggcaaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa  | 18120 |
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgcctat ctgtgtatat   | 18180 |
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct   | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc atgggcatac atgcacatcg    | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctggt gcagttcgcc cgcgccacag   | 18360 |
| acacctactt caatctggga aataagtta gaaatccac cgtagcgccg acccacgatg     | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca   | 18480 |
| atacatactc ttacaaagtg cggtaacccc tggccgtggg cgacaacaga gtgctggata   | 18540 |
| tggccagcac gttctttgac attaggggtg tgttgacag aggtcccagt ttcaaaccct    | 18600 |
| attctggtac ggcttacaac tccctggctc cttaaaggcg tccaaataca tctcagtgga   | 18660 |
| ttgcagaagg tgtaaaaaat acaactggtg aggaacacgt aacagaagag gaaaccaata   | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag   | 18780 |
| gactcccagt aggttttgaa gtttcagatg aagaaagtaa accgatttat gctgataaaa   | 18840 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg   | 18900 |
| aaaagtatgg aggcagggct ctcaaaccgc atactaagat gaaaccatgc tacgggtcct   | 18960 |
| ttgccaaacc tactaatgtg aaaggcggtc aggcaaaaca aaaaacaacg gagcagccaa   | 19020 |
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa  | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc   | 19140 |
| atgtagtgta caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat   | 19200 |
| ctatgcccac cagacccaac tacattggct tcagagataa ctttattgga cttatgtact   | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctggtcaagc gtctcagtta aatgcagtgg   | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg   | 19380 |
| acagaaccag atacttttagc atgtggaatc aggcctgtgga cagttatgat cctgatgtac | 19440 |
| gtgttattga aaatcatggt gtggaagatg aacttcccaa ctactgtttt ccactggacg   | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgccta   | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca   | 19620 |
| tggaaattaa ctttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat   | 19680 |
| atctcccaga ctcgtacaaa tacaccccggt ccaatgtcac tcttcagaa aacaaaaaca   | 19740 |
| cctacgacta catgaacggg cgggtggtgc cgccatctct agtagacacc tatgtgaaca   | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta   | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca   | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca   | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg   | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt   | 20100 |
| tccccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg   | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg    | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctgggtcat  | 20280 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ttaccagact gaaaacaaaa gaaactccct ctttggggtc tggatttgac ccctactttg  | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |
| ctaacgaatt tgaaataaag cgcactgtgg atggcgaagg ctacaacgta gccaatgca   | 20520 |
| acatgaccaa agactgggtc ttggtacaga tgctcgccaa ctacaacatc ggctatcagg  | 20580 |
| gcttctacat tccagaagga taaaaagatc gcatgtattc atttttcaga aacttccagc  | 20640 |
| ccatgagcag gcagggtggt gatgagggtca attacaaaga cttcaaggcc gtcgccatac | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccttatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcac accgttctcg agcaacttca  | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg  | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct  | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct   | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc  | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca  | 21180 |
| gagccattgt ccaagacctg ggttgccggac cctatTTTTT gggaacctac gataagcgct | 21240 |
| tcccgggggt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg   | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc  | 21360 |
| tttttgatcc ttttggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg  | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat  | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcatgttcc   | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaaccccacc atgaaattgc  | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaaagt ccagcccacc ctgtgtgaca  | 21660 |
| atcaaaaagc actctaccat tttcttaata cccattcgcc ttatttttcgc tcccatcgta | 21720 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcattgtaaa  | 21780 |
| caacgtgttc aataaacatc actttatttt ttacatgta tcaaggctct gcattactta    | 21840 |
| tttattttaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg  | 21900 |
| ttgcggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt   | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca  | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgcctt gagcgcgaga gttgcggtac   | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacgggtg  | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cggggtcatc   | 22200 |
| ttgcaggctc gcctacccat ggcgggcacc caattaggct tgtggttgca atcgcagtg    | 22260 |
| aggggggatca gtatcatctt ggccctgatcc tgtctgattc ctggatacac ggctctcatg | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcggtata aaacatccc    | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcggg     | 22440 |
| tcattgttag ctatttgcac cacacttctg cccagcgggt tttgggtgat tttggttcgc   | 22500 |
| tcgggattct cctttaaggc tcgttgtccg ttctcgctgg ccacatccat ctcgataatc   | 22560 |
| tgctccttct gaatcataat attgccatgc aggcacttca gcttgccctc ataattcattg  | 22620 |
| cagccatgag gccacaacgc acagcctgta cattcccaat tatggtgggc gatctgagaa   | 22680 |
| aaagaatgta tcattccctg cagaaatctt cccatcatcg tgctcagtg cttgtgacta    | 22740 |
| gtgaaagtta actggatgcc tcggtgctcc tcgtttacgt actggtgaca gatgcgcttg   | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtc taagtctgtt atccagcctg   | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc   | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcattctta  | 22980 |
| gcgatcttct caatgcttct ttgcatcc ttctcaacga tgcgcacggg cgggtagctg     | 23040 |
| aaacccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgttttgt cttccttggc ttcttttttg ggggtatcgg aggaggagga   | 23160 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ctgtcgctcc gttccggaga cagggaggat tgtgacgttt cgctcaccat taccaactga  | 23220 |
| ctgtcggtag aagaacctga ccccacacgg cgacagggtgt ttctcttcgg gggcagaggt | 23280 |
| ggaggcgatt gcgaagggct gcggtccgac ctggaaggcg gatgactggc agaaccctt   | 23340 |
| ccgcgttcgg ggggtgtgctc cctgtggcgg tcgcttaact gatttccttc gcggctggcc | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |
| cgccacgagt gccatcacat ctcgctctca gcgacgagga aaaggagcag agcttaagca  | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaagagt ctgagacaga catcgagcaa gaccgggct   | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa  | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca  | 23760 |
| ccgactacct catagggctt gacggggaag acgcgctcct taaacatcta gcaagacagt  | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccacagc gtggaagagc   | 23880 |
| tcagccgcgc ctacgagctt aacctctttt cacctcgta tcccccaaa cgtcagccaa    | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag  | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta  | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag  | 24120 |
| cttccttgga agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg | 24180 |
| caaatgctct gcaaaaggga gaaaatggca tggatgagca tcacagcgtt ctggtggaat  | 24240 |
| tggaaggcga taatgccaga ctgcagtac tcaagcgaag catcgaggtc acacacttcg   | 24300 |
| catatccgc tgtcaacctg cccctaaag tcatgacggc ggtcatggac cagttactca    | 24360 |
| ttaagcgcgc aagtccccct tcagaagaca tgcatgaccc agatgcctgt gatgagggtg  | 24420 |
| aaccagtggc cagtgatgag cagctaacc gatggctggg caccgactct cccagggtt    | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tgggtgctggt taccgtagaa ctagagtgtc | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca  | 24600 |



eolf-seql (2)

|            |            |             |             |            |            |       |
|------------|------------|-------------|-------------|------------|------------|-------|
| cttttagaca | cggctttgtg | cggcaggcat  | gcaagatatt  | taacgtggaa | ctcaccaacc | 24660 |
| tggtttccta | catgggtatt | ctgcatgaga  | atcgccctagg | acaaagcgtg | ctgcacagca | 24720 |
| ccctgaaggg | ggaagcccg  | cgtgattaca  | tccgcgattg  | tgtctatctg | tacctgtgcc | 24780 |
| acacgtggca | aaccggcatg | ggtgtatggc  | agcaatgttt  | agaagaacag | aacttgaaag | 24840 |
| agcttgacaa | gctcttacag | aaatctctta  | aggttctgtg  | gacagggttc | gacgagcgca | 24900 |
| ccgtcgcttc | cgacctggca | gacctcatct  | tcccagagcg  | tctcagggtt | actttgcgaa | 24960 |
| acggattgcc | tgactttatg | agccagagca  | tgcttaacaa  | ttttcgctct | ttcatcctgg | 25020 |
| aacgctccgg | tatcctgccc | gccacctgct  | gcgcactgcc  | ctccgacttt | gtgcctctca | 25080 |
| cctaccgcga | gtgcccccg  | ccgctatgga  | gtcactgcta  | cctgttccgt | ctggccaact | 25140 |
| atctctccta | ccactcggat | gtgatcgagg  | atgtgagcgg  | agacggcttg | ctggagtgtc | 25200 |
| actgccgctg | caatctgtgc | acgccccacc  | ggtccttagc  | ttgcaacccc | cagttgatga | 25260 |
| gcgaaaccca | gataataggc | acctttgaat  | tgcaaggccc  | cagcagccaa | ggcgatgggt | 25320 |
| cttctcctgg | gcaaagttaa | aaactgaccc  | cgggactgtg  | gacctccgcc | tacttgcgca | 25380 |
| agtttgctcc | ggaagattac | caccctatg   | aaatcaagtt  | ctatgaggac | caatcacagc | 25440 |
| ctccaaaggc | cgaactttcg | gcctgcgtca  | tcaccagggg  | ggcaattctg | gccaattgc  | 25500 |
| aagccatcca | aaaatcccg  | caagaatttc  | tactgaaaaa  | gggtaagggg | gtctaccttg | 25560 |
| acccccagac | cggcgaggaa | ctcaacacaa  | ggttccctca  | ggatgtccca | acgacgagaa | 25620 |
| aacaagaagt | tgaagggtga | gccgccgccc  | ccagaagata  | tggaggaaga | ttgggacagt | 25680 |
| caggcagagg | aggcggagga | ggacagtctg  | gaggacagtc  | tggaggaaga | cagtttgag  | 25740 |
| gaggaaaacg | aggaggcaga | ggagggtggaa | gaagtaaccg  | ccgacaaaca | gttatcctcg | 25800 |
| gctgcggaga | caagcaacag | cgctaccatc  | tccgctccga  | gtcgaggaac | ccggcggcgt | 25860 |
| cccagcagta | gatgggacga | gaccggacgc  | ttcccgaacc  | caaccagcgc | ttccaagacc | 25920 |
| ggtaagaagg | atcggcaggg | atacaagtcc  | tggcgggggc  | ataagaatgc | catcatctcc | 25980 |
| tgcttgcatg | agtgcggggg | caacatatcc  | ttcacgcggc  | gctacttgct | attccaccat | 26040 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ggggtgaact ttccgcgcaa tgttttgcat tactaccgtc acctccacag cccctactat  | 26100 |
| agccagcaaa tcccggcagt ctgcacagat aaagacagcg gcggcgacct ccaacagaaa  | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac  | 26220 |
| agccaacgag ccagcgcaaa cccgagagtt aagaaatcgg atctttccaa ccctgtatgc  | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |
| ttcgctcacc agaagttggt tgtatcacaa gagcgaagat caacttcagc gcactctcga  | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac  | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcatcctcga catgagtaaa gaaattccca  | 26520 |
| cgccttacat gtggagttat caaccccaaa tgggattggc ggcaggcgcc tcccaggact  | 26580 |
| actccacccg catgaattgg ctacgcgccg ggcccttctat gatttctcga gttaatgata | 26640 |
| tacgcgccta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc  | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca  | 26760 |
| ccactgtatt acttcctcga gacgcccagg ccgaagtcca aatgactaat gcagggtgcgc | 26820 |
| agttagctgg cggctccacc ctatgtcgtc acaggcctcg gcataatata aaacgcctga  | 26880 |
| tgatcagagg ccgaggtatc cagctcaacg acgagtcggt gagctctccg cttggtctac  | 26940 |
| gaccagacgg aatctttcag attgccggct gcgggagatc ttccttcacc cctcgtcagg  | 27000 |
| ctgttctgac tttggaaagt tcgtcttcgc aaccccgtc gggcggaatc gggaccgttc   | 27060 |
| aatttgtgga ggagtttact ccctctgtct acttcaaccc cttctccgga tctcctgggc  | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg  | 27180 |
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg  | 27240 |
| ctttcgtgc tttgcccggg aactcattga gttcatctac ttcgaactcc ccaaggatca   | 27300 |
| ccctcaaggc ccggcccacg gagtgcggat ttctatcgaa ggcaaaatag actctgcct   | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccaggga acaccacggt   | 27420 |
| ttccatctac tgcatttgta atcaccgccg attgcatgaa agcctttgct gtcttatgtg  | 27480 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tactgagttt aataaaaaact gaattaagac tctcctacgg actgccgctt cttcaacccg  | 27540 |
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctgtt aacttcacct   | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttcccta   | 27660 |
| ctaatactac tttcaaaacc ggaggtgagc tccaaggtct tcctacagaa aacccttggg   | 27720 |
| tggaagcggg ccttgtagtg ctaggaattc ttgcgggtgg gcttgtgatt attctttgct   | 27780 |
| acctatacac accttgcttc acttttcttag tgggtgttgtg gtattggttt aaaaaatggg | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga   | 27900 |
| tccatgtcta gacttcgacc cagaaaactg cacacttact tttgcacccg acacaagccg   | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aatttacctg   | 28020 |
| catggtggga atcaacccca tagttatcac ccagcaaagt ggagatacta agggttgcat   | 28080 |
| tcactgctcc tgcgattcca tcgagtgcac ctacaccctg ctgaagaccc tatgcggcct   | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca   | 28200 |
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttccctc ttcccaactc   | 28260 |
| tgggtattcta aaccccgttc agcggcatac tttctccata ctttaaaggg gatgtcaa    | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt    | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca   | 28440 |
| cccctttata aacccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt   | 28500 |
| tcttacttta aaatgtttaa cccactaac aaccacaggc ggatctctac agctaaaagt    | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac   | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac   | 28680 |
| gaatgaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat   | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aacccaccg aagccaactg    | 28800 |
| tcaaatcatg aactccagt aatctaataa ttgcaaatta attctaacac tagttaa       | 28860 |
| tgagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct    | 28920 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaat    | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc  | 29040 |
| tactggtgcc attactaatg ctaaagggtt catgcccagc acgactgcct atcctttcaa  | 29100 |
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga  | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga  | 29220 |
| gacatcatat tgtattcgta taacttgggtc ctggaacaca ggagatgccc cagaggtgca | 29280 |
| aacctctgct acaaccctag tcacctcccc atttaccttt tactacatca gagaagacga  | 29340 |
| ctgacaaata aagtttgcga tcgccaggcc caccatggga tggagctgta tcatcctctt  | 29400 |
| cttggtagca acagctacag gtgtccactc ccagggtgcag ctgcagcagt ctggggctga | 29460 |
| actggcaaga cctggggcct cagtgaagat gtcctgcaag gcttctgggt acacctttac  | 29520 |
| taggtacacg atgcactggg taaaacagag gcctggacag ggtctggaat ggattggata  | 29580 |
| cattaatcct agccgtggtt atactaatta caatcagaag ttcaaggaca aggccacatt  | 29640 |
| gactacagac aaatcctcca gcacagccta catgcaactg agcagcctga catctgagga  | 29700 |
| ctctgcagtc tattactgtg caagatatta tgatgatcat tactgccttg actactgggg  | 29760 |
| ccaaggcacc actctcacag tctctcagg tggcgggtggc tcgggcgggtg gtggatctgg | 29820 |
| tggcggcgga tctgatatcg tgctcactca gtctccagca atcatgtctg catctccagg  | 29880 |
| ggagaagggtc accatgacct gcagtgccag ctcaagtgtg agttacatga actggtacca | 29940 |
| gcagaagtca ggcacctccc caaaagatg gatttatgac acatccaaac tggcttctgg   | 30000 |
| agtccctgct cacttcaggg gcagtgggtc tgggacctct tactctctca caatcagcgg  | 30060 |
| catggagggt gaagatgctg ccacttatta ctgccagcag tggagtagta acccattcac  | 30120 |
| gttcgggtcg gggacaaagt tggaaataaa ccgggggatcc gaacaaaaac tcatctcaga | 30180 |
| agaggatctg aatgctgtgg gccaggacac gcaggagggtc atcgtggtgc cacactcctt | 30240 |
| gccctttaag gtggtggtga tctcagccat cctggccctg gtggtgctca ccatcatctc  | 30300 |
| ccttatcatc ctcatcatgc tttggcagaa gaagccacgt ggaagcggag ctactaactt  | 30360 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cagcctgctg aagcaggctg gagacgtgga ggagaaccct ggacctggcc acacacggag   | 30420 |
| gcagggaaca tcaccatcca agtgtccata cctcaatttc tttcagctct tgggtgctggc  | 30480 |
| tggctctttct cacttctgtt caggtgttat ccacgtgacc aaggaagtga aagaagtggc  | 30540 |
| aacgctgtcc tgtggtcaca atgtttctgt tgaagagctg gcacaaactc gcatctactg   | 30600 |
| gcaaaaggag aagaaaatgg tgctgactat gatgtctggg gacatgaata tatggccccga  | 30660 |
| gtacaagaac cggaccatct ttgatatac taataacctc tccattgtga tcctggctct    | 30720 |
| gcgccccatct gacgaggga catacgagtg tgttgttctg aagtatgaaa aagacgcttt   | 30780 |
| caagcgggaa cacctggctg aagtgcgtt atcagtcaaa gctgacttcc ctacacctag    | 30840 |
| tatatctgac tttgaaattc caacttctaa tattagaagg ataatttgct caacctctgg   | 30900 |
| aggttttcca gagcctcacc tctcctgggt ggaaaatgga gaagaattaa atgccatcaa   | 30960 |
| cacaacagtt tccaagatc ctgaaactga gctctatgct gttagcagca aactggattt    | 31020 |
| caatatgaca accaaccaca gcttcatgtg tctcatcaag tatggacatt taagagtga    | 31080 |
| tcagaccttc aactggaata caaccaagca agagcatttt cctgataacc tgctcccatc   | 31140 |
| ctggggccatt accttaatct cagtaaattg aatttttgtg atatgctgcc tgacctactg  | 31200 |
| ctttgccccca agatgcagag agagaaggag gaatgagaga ttgagaaggg aaagtgtacg  | 31260 |
| ccctgtataa gctagcttga ctgactgaga tacagcgtac cttcagctca cagacatgat   | 31320 |
| aagatacatt gatgagtttg gacaaaccac aactagaatg cagtgaaaaa aatgctttat   | 31380 |
| ttgtgaaatt tgtgatgcta ttgctttatt tgtaaccatt ataagctgca ataaacaagt   | 31440 |
| taacaacaac aattgcattc attttatgtt tcaggttcag ggggaggtgt gggaggtttt   | 31500 |
| ttaaagcaag taaaacctct acaaattgtg tagtcgtcag ctatcctgca ggaacttggt   | 31560 |
| tatttgaaaa tcaattcaca aaatccgagt agttattttg cctccccctt cccatttaac   | 31620 |
| agaatacacc aatctctccc cacgcacagc tttaaacatt tggataccat tagatataga   | 31680 |
| catggtttta gattccacat tccaaacagt ttcagagcga gccaatctgg ggtcagtgat   | 31740 |
| agataaaaaat ccatcgggat agtcttttaa agcgctttca cagtccaact gctgcgggatg | 31800 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cgactccgga gtctggatca cggatcatctg gaagaagaac gatgggaatc ataatccgaa  | 31860 |
| aacgggtatcg gacgattgtg tctcatcaaa cccacaagca gccgctgtct gcgtcgctcc  | 31920 |
| gtgcgactgc tgtttatggg atcaggggtcc acagtgtcct gaagcatgat tttaatagcc  | 31980 |
| cttaacatca acttttctggt gcgatgcgcg cagcaacgca ttctgatttc actcaaactct | 32040 |
| ttgcagtagg tacaacacat tattacaata ttgtttaata aaccataatt aaaagcgctc   | 32100 |
| cagccaaaac tcatatctga tataatcgcc cctgcatgac catcatacca aagtttaata   | 32160 |
| taaattaaat gacgttcctt caaaaacaca ctaccacat acatgatctc ttttgcatg     | 32220 |
| tgcatattaa caatctgtct gtaccatgga caacgttggg taatcatgca acccaatata   | 32280 |
| accttccgga accacactgc caacaccgct cccccagcca tgcattgaag tgaaccctgc   | 32340 |
| tgattacaat gacaatgaag aacccaattc tctcgaccgt gaatcacttg agaatgaaaa   | 32400 |
| atatctatag tggcacaaca tagacataaa tgcatgcatc ttctcataat ttttaactcc   | 32460 |
| tcaggattta gaaacatatc ccagggaata ggaagctctt gcagaacagt aaagctggca   | 32520 |
| gaacaaggaa gaccacgaac acaacttaca ctatgcatag tcatagtatc acaatctggc   | 32580 |
| aacagcgggt ggtcttcagt catagaagct cgggtttcat tttcctcaca acgtggtaac   | 32640 |
| tgggctctgg tgtaagggtg atgtctggcg catgatgtcg agcgtgcgcg caaccttgtc   | 32700 |
| ataatggagt tgcttcctga cattctcgta ttttgtatag caaaacgcgg ccctggcaga   | 32760 |
| acacactctt cttcgccttc tatcctgccg cttagcgtgt tccgtgtgat agttcaagta   | 32820 |
| caaccacact ctttaagttgg tcaaaagaat gctggcttca gttgtaatca aaactccatc  | 32880 |
| gcatctaatac gttctgagga aatcatccaa gcaatgcaac tggattgtgt ttcaagcagg  | 32940 |
| agaggagagg gaagagacgg aagaaccatg ttaattttta ttccaaacga tctcgagta    | 33000 |
| cttcaaattg tagatcgcg agatggcatc tctcgcccc actgtgttgg tgaaaaagca     | 33060 |
| cagctagatc aaaagaaatg cgattttcaa ggtgctcaac ggtggcttcc agcaaagcct   | 33120 |
| ccacgcgcac atccaagaac aaaagaatac caaaagaagg agcattttct aactcctcaa   | 33180 |
| tcatcatatt acattcctgc accattccca gataattttc agctttccag ccttgaatta   | 33240 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ttcgtgtcag ttcttgtggt aaatccaatc cacacattac aaacaggtcc cggagggcgc  | 33300 |
| cctccaccac cattcttaaa cacaccctca taatgacaaa atatcttgct cctgtgtcac  | 33360 |
| ctgtagcgaa ttgagaatgg caacatcaat tgacatgccc ttggctctaa gttcttcttt  | 33420 |
| aagttctagt tgtaaaaact ctctcatatt atcaccaaac tgcttagcca gaagcccccc  | 33480 |
| gggaacaaga gcaggggacg ctacagtgcg gtacaagcgc agacctcccc aattggctcc  | 33540 |
| agcaaaaaca agattggaat aagcatattg ggaaccgcca gtaatatcat cgaagttgct  | 33600 |
| ggaaatataa tcaggcagag tttcttgtaa aaattgaata aaagaaaaat ttgccaaaaa  | 33660 |
| aacattcaaa acctctggga tgcaaatgca ataggttacc gcgctgcgct ccaacattgt  | 33720 |
| tagttttgaa ttagtctgca aaaataaaaa aaaaaacaag cgtcatatca tagtagcctg  | 33780 |
| acgaacagat ggataaatca gtctttccat cacaagacaa gccacagggt ctccagctcg  | 33840 |
| acctctgtaa aacctgtcat catgattaaa caacagcacc gaaagttcct cgcggtgacc  | 33900 |
| agcatgaata attcttgatg aagcatataa tccagacatg ttagcatcag ttaacgagaa  | 33960 |
| aaaacagcca acatagcctt tgggtataat tatgcttaat cgtaagtata gcaaagccac  | 34020 |
| ccctcgcgga taaaaagtaa aaggcacagg agaataaaaa atataattat ttctctgctg  | 34080 |
| ctgttcaggc aacgtcgccc ccggtccctc taaatacaca taaaagcct catcagccat   | 34140 |
| ggcttaccag acaaagtaca gcgggcacac aaagcacaag ctctaaagtg actctccaac  | 34200 |
| ctctccacaa tatatatata cacaagccct aaactgacgt aatgggagta aagtgtaaaa  | 34260 |
| aatcccgcca aaccaaacac acaccccgaa actgcgtcac cagggaaaag tacagtttca  | 34320 |
| cttccgcaat cccaacaggc gtaacttcct ctttctcacg gtacgtgata tcccactaac  | 34380 |
| ttgcaacgtc attttcccac ggtcgcaccg ccccttttag ccgttaaccc cacagccaat  | 34440 |
| caccacacga tccacacttt ttaaaatcac ctcatattaca tattggcacc attccatcta | 34500 |
| taaggtatat tatatagata ga                                           | 34522 |

<210> 123  
 <211> 966  
 <212> DNA

eolf-seql (2)

<213> Artificial Sequence

<220>

<223> MEMBRANE TETHERED OKT3-SCFV NUCLEIC ACID SEQUENCE

<400> 123

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gtgcagctgc agcagtctgg ggctgaactg gcaagacctg gggcctcagt gaagatgtcc      120
tgcaaggctt ctggctacac ctttactagg tacacgatgc actgggtaaa acagaggcct      180
ggacagggtc tggaatggat tggatacatt aatcctagcc gtggttatac taattacaat      240
cagaagttca aggacaaggc cacattgact acagacaaat cctccagcac agcctacatg      300
caactgagca gcctgacatc tgaggactct gcagtctatt actgtgcaag atattatgat      360
gatcattact gccttgacta ctggggccaa ggcaccactc tcacagtctc ctcaggtggc      420
gggtggctcgg gcggtggtgg atctggtggc ggcggatctg atatcgtgct cactcagtct      480
ccagcaatca tgtctgcatc tccaggggag aaggtcacca tgacctgcag tgccagctca      540
agtgtaaagt acatgaactg gtaccagcag aagtcaggca cctcccccaa aagatggatt      600
tatgacacat ccaaactggc ttctggagtc cctgctcact tcaggggcag tgggtctggg      660
acctcttact ctctcacaat cagcggcatg gaggctgaag atgctgccac ttattactgc      720
cagcagtgga gtagtaaccc attcacgttc ggctcgggga caaagttgga aataaaccgg      780
ggatccgaac aaaaactcat ctcagaagag gatctgaatg ctgtgggcca ggacacgcag      840
gaggtcatcg tggtgccaca ctcttgccc ttttaagggtg tggatgatctc agccatcctg      900
gccctggtgg tgctcaccat catctccctt atcatcctca tcatgctttg gcagaagaag      960
ccacgt                                           966

```

<210> 124

<211> 2196

<212> DNA

<213> Artificial Sequence

<220>

<223> Transgene Cassette sequence - NG-348



eolf-seql (2)

<400> 124  
gcgatcgcca ggcccacccat gggatggagc tgtatcatcc tcttcttggt agcaacagct 60  
acaggtgtcc actcccaggt gcagctgcag cagtctgggg ctgaactggc aagacctggg 120  
gcctcagtga agatgtcctg caaggcttct ggctacacct ttactaggta cacgatgcac 180  
tgggtaaaac agaggcctgg acagggtctg gaatggattg gatacattaa tcctagccgt 240  
ggttatacta attacaatca gaagttcaag gacaaggcca cattgactac agacaaatcc 300  
tccagcacag cctacatgca actgagcagc ctgacatctg aggactctgc agtctattac 360  
tgtgcaagat attatgatga tcattactgc cttgactact ggggccaagg caccactctc 420  
acagtctcct caggtggcgg tggctcgggc ggtgggtggat ctggtggcgg cggatctgat 480  
atcgtgctca ctcagtctcc agcaatcatg tctgcatctc caggggagaa ggtcaccatg 540  
acctgcagtg ccagctcaag tgtaagttac atgaactggg accagcagaa gtcaggcacc 600  
tcccccaaaa gatggattta tgacacatcc aaactggctt ctggagtccc tgctcacttc 660  
aggggcagtg ggtctgggac ctcttactct ctcaaatca gcggcatgga ggctgaagat 720  
gctgccactt attactgcca gcagtggagt agtaacccat tcacgttcgg ctcggggaca 780  
aagttgga aa taaaccgggg atccgaacaa aaactcatct cagaagagga tctgaatgct 840  
gtgggccagg acacgcagga ggtcatcgtg gtgccacact ccttgccctt taaggtggtg 900  
gtgatctcag ccatcctggc cctgggtggtg ctcaccatca tctcccttat catcctcatc 960  
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gctggagacg tggaggagaa ccctggacct ggccacacac ggaggcaggg aacatcacca 1080  
tccaagtgtc catacctcaa tttctttcag ctcttggtgc tggctggtct ttctcacttc 1140  
tgttcaggtg ttatccacgt gaccaaggaa gtgaaagaag tggcaacgct gtcctgtggt 1200  
cacaatgttt ctgttgaaga gctggcacia actcgcactt actggcaaaa ggagaagaaa 1260  
atgggtgctga ctatgatgtc tggggacatg aatatatggc ccgagtacaa gaaccggacc 1320  
atctttgata tcactaataa cctctccatt gtgatcctgg ctctgcgccc atctgacgag 1380

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| ggcacatacg agtgtgttgt tctgaagtat gaaaaagacg ctttcaagcg ggaacacctg   | 1440 |
| gctgaagtga cgttatcagt caaagctgac ttccctacac ctagtatatc tgactttgaa   | 1500 |
| attccaactt ctaatattag aaggataatt tgctcaacct ctggagggttt tccagagcct  | 1560 |
| cacctctcct ggttggaaaa tggagaagaa ttaaattgcca tcaacacaac agtttcccaa  | 1620 |
| gacacctgaaa ctgagctcta tgctgttagc agcaaaactgg atttcaatat gacaaccaac | 1680 |
| cacagcttca tgtgtctcat caagtattga catttaagag tgaatcagac cttcaactgg   | 1740 |
| aatacaacca agcaagagca ttttcctgat aacctgctcc catcctgggc cattacctta   | 1800 |
| atctcagtaa atggaatfff tgtgatatgc tgcctgacct actgctttgc cccaagatgc   | 1860 |
| agagagagaa ggaggaatga gagattgaga agggaaagtg tacgccctgt ataagctagc   | 1920 |
| ttgactgact gagatacagc gtaccttcag ctcacagaca tgataagata cattgatgag   | 1980 |
| tttggacaaa ccacaactag aatgcagtga aaaaaatgct ttattttgtga aattttgtgat | 2040 |
| gctattgctt tattttgtaac cattataagc tgcaataaac aagttaacaa caacaattgc  | 2100 |
| attcatttta tgtttcaggt tcagggggag gtgtgggagg ttttttaaag caagtaaaac   | 2160 |
| ctctacaaat gtggtagtcg tcagctatcc tgcagg                             | 2196 |

<210> 125

<211> 32345

<212> DNA

<213> Artificial Sequence

<220>

<223> Fully synthetic EnAd genome with incorporated cloning site for transgene cassette insertion as in plasmid pEnAd2.4

<400> 125

|                                                                     |     |
|---------------------------------------------------------------------|-----|
| tctatctata taatataacct tatagatgga atggtgcca tatgtaaatg aggtgatttt   | 60  |
| aaaaagtgtg gatcgtgtgg tgattggctg tgggggttaac ggctaaaagg ggcgggtgcga | 120 |
| ccgtgggaaa atgacgtttt gtgggggtgg agtttttttg caagttgtcg cgggaaatgt   | 180 |
| gacgcataaa aaggcttttt tctcacggaa ctacttagtt ttcccacggg atttaacagg   | 240 |
| aaatgaggta gttttgaccg gatgcaagtg aaaattgttg attttcgcgc gaaaactgaa   | 300 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg   | 360  |
| ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt   | 420  |
| ccgcgtaccg tgtcaaagtc ttctgttttt acgtagggtgt cagctgatcg ctaggggtatt | 480  |
| tatacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc   | 540  |
| tctgcgccgg cagttaata ataaaaaaaaat gagagatttg cgatttctgc ctcaggaaat  | 600  |
| aatctctgct gagactggaa atgaaatatt ggagcttggtg gtgcacgccc tgatgggaga  | 660  |
| cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt   | 720  |
| agaggtagag ggatcggagg attctaataa ggaagctgta aatggctttt ttaccgattc   | 780  |
| tatgctttta gctgctaata aagggtaga attagatccg cttttggaca cttttgatac    | 840  |
| tccaggggta attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagtccgt    | 900  |
| ggactgtgat ttgcactgct atgaagacgg gtttcctccg agtgatgagg aggaccatga   | 960  |
| aaaggagcag tccatgcaga ctgcagcggg tgagggagtg aaggctgcca atgttggttt   | 1020 |
| tcagttggat tgccccggagc ttcctggaca tggctgtaag tcttgatgaat ttcacaggaa | 1080 |
| aaatactgga gtaaaggaac tgttatgttc gctttgttat atgagaacgc actgccactt   | 1140 |
| tatttacagt aagtgtgttt aagttaaaat ttaaaggaat atgctgtttt tcacatgtat   | 1200 |
| attgagtgtg agttttgtgc ttcttattat aggtcctgtg tctgatgctg atgaatcacc   | 1260 |
| atctcctgat tctactacct cacctcctga gattcaagca cctgttcctg tggacgtgcg   | 1320 |
| caagcccatt cctgtgaagc ttaagcctgg gaaacgtcca gcagtggaaa aacttgagga   | 1380 |
| cttgttacag ggtggggacg gacctttgga cttgagtaca cggaacgctc caagacaata   | 1440 |
| agtgttccat atccgtgttt acttaagggtg acgtcaatat ttgtgtgaca gtgcaatgta  | 1500 |
| ataaaaaatat gttaactgtt cactggtttt tattgctttt tgggcgggga ctcaggata   | 1560 |
| taagtagaag cagacctgtg tggtagctc ataggagctg gctttcatcc atggaggttt    | 1620 |
| gggccatttt ggaagacctt aggaagacta ggcaactgtt agagaacgct tcggacggag   | 1680 |
| tctccggttt ttggagattc tggttcgcta gtgaattagc tagggtagtt tttaggataa   | 1740 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| aacaggacta taaacaagaa tttgaaaagt tgttggtaga ttgcccagga ctttttgaag  | 1800 |
| ctcttaattht gggccatcag gttcacttta aagaaaaagt tttatcagtt ttagacttht | 1860 |
| caaccccagg tagaactgct gctgctgtgg cttttcttac ttttatatta gataaatgga  | 1920 |
| tcccgagac tcatttcagc aggggatacg ttttggttt catagccaca gcattgtgga    | 1980 |
| gaacatggaa ggttcgcaag atgaggacaa tcttaggtta ctggccagtg cagcctttgg  | 2040 |
| gtgtagcggg aatcctgagg catccaccgg tcatgccagc ggttctggag gaggaacagc  | 2100 |
| aagaggacaa cccgagagcc ggcttgacc ctccagtgga ggaggcggag tagctgactt   | 2160 |
| gtctcctgaa ctgcaacggg tgcttactgg atctacgtcc actggacggg ataggggcgt  | 2220 |
| taagaggggag agggcatcta gtggtactga tgctagatct gagttggctt taagtttaat | 2280 |
| gagtcgcaga cgtcctgaaa ccatttggtg gcatgagggt cagaaagagg gaagggatga  | 2340 |
| agtttctgta ttgcaggaga aatattcact ggaacagggt aaaacatgtt ggttggagcc  | 2400 |
| tgaggatgat tgggaggtgg ccattaataaa ttatgccaa atagctttga ggctgataa   | 2460 |
| acagtataag attactagac ggattaatat ccggaatgct tgttacatat ctggaaatgg  | 2520 |
| ggctgagggt gtaatagata ctcaagacaa ggagttatt agatgctgca tgatggatat   | 2580 |
| gtggcctggg gtagtcggta tggaagcagt aacttttgta aatgttaagt ttaggggaga  | 2640 |
| tggttataat ggaatagtgt ttatggccaa taccaaactt atattgcatg gttgtagctt  | 2700 |
| ttttggtttc aacaatacct gtgtagatgc ctggggacag gttagtgtac ggggatgtag  | 2760 |
| tttctatgag ttgttgattg ccacagctgg cagaaccaag agtcaattgt ctctgaagaa  | 2820 |
| atgcatattht caaagatgta acctgggcat tctgaatgaa ggagaagcaa ggggccgcca | 2880 |
| ctgcgcttct acagatactg gatgttttat tttgattaag ggaaatgcca gcgtaaagca  | 2940 |
| taacatgatt tgcggtgctt ccgatgagag gccttatcaa atgctcactt gtgctgggtg  | 3000 |
| gcattgtaat atgctggcta ctgtgcatat tgtttcccat caacgcaaaa aatggcctgt  | 3060 |
| ttttgatcac aatgtgatga cgaagtgtac catgcatgca ggtgggcgta gaggaatgtt  | 3120 |
| tatgccttac cagtgtaca tgaatcatgt gaaagtgtt ttggaaccag atgccttttc    | 3180 |

eolf-seql (2)

|                                                                     |      |
|---------------------------------------------------------------------|------|
| cagaatgagc ctaacaggaa tttttgacat gaacatgcaa atctggaaga tcctgaggta   | 3240 |
| tgatgatacg agatcgaggg tacgcgcatg cgaatgcgga ggcaagcatg ccagggtcca   | 3300 |
| gccggtgtgt gtagatgtga ctgaagatct cagaccggat catttggtta ttgcccgcac   | 3360 |
| tggagcagag ttcggatcca gtggagaaga aactgactaa ggtgagtatt gggaaaactt   | 3420 |
| tgggggtggga ttttcagatg gacagattga gtaaaaaattt gttttttctg tcttgcagct | 3480 |
| gtcatgagtg gaaacgcttc ttttaagggg ggagtccttca gcccttatct gacagggcgt  | 3540 |
| ctcccatcct gggcaggagt tcgtcagaat gttatgggat ctactgtgga tggaagaccc   | 3600 |
| gtccaacccg ccaattcttc aacgctgacc tatgctactt taagtcttc acctttggac    | 3660 |
| gcagctgcag ctgccgccgc cgcttctgtt gccgctaaca ctgtgcttgg aatgggttac   | 3720 |
| tatggaagca tcatggctaa ttccacttcc tctaataacc cttctaccct gactcaggac   | 3780 |
| aagttacttg tccttttggc ccagctggag gctttgaccc aacgtctggg tgaactttct   | 3840 |
| cagcaggtgg tcgagttgcg agtacaaact gagtctgctg tcggcacggc aaagtctaaa   | 3900 |
| taaaaaaatc ccagaatcaa tgaataaata aacaagcttg ttgttgattt aaaatcaagt   | 3960 |
| gtttttatatt catttttcgc gcacggtatg ccctagacca ccgatctcta tcattgagaa  | 4020 |
| ctcggtgatg tttttccagg atcctataga ggtgggattg aatgtttaga tacatgggca   | 4080 |
| ttaggccgtc tttgggggtg agatagctcc attgaaggga ttcagctcc ggggtagtgt    | 4140 |
| tgtaaatac ccagtcataa caaggtcgca gtgcatgggt ttgcacaata tcttttagaa    | 4200 |
| gtaggctgat tgccacagat aagcccttgg ttaggtgtt tacaacccg ttgagctggg     | 4260 |
| atgggtgcat tcggggtgaa attatgtgca ttttgattg gatttttaag ttggcaatat    | 4320 |
| tgccgccaag atcccgctctt gggttcatgt tatgaaggac caccaagacg gtgtatccgg  | 4380 |
| tacatttagg aaatttatcg tgcagcttgg atggaaaagc gtggaaaaat ttggagacac   | 4440 |
| ccttgtgtcc tccaagattt tccatgcact catccatgat aatagcaatg gggccgtggg   | 4500 |
| cagcggcgcg ggcaaacacg ttccgtgggt ctgacacatc atagttatgt tcctgagtta   | 4560 |
| aatcatcata agccatttta atgaatttgg ggcggagagt accagattgg ggtatgaatg   | 4620 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ttccttcggg ccccgagca tagttcccct cacagatttg catttcccaa gctttcagtt   | 4680 |
| ccgaggggtgg aatcatgtcc acctgggggg ctatgaaaaa caccgtttct ggggcggggg | 4740 |
| tgattaattg tgatgatagc aaatttctga gcaattgaga tttgccacat ccggtggggc  | 4800 |
| cataaatgat tccgattacg gggtgcaggt ggtagtttag ggaacggcaa ctgccgtctt  | 4860 |
| ctcgaagcaa gggggccacc tcgttcatca tttcccttac atgcatattt tcccgcacca  | 4920 |
| aatccattag gaggcgctct cctcctagt atagaagttc ttgtagtgag gaaaagtttt   | 4980 |
| tcagcggttt cagaccgtca gccatgggca ttttggagag agtttgctgc aaaagttcta  | 5040 |
| gtctgttcca cagttcagtg atgtgttcta tggcatctcg atccagcaga cctcctcgtt  | 5100 |
| tcgcggggtt ggacggctcc tggaataggg tatgagacga tgggcgtcca gcgctgccag  | 5160 |
| ggttcgggtcc ttccagggtc tcagtgttcg agtcaggggt gtttccgtca cagtgaaggg | 5220 |
| gtgtgcgctt gcttgggcgc ttgccagggt gcgcttcaga ctcacctgc tggtcgaaaa   | 5280 |
| cttctgtcgc ttggcgccct gtatgtcggc caagtagcag tttaccatga gttcgtagtt  | 5340 |
| gagcgccctcg gctgcgtggc ctttggcgcg gagcttacct ttggaagttt tcttgcatat | 5400 |
| cgggcagtat aggcatttca gcgcatacaa cttgggcgca aggaaaacgg attctggggga | 5460 |
| gtatgcatct gcgccgagg aggcgcaaac agtttcacat tccaccagcc aggttaaadc   | 5520 |
| cggttcattg ggggtcaaaaa caagttttcc gccatatttt ttgatgcgtt tcttaccttt | 5580 |
| ggctctccatg agttcgtgtc ctggttgagt gacaaacagg ctgtccgtgt ccccgtagac | 5640 |
| tgattttaca ggcctcttct ccagtggagt gcctcggctt tcttcgtaca ggaactctga  | 5700 |
| ccactctgat acaaaggcgc gcgtccaggc cagcacaaag gaggctatgt gggaggggta  | 5760 |
| gcgatcgttg tcaaccaggg ggtccacctt ttccaaagta tgcaaacaca tgtcaccctc  | 5820 |
| ttcaacatcc aggaatgtga ttggcttgta ggtgtatttc acgtgacctg ggggtccccgc | 5880 |
| tgggggggta taaaaggggg cggttctttg ctcttcctca ctgtcttccg gatcgtgtc   | 5940 |
| caggaacgtc agctgttggg gtaggtattc cctctcgaag gcgggcatga cctctgcact  | 6000 |
| caggttgtca gtttctaaga acgaggagga tttgatattg acagtgccgg ttgagatgcc  | 6060 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| tttcatgagg ttttcgtcca tctggtcaga aaacacaatt tttttattgt caagtttggg  | 6120 |
| ggcaaatgat ccatacaggg cgttggataa aagtttggca atggatcgca tggtttgggt  | 6180 |
| cttttccttg tccgcgcgct ctttggcggc gatgttgagt tggacatact cgcgtgccag  | 6240 |
| gcacttccat tcggggaaga tagttgttaa ttcattctggc acgattctca cttgccaccc | 6300 |
| tcgattatgc aaggtaatta aatccacact ggtggccacc tcgcctcgaa ggggttcatt  | 6360 |
| ggtccaacag agcctacctc ctttcctaga acagaaaggg ggaagtgggt ctagcataag  | 6420 |
| ttcatcggga ggggtctgcat ccatggtaaa gattcccga agtaaactct tatcaaaata  | 6480 |
| gctgatggga gtggggcat ctaaggccat ttgccattct cgagctgcca gtgcgcgctc   | 6540 |
| atatgggtta aggggactgc cccatggcat gggatgggtg agtgcagagg catacatgcc  | 6600 |
| acagatgtca tagacgtaga tgggatcctc aaagatgcct atgtaggttg gatagcatcg  | 6660 |
| ccccctctg atacttgctc gcacatagtc atatagttca tgtgatggcg ctagcagccc   | 6720 |
| cggacccaag ttggtgcat tgggtttttc tgttctgtag acgatctggc gaaagatggc   | 6780 |
| gtgagaattg gaagagatgg tgggtctttg aaaaatgttg aaatgggcat gaggtagacc  | 6840 |
| tacagagtct ctgacaaagt gggcataaga ttcttgaagc ttggttacca gttcggcggt  | 6900 |
| gacaagtacg tctagggcgc agtagtcaag tgtttcttga atgatgtcat aacctggtg   | 6960 |
| gtttttcttt tcccacagtt cgcggttgag aaggtattct tcgcgatcct tccagtactc  | 7020 |
| ttctagcgga aaccgtctt tgtctgcacg gtaagatcct agcatgtaga actgattaac   | 7080 |
| tgccttgtaa gggcagcagc ctttctctac gggtagagag tatgcttgag cagcttttcg  | 7140 |
| tagcgaagcg tgagtaaggg caaagggtgc tctgaccatg actttgagga attggtattt  | 7200 |
| gaagtcgatg tcgtcacagg ctccctgttc ccagagttgg aagtctaccc gtttcttgta  | 7260 |
| ggcgggggtg ggcaaagcga aagtaacatc attgaagaga atcttgccgg ccctgggcat  | 7320 |
| gaaattgcga gtgatgcgaa aaggctgtgg tacttccgct cggttattga taacctgggc  | 7380 |
| agctaggacg atctcgtcga aaccgttgat gttgtgtcct acgatgtata attctatgaa  | 7440 |
| acgcggcgtg cctctgacgt gaggtagctt actgagctca tcaaagggtta ggtctgtggg | 7500 |

eolf-seql (2)

|                                                                    |      |
|--------------------------------------------------------------------|------|
| gtcagataag gcgtagtggt cgagagccca ttcgtgcagg tgaggattcg ctttaaggaa  | 7560 |
| ggaggaccag aggtccactg ccagtgtgtg ttgtaactgg tcccgggtact gacgaaaatg | 7620 |
| ccgtccgact gccatTTTTT ctgggggtgac gcaatagaag gtttgggggt cctgccgcca | 7680 |
| gcgatcccac ttgagtttta tggcgagggtc ataggcgatg ttgacgagcc gctggtctcc | 7740 |
| agagagtttc atgaccagca tgaaggggat tagctgcttg ccaaaggacc ccatccaggt  | 7800 |
| gtaggtttcc acatcgtagg tgagaaagag cttttctgtg cgaggatgag agccaatcgg  | 7860 |
| gaagaactgg atctcctgcc accagttgga ggaatggctg ttgatgtgat ggaagtagaa  | 7920 |
| ctccctgcga cgcgccgagc attcatgctt gtgcttgtag agacggccgc agtagtcgca  | 7980 |
| gcgttgccacg ggttgatatc cgtgaatgag ttgtacctgg cttcccttga cgagaaatTT | 8040 |
| cagtgggaag ccgaggcctg gcgattgtat ctcgtgcttt actatgttgt ctgcatcggc  | 8100 |
| ctgttcatct tctgtctcga tgggtggtcat gctgacgagc cctcgcgga ggcaagtcca  | 8160 |
| gacctcggcg cggcaggggc ggagctcgag gacgagagcg cgcaggctgg agctgtccag  | 8220 |
| ggtcctgaga cgctgcggac tcaggttagt aggcagtgtc aggagattaa cttgcatgat  | 8280 |
| cttttggagg gcgtgcggga ggttcagata gtacttgatc tcaacgggtc cgttggtgga  | 8340 |
| gatgtcgatg gcttgccagg ttccgtgtcc cttgggcgct accaccgtgc cttgttttt   | 8400 |
| cattttggac ggcggtggct ctgttgcttc ttgcatgttt agaagcgggtg tcgagggcgc | 8460 |
| gcaccgggcg gcaggggcgg ctcgggaccc ggccgcatgg ctggcagtgg tacgtcggcg  | 8520 |
| ccgcgcgcgg gtaggttctg gtactgcgcc ctgagaagac tcgcatgcgc gacgacgcgg  | 8580 |
| cggttgacat cctggatctg acgcctctgg gtgaaagcta ccggccccgt gagcttgaac  | 8640 |
| ctgaaagaga gttcaacaga atcaatctcg gtatcgttga cggcggcttg cctaaggatt  | 8700 |
| tcttgacgt caccagagtt gtcctggtag gcgatctccg ccatgaactg ctcgatctct   | 8760 |
| tcctcttgaa gatctccgcg gcccgtctc tcgacgggtg ccgcgagggtc gttggagatg  | 8820 |
| cgcccaatga gttgagagaa tgcattcatg cccgcctcgt tccagacgcg gctgtagacc  | 8880 |
| acggcccca cgggatctct cgcgcgcatg accacctggg cgaggttgag ctccacgtgg   | 8940 |



eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| cgggtgaaga ccgcatagtt gcataggcgc tggaaaaggt agttgagtgt ggtggcgatg   | 9000  |
| tgctcgggtga cgaagaaata catgatccat cgtctcagcg gcatctcgct gacatcgccc  | 9060  |
| agagcttcca agcgctccat ggcctcgtag aagtccacgg caaaattaaa aaactgggag   | 9120  |
| tttcgcgcgg acacgggtcaa ctctctttcc agaagacgga taagttcggc gatggtggtg  | 9180  |
| cgcacctcgc gctcgaaagc ccctgggatt tcttcctcaa tctcttcttc ttccactaac   | 9240  |
| atctcttcct cttcagggtgg ggctgcagga ggagggggaa cgcggcgacg ccggcggcgc  | 9300  |
| acgggcagac ggtcgatgaa tctttcaatg acctctccgc ggccggcgcg catggtttca   | 9360  |
| gtgacggcgc ggccgttctc gcgcggctgc agagtaaaaa caccgccgcg catctcctta   | 9420  |
| aagtgggtgac tgggaggttc tccgtttggg agggagaggg cgctgattat acattttatt  | 9480  |
| aattggcccc tagggactgc acgcagagat ctgatcgtgt caagatccac gggatctgaa   | 9540  |
| aacctttcga cgaaagcgtc taaccagtca cagtcacaag gtaggctgag tacggcttct   | 9600  |
| tgtgggcggg ggtggttatg tggtcggctt gggtcttctg tttcttcttc atctcgggaa   | 9660  |
| ggtgagacga tgctgctggt gatgaaatta aagtaggcag ttctaagacg gcggatggtg   | 9720  |
| gcgaggagca ccaggctctt gggtccggct tgctggatac gcaggcgatt ggccattccc   | 9780  |
| caagcattat cctgacatct agcaagatct ttgtagtagt cttgcatgag ccgttctacg   | 9840  |
| ggcacttctt cctcaccctg tctgccatgc atacgtgtga gtccaaatcc gcgcattggt   | 9900  |
| tgtaccagtg ccaagtcagc tacgactctt tcggcgagga tggcttgctg tacttgggta   | 9960  |
| agggtggctt gaaagtcac aaaatccaca aagcggtggt aagctcctgt attaatggtg    | 10020 |
| taagcacagt tggccatgac tgaccagtta actgtctggt gaccagggcg cacgagctcg   | 10080 |
| gtgtatttaa ggcgcgaaata ggcgcggggtg tcaaagatgt aatcgttgca ggtgcgcacc | 10140 |
| agatactggt accctataag aaaatgcggc ggtggttggc ggtagagagg ccatcgttct   | 10200 |
| gtagctggag cgccaggggc gaggtcttcc aacataaggc ggtgatagcc gtagatgtac   | 10260 |
| ctggacatcc aggtgattcc tgcggcggtg gtagaagccc gaggaaaactc gcgtacgcgg  | 10320 |
| ttccaaatgt tgcgtagcgg catgaagtag ttcatgtag gcacggtttg accagtgagg    | 10380 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| cgcgcgagct cattgatgct ctatagacac ggagaaaaatg aaagcggttca gcgactcgac  | 10440 |
| tccgtagcct ggaggaacgt gaacggggttg ggtcgcgggtg taccgccggtt cgagacttgt | 10500 |
| actcgagccg gccggagccg cggctaacgt ggtattggca ctcccgtctc gacccagcct    | 10560 |
| acaaaaatcc aggatacggg atcgagtcgt tttgctgggt tccgaatggc aggggaagtga   | 10620 |
| gtcctatttt ttttttttgc cgctcagatg catcccgtgc tgcgacagat gcgcccccaa    | 10680 |
| caacagcccc cctcgcagca gcagcagcag caatcacaaa aggctgtccc tgcaactact    | 10740 |
| gcaactgccg ccgtgagcgg tgcgggacag cccgcctatg atctggactt ggaagagggc    | 10800 |
| gaaggactgg cacgtctagg tgcgccttca cccgagcggc atccgcgagt tcaactgaaa    | 10860 |
| aaagattctc gcgaggcgta tgtgccccaa cagaacctat ttagagacag aagcggcgag    | 10920 |
| gagccggagg agatgcgagc ttcccgtttt aacgcgggtc gtgagctgcg tcacggtttg    | 10980 |
| gaccgaagac gagtgttgcg ggacgaggat ttcgaagttg atgaaatgac agggatcagt    | 11040 |
| cctgccaggg cacacgtggc tgcagccaac cttgtatcgg cttacgagca gacagtaaag    | 11100 |
| gaagagcgta acttccaaaa gtcttttaaat aatcatgtgc gaaccctgat tgcccgcgaa   | 11160 |
| gaagttaccc ttggtttgat gcattttgtgg gattttgatgg aagctatcat tcagaaccct  | 11220 |
| actagcaaac ctctgaccgc ccagctgttt ctggtgggtc aacacagcag agacaatgag    | 11280 |
| gctttcagag aggcgctgct gaacatcacc gaacccgagg ggagatgggt gtatgatctt    | 11340 |
| atcaacattc tacagagtat catagtgcag gagcggagcc tgggcctggc cgagaagggtg   | 11400 |
| gctgccatca attactcggg tttgagcttg ggaaaatatt acgctcgcaa aatctacaag    | 11460 |
| actccatacg ttcccataga caaggagggtg aagatagatg ggttctacat gcgcatgacg   | 11520 |
| ctcaaggctt tgaccctgag cgatgatctt ggggtgtatc gcaatgacag aatgcatcgc    | 11580 |
| gcggttagcg ccagcaggag gcgcgagtta agcgacaggg aactgatgca cagtttgcaa    | 11640 |
| agagctctga ctggagctgg aaccgagggt gagaattact tcgacatggg agctgacttg    | 11700 |
| cagtggcagc ctagtcgcag ggctctgagc gccgcgacgg caggatgtga gcttccttac    | 11760 |
| atagaagagg cggatgaagg cgaggaggaa gagggcgagt acttggaaga ctgatggcac    | 11820 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| aacccgtgtt ttttgctaga tggaacagca agcaccggat cccgcaatgc gggcggcgct  | 11880 |
| gcagagccag ccgctccggca ttaactcctc ggacgattgg acccaggcca tgcaacgtat | 11940 |
| catggcgttg acgactcgca accccgaagc ctttagacag caaccccagg ccaaccgtct  | 12000 |
| atcggccatc atggaagctg tagtgccttc ccgctctaata cccactcatg agaaggtcct | 12060 |
| ggccatcgtg aacgcgttgg tggagaacaa agctattcgt ccagatgagg ccggactggg  | 12120 |
| atacaacgct ctcttagaac gcgtggctcg ctacaacagt agcaatgtgc aaaccaat    | 12180 |
| ggaccgtatg ataacagatg tacgcgaagc cgtgtctcag cgcgaaagg tccagcgtga   | 12240 |
| tgccaacctg ggttcgctgg tggcgtaaaa tgctttcttg agtactcagc ctgcta      | 12300 |
| gccgcgtggg caacaggatt atactaactt ttttaagtgc ttgagactga tggatcaga   | 12360 |
| agtacctcag agcgaagtgt atcagtcagg tcctgattac ttctttcaga ctagcagaca  | 12420 |
| gggcttgtag acggtaaatc tgagccaagc ttttaaaaaac cttaaagggt tgtggggagt | 12480 |
| gcatgccccg gtaggagaaa gagcaaccgt gtctagcttg ttaactccga actccgcct   | 12540 |
| attattactg ttggtagctc ctttcaccga cagcggtagc atcgaccgta attcctat    | 12600 |
| gggttaccta ctaaacctgt atcgcaagc catagggcaa agtcagggtg acgagcagac   | 12660 |
| ctatcaagaa attaccaag tcagtcgagc tttgggacag gaagacactg gcagtttga    | 12720 |
| agccactctg aacttcttgc ttaccaatcg gtctcaaaag atccctcctc aatatgctct  | 12780 |
| tactgcggag gaggagagga tccttagata tgtgcagcag agcgtgggat tgtttctgat  | 12840 |
| gcaagagggg gcaactccga ctgcagcact ggacatgaca gcgcgaaata tggagcccag  | 12900 |
| catgtatgcc agtaaccgac ctttcattaa caaactgctg gactacttgc acagagctgc  | 12960 |
| cgctatgaac tctgattatt tcaccaatgc catcttaaac ccgactggc tgccccacc    | 13020 |
| tggtttctac acgggcgaat atgacatgcc cgaccctaata gacggatttc tgtgggacga | 13080 |
| cgtggacagc gatgtttttt cacctctttc tgatcatcgc acgtggaaaa aggaaggcgg  | 13140 |
| cgatagaatg cattcttctg catcgctgtc cgggggtcatg ggtgctaccg cggctgagcc | 13200 |
| cgagtctgca agtccttttc ctagtctacc cttttctcta cacagtgtac gtagcagcga  | 13260 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| agtgggtaga ataagtcgcc cgagtttaaat gggcgaagag gagtatctaa acgattcctt  | 13320 |
| gctcagaccg gcaagagaaa aaaattttccc aaacaatgga atagaaagtt tgggtggataa | 13380 |
| aatgagtaga tggaagactt atgctcagga tcacagagac gagcctggga tcatggggat   | 13440 |
| tacaagtaga gcgagccgta gacgccagcg ccatgacaga cagaggggtc ttgtgtggga   | 13500 |
| cgatgaggat tcggccgatg atagcagcgt gctggacttg ggtgggagag gaaggggcaa   | 13560 |
| cccgtttgct cattttgcgcc ctcgcttggg tggatatgtt taaaaaaaaa taaaaaaaaa  | 13620 |
| actcaccaag gccatggcga cgagcgtacg ttcgttcttc tttattatct gtgtctagta   | 13680 |
| taatgaggcg agtcgtgcta ggcggagcgg tgggtgtatcc ggagggtcct cctccttcgt  | 13740 |
| acgagagcgt gatgcagcag cagcaggcga cggcgggtgat gcaatcccca ctggaggctc  | 13800 |
| cctttgtgcc tccgcgatac ctggcaccta cggagggcag aaacagcatt cgttattcgg   | 13860 |
| aactggcacc tcagtacgat accaccaggt tgtatctggt ggacaacaag tcggcggaca   | 13920 |
| ttgcttctct gaactatcag aatgaccaca gcaacttctt gaccacggtg gtgcaaaaca   | 13980 |
| atgactttac ccctacggaa gccagcacc agaccattaa ctttgatgaa cgatcgcggt    | 14040 |
| ggggcgggtca gctaaagacc atcatgcata ctaacatgcc aaacgtgaac gagtatatgt  | 14100 |
| ttagtaacaa gttcaaagcg cgtgtgatgg tgtccagaaa acctcccgac ggtgctgcag   | 14160 |
| ttggggatac ttatgatcac aagcaggata ttttgaaata tgagtgggtc gagtttactt   | 14220 |
| tgccagaagg caacttttca gttactatga ctattgattt gatgaacaat gccatcatag   | 14280 |
| ataattactt gaaagtgggt agacagaatg gagtgcttga aagtgacatt ggtgttaagt   | 14340 |
| tcgacaccag gaacttcaag ctgggatggg atcccgaac caagttgatc atgcctggag    | 14400 |
| tgtatacgta tgaagccttc catcctgaca ttgtcttact gcctggctgc ggagtggatt   | 14460 |
| ttaccgagag tcgtttgagc aaccttcttg gtatcagaaa aaaacagcca tttcaagagg   | 14520 |
| gttttaagat tttgtatgaa gatttagaag gtggtaatat tccggccctc ttggatgtag   | 14580 |
| atgcctatga gaacagtaag aaagaacaaa aagccaaaat agaagctgct acagctgctg   | 14640 |
| cagaagctaa ggcaaacata gttgccagcg actctacaag ggttgctaac gctggagagg   | 14700 |

eolf-seql (2)

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| tcagaggaga caatthttgcb ccaacacctg ttccgactgc agaataatta ttggccgatg   | 14760 |
| tgtctgaagg aacggacgtg aaactcacta ttcaacctgt agaaaaagat agtaagaata    | 14820 |
| gaagctataa tgtgtttgaa gacaaaatca acacagccta tcgcagttgg tatctttcgt    | 14880 |
| acaattatgg cgatcccgaa aaaggagtgc gttcctggac attgctcacc acctcagatg    | 14940 |
| tcacctgcgg agcagagcag gtctactggg cgcttccaga catgatgaag gatcctgtca    | 15000 |
| ctttccgctc cactagacaa gtcagtaact accctgtggg ggggtgcagag cttatgcccc   | 15060 |
| tcttctcaaa gagcttctac aacgaacaag ctgtgtactc ccagcagctc cgccagtcca    | 15120 |
| cctcgcttac gcacgtcttc aaccgctttc ctgagaacca gattttaatc cgtccgccgg    | 15180 |
| cgcccacat taccaccgtc agtgaaaacg ttcctgctct cacagatcac gggaccctgc     | 15240 |
| cgttgcgcag cagtatccgg ggagtccaac gtgtgaccgt tactgacgcc agacgccgca    | 15300 |
| cctgtcccta cgtgtacaag gcactgggca tagtcgcacc gcgcgtcctt tcaagccgca    | 15360 |
| ctttctaaaa aaaaaaaaaa tgtccattct tatctcgccc agtaataaca ccggttgggg    | 15420 |
| tctgcgcgct ccaagcaaga tgtacggagg cgcacgcaaa cgttctaccc aacatcctgt    | 15480 |
| ccgtgttcgc ggacattttc gcgctccatg gggcgccctc aagggccgca ctcgcgttcg    | 15540 |
| aaccaccgtc gatgatgtaa tcgatcagg gtgtgcccgc gcccgttaatt atactcctac    | 15600 |
| tgcgcctaca tctactgtgg atgcagttat tgacagtgtg gtggctgacg ctcgcaacta    | 15660 |
| tgctcgacgt aagagccggc gaaggcgcac tgccagacgc caccgagcta cactgccat     | 15720 |
| gcgagccgca agagctctgc tacgaagagc tagacgcgtg gggcgaagag ccatgcttag    | 15780 |
| ggcggccaga cgtgcagctt cgggcgccag cgccggcagg tcccgcaggc aagcagccgc    | 15840 |
| tgctgcagcg gcgactattg ccgacatggc ccaatcgca agaggcaatg tatactgggt     | 15900 |
| gcgtgacgct gccaccggc aacgtgtacc cgtgcgcacc cgtccccctc gcacttagaa     | 15960 |
| gatactgagc agtctccgat gttgtgtccc agcggcgagg atgtccaagc gcaaatacaa    | 16020 |
| ggaagaaatg ctgcagggtta tcgcacctga agtctacggc caaccgttga aggatgaaaa   | 16080 |
| aaaaccccg c aaaaatcaagc ggggttaaaaa ggacaaaaaa gaagaggaag atggcgatga | 16140 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tgggctggcg gagtttgtgc gcgagtttgc cccacggcga cgcgtgcaat ggcgtgggcg   | 16200 |
| caaagttcga catgtgttga gacctggaac ttcgggtggtc tttacacccg gcgagcgttc  | 16260 |
| aagcgctact ttttaagcgtt cctatgatga ggtgtacggg gatgatgata ttcttgagca  | 16320 |
| ggcggctgac cgattaggcg agtttgctta tggcaagcgt agtagaataa cttccaagga   | 16380 |
| tgagacagtg tcgataccct tggatcatgg aaatcccacc cctagtctta aaccggtcac   | 16440 |
| tttgcagcaa gtgttaccgg taactccgcg aacagggtgtt aaacgcgaag gtgaagattt  | 16500 |
| gtatcccact atgcaactga tggtaaccaa acgccagaag ttggaggacg ttttggagaa   | 16560 |
| agtaaaaagtg gatccagata ttcaacctga ggtaaaagt agacccatta agcaggtagc   | 16620 |
| gcctgggtctg ggggtacaaa ctgtagacat taagattccc actgaaagta tggaagtgca  | 16680 |
| aactgaaccc gcaaagccta ctgccacctc cactgaagtg caaacggatc catggatgcc   | 16740 |
| catgcctatt acaactgacg ccgccgggtcc cactcgaaga tcccgaagaa agtacgggtcc | 16800 |
| agcaagtctg ttgatgcca attatgttgt acacccatct attattccta ctcttggtta    | 16860 |
| ccgaggcact cgctactatc gcagccgaaa cagtacctcc cgccgtcgcc gcaagacacc   | 16920 |
| tgcaaatcgc agtcgtcgcc gtagacgcac aagcaaaccg actcccggcg ccctgggtgcg  | 16980 |
| gcaagtgtac cgcaatggta gtgcggaacc tttgacactg ccgcgtgcgc gttaccatcc   | 17040 |
| gagtatcatc acttaatcaa tgttgccgct gcctccttgc agatatggcc ctcaattgtc   | 17100 |
| gccttcgcgt tcccatcact ggttaccgag gaagaaactc gcgccgtaga agagggatgt   | 17160 |
| tgggacgcgg aatgcgacgc tacaggcgac ggcgtgctat ccgcaagcaa ttgcgggggtg  | 17220 |
| gttttttacc agccttaatt ccaattatcg ctgctgcaat tggcgcgata ccaggcatag   | 17280 |
| cttccgtggc ggttcaggcc tcgcaacgac attgacattg gaaaaaacg tataaataaa    | 17340 |
| aaaaaaaaa tacaatggac tctgacactc ctggtcctgt gactatgttt tcttagagat    | 17400 |
| ggaagacatc aatttttcat ccttggctcc gcgacacggc acgaagccgt acatgggcac   | 17460 |
| ctggagcgac atcggcacga gccaaactgaa cggggggcgcc ttcaattgga gcagtatctg | 17520 |
| gagcgggctt aaaaattttg gctcaacat aaaaacatac gggaacaaag cttggaacag    | 17580 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| cagtacagga caggcgctta gaaataaaact taaagaccag aacttccaac aaaaagtagt | 17640 |
| cgatgggata gcttccggca tcaatggagt ggtagatttg gctaaccagg ctgtgcagaa  | 17700 |
| aaagataaac agtcgtttgg acccgccgcc agcaacccca ggtgaaatgc aagtggagga  | 17760 |
| agaaattcct ccgccagaaa aacgaggcga caagcgtccg cgtcccgatt tggaagagac  | 17820 |
| gctggtgacg cgcgtagatg aaccgccttc ttatgaggaa gcaacgaagc ttggaatgcc  | 17880 |
| caccactaga ccgatagccc caatggccac cggggtgatg aaaccttctc agttgcatcg  | 17940 |
| accgctcacc ttggatttgc cccctcccc tgctgctact gctgtacccg cttctaagcc   | 18000 |
| tgctgctgcc ccgaaaccag tcgccgtagc caggtcacgt cccgggggcg ctcctcgtcc  | 18060 |
| aaatgcgcac tggcaaaaata ctctgaacag catcgtgggt ctaggcgtgc aaagtgtaaa | 18120 |
| acgccgtcgc tgcttttaat taaatatgga gtagcgctta acttgccctat ctgtgtatat | 18180 |
| gtgtcattac acgccgtcac agcagcagag gaaaaaagga agaggtcgtg cgtcgacgct  | 18240 |
| gagttacttt caagatggcc accccatcga tgctgcccc aatgggcatac atgcacatcg  | 18300 |
| ccggacagga tgcttcggag tacctgagtc cgggtctgggt gcagttcgcc cgcgccacag | 18360 |
| acacctactt caatctggga aataagttta gaaatccac cgtagcgccg acccacgatg   | 18420 |
| tgaccaccga ccgtagccag cggctcatgt tgcgcttcgt gcccgttgac cgggaggaca  | 18480 |
| atacatactc ttacaaaagt cggtacaccc tggccgtggg cgacaacaga gtgctggata  | 18540 |
| tggccagcac gttctttgac attaggggtg tgttggacag aggtcccagt ttcaaaccct  | 18600 |
| attctggtac ggcttacaac tccctggctc ctaaaggcgc tccaaataca tctcagtgga  | 18660 |
| ttgcagaagg tgtaaaaaat acaactgggt aggaacacgt aacagaagag gaaaccaata  | 18720 |
| ctactactta cacttttggc aatgctcctg taaaagctga agctgaaatt acaaaagaag  | 18780 |
| gactcccagt aggtttggaa gtttcagatg aagaaagtaa accgatttat gctgataaaa  | 18840 |
| catatcagcc agaacctcag ctgggagatg aaacttggac tgaccttgat ggaaaaaccg  | 18900 |
| aaaagtatgg aggcagggtc ctcaaaccg atactaagat gaaaccatgc tacgggtcct   | 18960 |
| ttgccaaacc tactaatgtg aaaggcggtc aggcacaaaca aaaaacaacg gagcagccaa | 19020 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| atcagaaaagt cgaatatgat atcgacatgg agttttttga tgcggcatcg cagaaaacaa | 19080 |
| acttaagtcc taaaattgtc atgtatgcag aaaatgtaaa tttggaaact ccagacactc  | 19140 |
| atgtagtgta caaacctgga acagaagaca caagttccga agctaatttg ggacaacaat  | 19200 |
| ctatgccccaa cagacccaac tacattggct tcagagataa ctttattgga cttatgtact | 19260 |
| ataacagtac tggtaacatg ggggtgctgg ctggtcaagc gtctcagtta aatgcagtgg  | 19320 |
| ttgacttgca ggacagaaac acagaacttt cttaccaact cttgcttgac tctctgggcg  | 19380 |
| acagaaccag atacttttagc atgtggaatc aggctgtgga cagttatgat cctgatgtac | 19440 |
| gtgttattga aaatcatggg gtggaagatg aacttcccaa ctactgtttt ccactggacg  | 19500 |
| gcataggtgt tccaacaacc agttacaaat caatagttcc aaatggagac aatgcgccta  | 19560 |
| attggaagga acctgaagta aatggaacaa gtgagatcgg acagggtaat ttgtttgcca  | 19620 |
| tggaaattaa ctttcaagcc aatctatggc gaagtttcct ttattccaat gtggctctat  | 19680 |
| atctcccaga ctcgtacaaa tacaccccggt ccaatgtcac tcttccagaa aacaaaaaca | 19740 |
| cctacgacta catgaacggg cgggtgggtgc cgccatctct agtagacacc tatgtgaaca | 19800 |
| ttggtgccag gtggtctctg gatgccatgg acaatgtcaa cccattcaac caccaccgta  | 19860 |
| acgctggctt gcgttaccga tccatgcttc tgggtaacgg acgttatgtg cttttccaca  | 19920 |
| tacaagtgcc tcaaaaattc ttcgctgtta aaaacctgct gcttctccca ggctcctaca  | 19980 |
| cttatgagtg gaactttagg aaggatgtga acatggttct acagagttcc ctcggtaacg  | 20040 |
| acctgcgggt agatggcgcc agcatcagtt tcacgagcat caacctctat gctacttttt  | 20100 |
| tccccatggc tcacaacacc gcttccaccc ttgaagccat gctgcggaat gacaccaatg  | 20160 |
| atcagtcatt caacgactac ctatctgcag ctaacatgct ctacccatt cctgccaatg   | 20220 |
| caaccaatat tcccatttcc attccttctc gcaactgggc ggctttcaga ggctgggtcat | 20280 |
| ttaccagact gaaaacaaaa gaaactccct ctttggggtc tggatttgac ccctactttg  | 20340 |
| tctattctgg ttctattccc tacctggatg gtaccttcta cctgaaccac acttttaaga  | 20400 |
| aggtttccat catgtttgac tcttcagtga gctggcctgg aaatgacagg ttactatctc  | 20460 |



eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ctaacgaatt tgaaataaag cgcaactgtgg atggcgaagg ctacaacgta gcccaatgca | 20520 |
| acatgaccaa agactgggttc ttggtacaga tgctcgccaa ctacaacatc ggctatcagg | 20580 |
| gcttctacat tccagaagga taaaaagatc gcatgtattc atttttcaga aacttccagc  | 20640 |
| ccatgagcag gcaggtgggt gatgaggtca attacaaaga cttcaaggcc gtcgccatac  | 20700 |
| cctaccaaca caacaactct ggctttgtgg gttacatggc tccgaccatg cgccaaggtc  | 20760 |
| aaccctatcc cgctaactat ccctatccac tcattggaac aactgccgta aatagtgtta  | 20820 |
| cgcagaaaaa gttcttgtgt gacagaacca tgtggcgcat accgttctcg agcaacttca  | 20880 |
| tgtctatggg ggcccttaca gacttgggac agaatatgct ctatgccaac tcagctcatg  | 20940 |
| ctctggacat gacctttgag gtggatccca tggatgagcc caccctgctt tatcttctct  | 21000 |
| tcgaagtttt cgacgtggtc agagtgcac agccacaccg cggcatcatc gaggcagtct   | 21060 |
| acctgcgtac accgttctcg gccggtaacg ctaccacgta agaagcttct tgcttcttgc  | 21120 |
| aaatagcagc tgcaaccatg gcctgcggat cccaaaacgg ctccagcgag caagagctca  | 21180 |
| gagccattgt ccaagacctg gggtgcggac cctatTTTTT gggaacctac gataagcgct  | 21240 |
| tcccggggtt catggcccc gataagctcg cctgtgccat tgtaaatacg gccggacgtg   | 21300 |
| agacgggggg agagcactgg ttggctttcg gttggaaccc acgttctaac acctgctacc  | 21360 |
| tttttgatcc ttttggattc tcggatgatc gtctcaaaca gatttaccag tttgaatatg  | 21420 |
| agggtctcct gcgccgcagc gctcttgcta ccaaggaccg ctgtattacg ctggaaaaat  | 21480 |
| ctaccagac cgtgcagggt ccccgttctg ccgcctgcgg acttttctgc tgcatgttcc   | 21540 |
| ttcacgcctt tgtgcactgg cctgaccgtc ccatggacgg aaaccccacc atgaaattgc  | 21600 |
| taactggagt gccaaacaac atgcttcatt ctctaaagt ccagcccacc ctgtgtgaca   | 21660 |
| atcaaaaagc actctaccat tttcttaata cccattcgcc ttattttctgc tcccatcgta | 21720 |
| cacacatcga aagggccact gcgttcgacc gtatggatgt tcaataatga ctcatgtaaa  | 21780 |
| caacgtgttc aataaacatc actttatTTT ttacatgta tcaaggctct gcattactta   | 21840 |
| tttatTTTaca agtcgaatgg gttctgacga gaatcagaat gacccgcagg cagtgatacg | 21900 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ttgcggaact gatacttggg ttgccacttg aattcgggaa tcaccaactt gggaaccggt  | 21960 |
| atatcgggca ggatgtcact ccacagcttt ctggtcagct gcaaagctcc aagcagggtca | 22020 |
| ggagccgaaa tcttgaaatc acaattagga ccagtgcctt gagcgcgaga gttgcggtac  | 22080 |
| accggattgc agcactgaaa caccatcagc gacggatgtc tcacgcttgc cagcacgggtg | 22140 |
| ggatctgcaa tcatgcccac atccagatct tcagcattgg caatgctgaa cggggtcac   | 22200 |
| ttgcagggtct gcctacccat ggcgggcacc caattaggct tgtggttgca atcgcagtg  | 22260 |
| agggggatca gtatcatctt ggcctgatcc tgtctgattc ctggatacac ggctctcatg  | 22320 |
| aaagcatcat attgcttgaa agcctgctgg gctttactac cctcgggtata aaacatccc  | 22380 |
| caggacctgc tcgaaaactg gttagctgca cagccggcat cattcacaca gcagcgggcg  | 22440 |
| tcattgttag ctatttgcac cacacttctg cccagcgggt tttgggtgat tttggttcgc  | 22500 |
| tcgggattct cctttaaggc tcgttgtccg ttctcgctgg ccacatccat ctcgataatc  | 22560 |
| tgctccttct gaatcataat attgccatgc aggcaattca gcttgccctc ataattcattg | 22620 |
| cagccatgag gccacaacgc acagcctgta cattcccaat tatggtgggc gatctgagaa  | 22680 |
| aaagaatgta tcattccctg cagaaatctt cccatcatcg tgctcagtgt cttgtgacta  | 22740 |
| gtgaaagtta actggatgcc tcggtgctcc tcgtttacgt actggtgaca gatgcgcttg  | 22800 |
| tattgttcgt gttgctcagg cattagttta aaagagggtc taagtctgtt atccagcctg  | 22860 |
| tacttctcca tcagcagaca catcacttcc atgcctttct cccaagcaga caccaggggc  | 22920 |
| aagctaatacg gattcttaac agtgcaggca gcagctcctt tagccagagg gtcattctta | 22980 |
| gcgatcttct caatgcttct tttgccatcc ttctcaacga tgcgcacggg cgggtagctg  | 23040 |
| aaaccactg ctacaagttg cgcctcttct ctttcttctt cgctgtcttg actgatgtct   | 23100 |
| tgcatgggga tatgtttggt cttccttggc ttctttttgg ggggtatcgg aggaggagga  | 23160 |
| ctgtcgctcc gttccggaga caggaggat tgtgacgtt cgctcaccat taccaactga    | 23220 |
| ctgtcggtag aagaacctga cccacacgg cgacagggtg ttctcttcgg gggcagaggt   | 23280 |
| ggaggcgatt gcgaagggtc gcggtccgac ctggaaggcg gatgactggc agaaccctt   | 23340 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| ccgcgttcgg ggggtgtgctc cctgtggcgg tcgcttaact gatttccttc gcggctggcc | 23400 |
| attgtgttct cctaggcaga gaaacaacag acatggaaac tcagccattg ctgtcaacat  | 23460 |
| cgccacgagt gccatcacat ctcgctctca gcgacgagga aaaggagcag agcttaagca  | 23520 |
| ttccaccgcc cagtcctgcc accacctcta ccctagaaga taaggaggtc gacgcatctc  | 23580 |
| atgacatgca gaataaaaaa gcgaaaagagt ctgagacaga catcgagcaa gacccgggct | 23640 |
| atgtgacacc ggtggaacac gaggaagagt tgaaacgctt tctagagaga gaggatgaaa  | 23700 |
| actgccccaa acaacgagca gataactatc accaagatgc tggaaatagg gatcagaaca  | 23760 |
| ccgactacct catagggctt gacgggggaag acgcgctcct taaacatcta gcaagacagt | 23820 |
| cgctcatagt caaggatgca ttattggaca gaactgaagt gcccacagc gtggaagagc   | 23880 |
| tcagccgcgc ctacgagctt aacctctttt cacctcgtac tccccccaaa cgtcagccaa  | 23940 |
| acggcacctg cgagccaaat cctcgcttaa acttttatcc agcttttgct gtgccagaag  | 24000 |
| tactggctac ctatcacatc ttttttaaaa atcaaaaaat tccagtctcc tgccgcgcta  | 24060 |
| atcgcacccg cgccgatgcc ctactcaatc tgggacctgg ttcacgctta cctgatatag  | 24120 |
| cttccttgga agaggttcca aagatcttcg agggctctggg caataatgag actcgggccg | 24180 |
| caaatgctct gcaaaaaggga gaaaatggca tggatgagca tcacagcgtt ctggtggaat | 24240 |
| tggaaggcga taatgccaga ctgcgagtac tcaagcgaag catcgaggtc acacacttcg  | 24300 |
| catatccgc tgtcaacctg cccctaaag tcatgacggc ggtcatggac cagttactca    | 24360 |
| ttaagcgcgc aagtccccct tcagaagaca tgcgatgacc agatgcctgt gatgagggt   | 24420 |
| aaccagtggc cagtgatgag cagctaaccg gatggctggg caccgactct cccagggt    | 24480 |
| tggaagagcg tcgcaagctt atgatggccg tggctgctgt taccgtagaa ctagagtgtc  | 24540 |
| tccgacgttt ctttaccgat tcagaaacct tgcgcaaact cgaagagaat ctgcactaca  | 24600 |
| cttttagaca cggctttgtg cggcaggcat gcaagatatc taacgtggaa ctcaccaacc  | 24660 |
| tggtttccta catgggtatt ctgcatgaga atcgccctagg acaaagcgtg ctgcacagca | 24720 |
| ccctgaaggg ggaagccgc cgtgattaca tccgcgattg tgtctatctg tacctgtgcc   | 24780 |

eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| acacgtggca aaccggcatg ggtgtatggc agcaatgttt agaagaacag aacttgaaag | 24840 |
| agcttgacaa gctcttacag aaatctctta aggttctgtg gacagggttc gacgagcgca | 24900 |
| ccgtcgcttc cgacctggca gacctcatct tcccagagcg tctcagggtt actttgcgaa | 24960 |
| acggattgcc tgactttatg agccagagca tgcttaacaa ttttcgctct ttcacacctg | 25020 |
| aacgctccgg tatcctgccc gccacctgct gcgcactgcc ctccgacttt gtgcctctca | 25080 |
| cctaccgcga gtgccccccg ccgctatgga gtcactgcta cctgttccgt ctggccaact | 25140 |
| atctctccta ccactcggat gtgatcgagg atgtgagcgg agacggcttg ctggagtgtc | 25200 |
| actgccgctg caatctgtgc acgccccacc ggtccctagc ttgcaacccc cagttgatga | 25260 |
| gcgaaaccca gataataggc acctttgaat tgcaaggccc cagcagccaa ggcgatgggt | 25320 |
| cttctcctgg gcaaagttta aaactgaccc cgggactgtg gacctccgcc tacttgcgca | 25380 |
| agtttgctcc ggaagattac caccctatg aaatcaagtt ctatgaggac caatcacagc  | 25440 |
| ctccaaaggc cgaactttcg gcctgcgtca tcaccaggg ggcaattctg gcccaattgc  | 25500 |
| aagccatcca aaaatcccg ccaagaatttc tactgaaaaa gggtaagggg gtctaccttg | 25560 |
| acccccagac cggcgaggaa ctcaacacaa ggttccctca ggatgtccca acgacgagaa | 25620 |
| aacaagaagt tgaaggcgca gccgccgccc ccagaagata tggaggaaga ttgggacagt | 25680 |
| caggcagagg aggcggagga ggacagtctg gaggacagtc tggaggaaga cagtttgag  | 25740 |
| gaggaaaacg aggaggcaga ggaggtggaa gaagtaaccg ccgacaaaca gttatcctcg | 25800 |
| gctgcggaga caagcaacag cgctaccatc tccgctccga gtcgaggaac ccggcggcgt | 25860 |
| cccagcagta gatgggacga gaccggacgc ttcccgaacc caaccagcgc ttccaagacc | 25920 |
| ggtaagaagg atcggcaggg atacaagtcc tggcgggggc ataagaatgc catcatctcc | 25980 |
| tgcttgcatg agtgcggggg caacatatcc ttcacgcggc gctacttgct attccaccat | 26040 |
| ggggtgaact ttccgcgcaa tgttttgcat tactaccgtc acctccacag cccctactat | 26100 |
| agccagcaaa tcccggcagt ctcgacagat aaagacagcg gcggcgacct ccaacagaaa | 26160 |
| accagcagcg gcagttagaa aatacacaac aagtgcagca acaggaggat taaagattac | 26220 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| agccaacgag ccagcgcaaa cccgagagtt aagaaatcgg atctttccaa ccctgtatgc  | 26280 |
| catcttccag cagagtcggg gtcaagagca ggaactgaaa ataaaaaacc gatctctgcg  | 26340 |
| ttcgctcacc agaagttggt tgtatcacaa gagcgaagat caacttcagc gcactctcga  | 26400 |
| ggacgccgag gctctcttca acaagtactg cgcgctgact cttaaagagt aggcagcgac  | 26460 |
| cgcgcttatt caaaaaaggc gggaattaca tcatcctcga catgagtaaa gaaattccca  | 26520 |
| cgccttacat gtggagttat caaccccaaa tgggattggc ggcaggcgcc tcccaggact  | 26580 |
| actccacccg catgaattgg ctacgagcgcg ggccttctat gatttctcga gttaatgata | 26640 |
| tacgcgcta ccgaaaccaa atacttttgg aacagtcagc tcttaccacc acgccccgcc   | 26700 |
| aacaccttaa tcccagaaat tggcccgccg ccctagtgtg ccaggaaagt cccgctccca  | 26760 |
| ccactgtatt acttcctcga gacgcccagg ccgaagtcca aatgactaat gcagggtgcgc | 26820 |
| agttagctgg cggctccacc ctatgtcgtc acaggcctcg gcataatata aaacgcctga  | 26880 |
| tgatcagagg ccgaggtatc cagctcaacg acgagtcggt gagctctccg cttgggtctac | 26940 |
| gaccagacgg aatctttcag attgccggct gcgggagatc ttccttcacc cctcgtcagg  | 27000 |
| ctgttctgac tttggaaagt tcgtcttcgc aaccccgctc gggcggaatc gggaccgttc  | 27060 |
| aatttgtgga ggagtttact ccctctgtct acttcaaccc cttctccgga tctcctgggc  | 27120 |
| attacccgga cgagttcata ccgaacttcg acgcgattag cgagtcagtg gacggctacg  | 27180 |
| attgatgtct ggtgacgcgg ctgagctatc tcggctgcga catctagacc actgccgccg  | 27240 |
| ctttcgtgc tttgcccggg aactcattga gttcatctac ttcgaactcc ccaaggatca   | 27300 |
| ccctcaaggt ccggcccacg gagtgcggtat ttctatcgaa ggcaaaatag actctcgctt | 27360 |
| gcaacgaatt ttctcccagc ggcccgtgct gatcgagcga gaccaggga acaccacggt   | 27420 |
| ttccatctac tgcatttgta atcaccgccg attgcatgaa agcctttgct gtcttatgtg  | 27480 |
| tactgagttt aataaaaaact gaattaagac tctcctacgg actgccgctt cttcaacccg | 27540 |
| gattttacaa ccagaagaac gaaacttttc ctgtcgtcca ggactctgtt aacttcacct  | 27600 |
| ttcctactca caaactagaa gctcaacgac tacaccgctt ttccagaagc attttcccta  | 27660 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| ctaatactac tttcaaaacc ggaggtgagc tccaaggtct tcctacagaa aacccttggg   | 27720 |
| tggaagcggg ccttgtagtg ctaggaattc ttgcgggtgg gcttgtgatt attctttgct   | 27780 |
| acctatacac accttgcttc actttcttag tgggtgttggtg gtattggttt aaaaaatggg | 27840 |
| gcccatacta gtcttgcttg ttttactttc gcttttggaa ccgggttctg ccaattacga   | 27900 |
| tccatgtcta gacttcgacc cagaaaactg cacacttact tttgcacccg acacaagccg   | 27960 |
| catctgtgga gttcatcgcc tctcttacga acttggcccc caacgacaaa aatttacctg   | 28020 |
| catggtggga atcaaccca tagttatcac ccagcaaagt ggagatacta agggttgcat    | 28080 |
| tcactgctcc tgcgattcca tcgagtgcac ctacaccctg ctgaagaccc tatgcggcct   | 28140 |
| aagagacctg ctaccaatga attaaaaaat gattaataaa aaatcactta cttgaaatca   | 28200 |
| gcaataaggt ctctgttgaa attttctccc agcagcacct cacttcctc ttcccaactc    | 28260 |
| tggatttcta aaccccgctc agcggcatac tttctccata ctttaaaggg gatgtcaa     | 28320 |
| tttagctcct ctctgtacc cacaatcttc atgtctttct tcccagatga ccaagagagt    | 28380 |
| ccggctcagt gactccttca accctgtcta cccctatgaa gatgaaagca cctcccaaca   | 28440 |
| cccctttata aaccagggt ttatttcccc aaatggcttc acacaaagcc caaacggagt    | 28500 |
| tcttacttta aaatgttta cccactaac aaccacaggc ggatctctac agctaaaagt     | 28560 |
| gggaggggga cttacagtgg atgacaccaa cggttttttg aaagaaaaca taagtgccac   | 28620 |
| cacaccactc gttaagactg gtcactctat aggtttacca ctaggagccg gattgggaac   | 28680 |
| gaatgaaaat aaactttgta tcaaattagg acaaggactt acattcaatt caaacaacat   | 28740 |
| ttgcattgat gacaatatta acaccttatg gacaggagtc aacccaccg aagccaactg    | 28800 |
| tcaaatcatg aactccagt aatctaataa ttgcaaatta attctaacac tagttaaac     | 28860 |
| tggagcacta gtcactgcat ttgtttatgt tataggagta tctaacaatt ttaatatgct   | 28920 |
| aactacacac agaaatataa attttactgc agagctgttt ttcgattcta ctggtaat     | 28980 |
| actaactaga ctctcatccc tcaaaactcc acttaatcat aaatcaggac aaaacatggc   | 29040 |
| tactggtgcc attactaatg ctaaagggtt catgcccagc acgactgcct atcctttcaa   | 29100 |

eolf-seql (2)

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| tgataattct agagaaaaag aaaactacat ttacggaact tgttactaca cagctagtga  | 29160 |
| tcgcactgct tttcccattg acatatctgt catgcttaac cgaagagcaa taaatgacga  | 29220 |
| gacatcatat tgtattcgta taacttgggtc ctggaacaca ggagatgccc cagaggtgca | 29280 |
| aacctctgct acaaccctag tcacctcccc atttaccttt tactacatca gagaagacga  | 29340 |
| ctgacaaaata aagtttgcga tcgctaccct gcaggaactt gtttatttga aaatcaattc | 29400 |
| acaaaatccg agtagttatt ttgcctcccc cttcccattt aacagaatac accaatctct  | 29460 |
| ccccacgcac agctttaaac atttggatac cattagatat agacatgggt ttagattcca  | 29520 |
| cattccaaac agtttcagag cgagccaatc tggggtcagt gatagataaa aatccatcgg  | 29580 |
| gatagtcttt taaagcgctt tcacagtcca actgctgcgg atgcgactcc ggagtctgga  | 29640 |
| tcacgggcat ctggaagaag aacgatggga atcataatcc gaaaacggta tcggacgatt  | 29700 |
| gtgtctcatc aaaccacaa gcagccgctg tctgcgtcgc tccgtgcgac tgctgtttat   | 29760 |
| gggatcaggg tccacagtgt cctgaagcat gattttaata gcccttaaca tcaactttct  | 29820 |
| ggtgcgatgc gcgcagcaac gcattctgat ttactcaaa tctttgcagt aggtacaaca   | 29880 |
| cattattaca atattgttta ataaaccata attaaaagcg ctccagccaa aactcatatc  | 29940 |
| tgatataatc gcccctgcat gaccatcata ccaaagttta atataaatta aatgacgttc  | 30000 |
| cctcaaaaac aactaccca catacatgat ctcttttggc atgtgcatat taacaatctg   | 30060 |
| tctgtaccat ggacaacgtt ggttaatcat gcaacccaat ataaccttcc ggaaccacac  | 30120 |
| tgccaacacc gctccccag ccatgcattg aagtgaacct tgctgattac aatgacaatg   | 30180 |
| aagaacccaa ttctctcgac cgtgaatcac ttgagaatga aaaatatcta tagtggcaca  | 30240 |
| acatagacat aaatgcatgc atcttctcat aatttttaac tcctcaggat ttagaaacat  | 30300 |
| atcccaggga ataggaagct cttgcagaac agtaaagctg gcagaacaag gaagaccacg  | 30360 |
| aacacaactt acactatgca tagtcatagt atcacaatct ggcaacagcg ggtggtcttc  | 30420 |
| agtcatagaa gctcggggtt cattttcctc acaacgtggg aactgggctc tgggtgaagg  | 30480 |
| gtgatgtctg gcgcatgatg tcgagcgtgc gcgcaacctt gtcataatgg agttgcttcc  | 30540 |

eolf-seql (2)

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| tgacattctc gtattttgta tagcaaaacg cggccctggc agaacacact cttcttcgcc   | 30600 |
| ttctatcctg ccgcttagcg tggtccgtgt gatagttcaa gtacaaccac actcttaagt   | 30660 |
| tgggtcaaaag aatgctggct tcagttgtaa tcaaaactcc atcgcatcta atcgttctga  | 30720 |
| ggaaatcatc caagcaatgc aactggattg tgtttcaagc aggagaggag agggaagaga   | 30780 |
| cggagaacc atgttaatth ttattccaaa cgatctcgca gtacttcaaa ttgtagatcg    | 30840 |
| cgcagatggc atctctcgcc cccactgtgt tgggtgaaaa gcacagctag atcaaaagaa   | 30900 |
| atgcgattth caagggtgct aacgggtggct tccagcaaag cctccacgcg cacatccaag  | 30960 |
| aacaaaaagaa taccaaaaaga aggagcattt tctaactcct caatcatcat attacattcc | 31020 |
| tgcaccattc ccagataatt ttcagctttc cagccttgaa ttattcgtgt cagttcttgt   | 31080 |
| ggtaaatacca atccacacat tacaacagg tcccggaggg cgccctccac caccattctt   | 31140 |
| aaacacaccc tcataatgac aaaatatctt gctcctgtgt cacctgtagc gaattgagaa   | 31200 |
| tggcaacatc aattgacatg ccttggctc taagttcttc ttttaagttct agttgtaaaa   | 31260 |
| actctctcat attatcacca aactgcttag ccagaagccc cccgggaaca agagcagggg   | 31320 |
| acgctacagt gcagtacaag cgcagacctc cccaattggc tccagcaaaa acaagattgg   | 31380 |
| aataagcata ttgggaaccg ccagtaatat catcgaagtt gctggaaata taatcaggca   | 31440 |
| gagtttcttg taaaaattga ataaaagaaa aatttgccaa aaaaacattc aaaacctctg   | 31500 |
| ggatgcaaata gcaatagggt accgcgctgc gctccaacat tgtagtttt gaattagtct   | 31560 |
| gcaaaaaataa aaaaaaaaaac aagcgtcata tcatagtagc ctgacgaaca gatggataaa | 31620 |
| tcagtctttc catcacaaga caagccacag ggtctccagc tcgacctcg taaaacctgt    | 31680 |
| catcatgatt aaacaacagc accgaaagtt cctcgcggtg accagcatga ataattcttg   | 31740 |
| atgaagcata caatccagac atgtagcat cagttaacga gaaaaaacag ccaacatagc    | 31800 |
| ctttgggtat aattatgctt aatcgtaagt atagcaaagc caccctcgc ggatacaaag    | 31860 |
| taaaaggcac aggagaataa aaaatataat tatttctctg ctgctgttca ggcaacgtcg   | 31920 |
| cccccggtcc ctctaaatac acatacaaag cctcatcagc catggcttac cagacaaagt   | 31980 |



eolf-seql (2)

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| acagcgggca cacaaagcac aagctctaaa gtgactctcc aacctctcca caatatatat | 32040 |
| atacacaagc cctaaactga cgtaatggga gtaaagtgtg aaaaatcccg ccaaaccaca | 32100 |
| cacacacccc gaaactgcgt caccagggaa aagtacagtt tcacttccgc aatcccaaca | 32160 |
| ggcgtaactt cctctttctc acggtacgtg atatcccact aacttgcaac gtcattttcc | 32220 |
| cacggtcgca ccgccccctt tagccgttaa cccacagcc aatcaccaca cgatccacac  | 32280 |
| tttttaaaat cacctcattt acatattggc accattccat ctataaggta tattatatag | 32340 |
| ataga                                                             | 32345 |

<210> 126  
 <211> 864  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Human CD80

|                                                                   |     |
|-------------------------------------------------------------------|-----|
| <400> 126                                                         |     |
| ggccacacac ggaggcaggg aacatcacca tccaagtgtc catacctcaa tttctttcag | 60  |
| ctcttggtgc tggctggtct ttctcacttc tgttcaggtg ttatccacgt gaccaaggaa | 120 |
| gtgaaagaag tggcaacgct gtcctgtggt cacaatgttt ctgttgaaga gctggcacia | 180 |
| actcgcatct actggcaaaa ggagaagaaa atggtgctga ctatgatgtc tggggacatg | 240 |
| aatatatggc ccgagtacaa gaaccggacc atctttgata tcactaataa cctctccatt | 300 |
| gtgatcctgg ctctgcgcc atctgacgag ggcacatacg agtgtgttgt tctgaagtat  | 360 |
| gaaaaagacg ctttcaagcg ggaacacctg gctgaagtga cgttatcagt caaagctgac | 420 |
| ttccctacac ctagtatatc tgactttgaa attccaactt ctaatattag aaggataatt | 480 |
| tgctcaacct ctggagggtt tccagagcct cacctctcct gggttgaaaa tggagaagaa | 540 |
| ttaaatgcca tcaacacaac agtttcccaa gatcctgaaa ctgagctcta tgctgttagc | 600 |
| agcaaactgg atttcaatat gacaaccaac cacagcttca tgtgtctcat caagtatgga | 660 |
| catttaagag tgaatcagac cttcaactgg aatacaacca agcaagagca ttttcctgat | 720 |

eolf-seql (2)

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| aacctgctcc catcctgggc cattacctta atctcagtaa atggaatfff tgtgatatgc  | 780 |
| tgccctgacct actgctttgc cccaagatgc agagagagaa ggaggaatga gagattgaga | 840 |
| agggaaagtg tacgccctgt ataa                                         | 864 |

<210> 127  
 <211> 909  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Transmembrane form of Anti-CD3 ScFv

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| <400> 127                                                          |     |
| cagggtgcagc tgcagcagtc tggggctgaa ctggcaagac ctggggcctc agtgaagatg | 60  |
| tcctgcaagg cttctggcta cacctttact aggtacacga tgcactgggt aaaacagagg  | 120 |
| cctggacagg gtctggaatg gattggatac attaataccta gccgtgggta tactaattac | 180 |
| aatcagaagt tcaaggacaa ggccacattg actacagaca aatcctccag cacagcctac  | 240 |
| atgcaactga gcagcctgac atctgaggac tctgcagtct attactgtgc aagatattat  | 300 |
| gatgatcatt actgccttga ctactggggc caaggcacca ctctcacagt ctctcaggt   | 360 |
| ggcgggtggc cgggcgggtg tggatctggt ggcggcggat ctgatatcgt gctcactcag  | 420 |
| tctccagcaa tcatgtctgc atctccaggg gagaaggatca ccatgacctg cagtgccagc | 480 |
| tcaagtgtaa gttacatgaa ctggtaccag cagaagtcag gcacctcccc caaaagatgg  | 540 |
| atttatgaca catccaaact ggcttctgga gtccctgctc acttcagggg cagtgggtct  | 600 |
| gggacctctt actctctcac aatcagcggc atggaggctg aagatgctgc cacttattac  | 660 |
| tgccagcagt ggagtagtaa cccattcacg ttcggctcgg ggacaaagtt ggaaataaac  | 720 |
| cggggatccg aacaaaaact catctcagaa gaggatctga atgctgtggg ccaggacacg  | 780 |
| caggaggatca tcgtggtgcc acactccttg cctttaagg tgggtggtgat ctgagccatc | 840 |
| ctggccctgg tgggtgctcac catcatctcc cttatcatcc tcatcatgct ttggcagaag | 900 |
| aagccacgt                                                          | 909 |

eolf-seql (2)