

Sequence.txt
SEQUENCE LISTING

<110> BASF
BASF Aktiengesellschaft

<120> Coryneform bacteria with formate-THF-synthetase and/or glycine
cleavage activity

<130> B 8271 / DB

<160> 52

<170> PatentIn version 3.3

<210> 1
<211> 1689
<212> DNA
<213> Corynebacterium jeikeium

<400> 1
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gccaccgacc tggaggatct aaagaagcgc atcgggcgca tcgtggtggg ccagacctac 720
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Sequence.txt

```

aaggacaacg gctgggacaa gctgccagtg tgcgtgtcga agacacagta ctccttcagc 1500
gatgacccca gcgcgctggg cgcgccgagc ggccacaccc tgcattgtccg cgagctggtg 1560
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ctgccgaaga aaccgcgagc cgagcgtatt gatgtgaacg cgcaggggggt tatctcgggg 1680
ctgttctaa 1689

```

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<210> 2
<211> 562
<212> PRT
<213> Corynebacterium jeikeium

```

```
<400> 2
```

```

Met Thr Asn Ser Ser Ala Thr Ser Asn Pro Gln Pro Ser Asp Val Glu
1      5      10     15

```

```

Ile Ala Gln Ala His Thr Leu Glu Pro Ile Thr Thr Ile Ala Glu Arg
      20     25     30

```

```

Ala Gly Ile Pro Glu Ala Ala Leu Ile Pro Tyr Gly Arg Thr Lys Ala
      35     40     45

```

```

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

```

```

Lys Gly Lys Leu Val Leu Val Thr Ala Met Ser Pro Thr Pro Ala Gly
      65     70     75     80

```

```

Glu Gly Lys Ser Thr Val Leu Ile Gly Leu Ala Asp Ala Val Arg Thr
      85     90     95

```

```

Ala Gly Arg Gln Thr Met Val Ala Ile Arg Glu Pro Ser Gln Gly Pro
      100    105    110

```

```

Val Met Gly Ile Lys Gly Gly Ala Ala Gly Gly Gly Tyr Ala Gln Ile
      115    120    125

```

```

Val Pro Met Glu Asp Ile Asn Leu His Phe Thr Gly Asp Met His Ala
      130    135    140

```

```

Ile Thr Ala Ala Thr Asn Thr Leu Ala Ala Met Val Asp Asn His Val
      145    150    155    160

```

```

Gln His Gly Asn Ala Leu Gly Ile Asp Pro Arg Arg Val Thr Trp Arg
      165    170    175

```

```

Arg Cys Leu Asp Val Asn Asp Arg Ser Leu Arg His Val Val Thr Gly
      180    185    190

```

```

Leu Gly Gly Pro Gly Gln Gly Thr Pro Arg Glu Gly Gly Phe Asp Ile
      195    200    205

```

Sequence.txt

Thr Ala Ala Ser Glu Ile Met Ala Ile Leu Cys Leu Ala Thr Asp Leu
210 215 220

Glu Asp Leu Lys Lys Arg Ile Gly Arg Ile Val Val Gly Gln Thr Tyr
225 230 235 240

Asp Arg Arg Pro Val Thr Ala Gly Asp Leu Lys Cys Ala Gly Ala Ile
245 250 255

Thr Ala Leu Leu Arg Asp Ala Ile Asn Pro Asn Leu Val Gln Thr Leu
260 265 270

Gly Gly Thr Pro Ala Leu Val His Gly Gly Pro Phe Ala Asn Ile Ala
275 280 285

His Gly Cys Asn Ser Leu Ile Ala Thr Thr Thr Ala Leu Asp Leu Ser
290 295 300

Glu Val Val Leu Thr Glu Ala Gly Phe Gly Ser Asp Leu Gly Ala Glu
305 310 315 320

Lys Phe Phe Asp Ile Lys Ser Arg Ala Gly Asp Leu Asp Val Ala Ala
325 330 335

Thr Val Val Val Ala Thr Ile Arg Ser Leu Lys His Asn Gly Asp Ser
340 345 350

Val Leu Lys Ala Gly Leu Ala Asn Leu Glu Arg His Val Ser Asn Ile
355 360 365

Arg Lys Phe Gly Val Glu Pro Val Val Ala Leu Asn Leu Phe Ser Ser
370 375 380

Asp Thr Ala Ala Glu Arg Ser Met Val Ala Asp Trp Gly Glu Gln Phe
385 390 395 400

Gly Val Arg Val Val Glu Cys Ser Val Trp Ala Glu Gly Gly Ala Gly
405 410 415

Ala Ala Asp Leu Ala Thr Ala Val Leu Glu Val Val Asp Gly Val Ser
420 425 430

Asp Glu Asp Ala Ser Ser Ser Ser His Gln Ile Tyr Gln Pro Val Asp
435 440 445

Gly Val Glu Ala Thr Leu His Thr Leu Ala Thr Glu Ile Tyr Gly Ala
450 455 460

Ala Asp Val Gln Phe Gly Pro Gln Ala Leu Lys Asp Leu Ala Phe Leu
465 470 475 480

Sequence.txt

Lys Asp Asn Gly Trp Asp Lys Leu Pro Val Cys Val Ser Lys Thr Gln
485 490 495

Tyr Ser Phe Ser Asp Asp Pro Ser Ala Leu Gly Ala Pro Ser Gly His
500 505 510

Thr Leu His Val Arg Glu Leu Val Pro Arg Ile Gly Ala Gly Phe Val
515 520 525

Val Ala Leu Thr Gly Asp Val Met Thr Leu Pro Gly Leu Pro Lys Lys
530 535 540

Pro Ala Ala Glu Arg Ile Asp Val Asn Ala Gln Gly Val Ile Ser Gly
545 550 555 560

Leu Phe

<210> 3
<211> 192
<212> DNA
<213> artificial

<220>
<223> promotor P3119 = PSOD

<400> 3
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ttcgttgcaa tatcaacaaa aaggcctatc attgggaggt gtcgcaccaa gtacttttgc 120
gaagcgccat ctgacggatt ttcaaaagat gtatatgctc ggtgcggaaa cctacgaaag 180
gattttttac cc 192

<210> 4
<211> 184
<212> DNA
<213> artificial

<220>
<223> promotor P497 = PgroES

<400> 4
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ctggcactct cgggggtaga gtgcaaata ggttgtttga cacacagttg ttcacccgcg 120
acgacggctg tgctggaaac ccacaaccgg cacacacaaa atttttctca tggagggatt 180
catc 184

<210> 5
<211> 199
<212> DNA
<213> artificial

<220>

Sequence.txt

<223> promotor P1284 = PEFTU

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ggctgcttat cacagtgaag gcaaaaccaa ttcgtggctg cgaaagtcgt agccaccacg 180
aagtccagga ggacataca 199

<210> 6
<211> 114
<212> DNA
<213> artificial

<220>
<223> promotor ... = 1pR

<400> 6
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<210> 7
<211> 915
<212> DNA
<213> Corynebacterium glutamicum

<400> 7
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gttgtctttg attaa 915

<210> 8
<211> 304
<212> PRT

Sequence.txt

<213> Corynebacterium glutamicum

<400> 8

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Met Thr Pro Ser Ser Pro Glu Val Arg Asn Arg Pro Ser Ala Ala Pro
1          5          10          15

Glu Glu Arg Gln Phe Val Leu Thr Phe Gly Cys Pro Asp Ser Thr Gly
20          25          30

Ile Val Ala Lys Leu Ser Ser Phe Leu Ala Glu Arg Gly Gly Trp Ile
35          40          45

Thr Glu Ala Gly Tyr Phe Thr Asp Pro Asp Ser Asn Trp Phe Phe Thr
50          55          60

Arg Gln Ala Ile Arg Ala Glu Ser Ile Asp Thr Thr Ile Glu Gln Leu
65          70          75          80

Arg Glu Glu Phe Ala Pro Leu Ala Glu Glu Phe Gly Pro Arg Ala Lys
85          90          95

Trp Ser Phe Thr Asp Thr Ala Gln Val Lys Lys Ala Val Leu Leu Val
100         105         110

Ser Lys Glu Gly His Cys Leu His Asp Leu Leu Gly Arg Val Ala Glu
115         120         125

Asn Asp Tyr Pro Met Glu Val Val Ala Val Val Gly Asn His Glu Asn
130         135         140

Leu Arg Tyr Ile Ala Glu Asn His Asn Val Pro Phe Phe His Val Pro
145         150         155         160

Phe Pro Lys Asp Ala Val Gly Lys Arg Lys Ala Phe Asp Gln Val Ala
165         170         175

Glu Ile Val Asn Gly Tyr Asp Pro Asp Ala Ile Val Leu Ala Arg Phe
180         185         190

Met Gln Ile Leu Pro Pro Asp Leu Cys Glu Met Trp Ala Gly Arg Val
195         200         205

Leu Asn Ile His His Ser Phe Leu Pro Ser Phe Met Gly Ala Arg Pro
210         215         220

Tyr His Gln Ala Tyr Ser Arg Gly Val Lys Leu Ile Gly Ala Thr Cys
225         230         235         240

His Tyr Ala Thr Gly Asp Leu Asp Asp Gly Pro Ile Ile Glu Gln Asp
245         250         255

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Val Ile Arg Val Thr His Lys Asp Thr Pro Thr Glu Met Gln Arg Leu
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Gly Arg Asp Ala Glu Lys Gln Val Leu Ala Arg Gly Leu Arg Phe His
275 280 285

Leu Glu Asp Arg Val Leu Val Tyr Gly Asn Arg Thr Val Val Phe Asp
290 295 300

<210> 9
<211> 2952
<212> DNA
<213> Corynebacterium jeikeium

<400> 9
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Sequence.txt

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```

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<210> 10
<211> 983
<212> PRT
<213> Corynebacterium jeikeium
<400> 10

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```

Met Ser Ser Ala Ala Thr Arg Arg Asn Ser Ala Pro Phe Val Gln Arg
1          5          10          15

```

```

His Ile Gly Pro Asn Gln Ala Asp Thr Gln Glu Ile Leu Asp Tyr Leu
20          25          30

```

```

Gly Tyr Glu Ser Ser Ala Ala Leu Ala Asp Asp Ala Leu Pro Lys Ser
35          40          45

```


Sequence.txt

Ile Arg Gln Ala Gly Pro Ile Gly Leu Pro Glu Ala Leu Asp Glu Thr
50 55 60

Asp Thr Leu Ala Ala Leu Arg Ala Tyr Ala Asp Lys Asn Val Gln Lys
65 70 75 80

Gln Gln Leu Ile Gly Asn Gly Tyr Phe Asp Thr Ile Thr Pro Ala Val
85 90 95

Ile Arg Arg Asn Val Val Glu Asn Pro Gly Trp Tyr Thr Ala Tyr Thr
100 105 110

Pro Tyr Gln Pro Glu Ile Ser Gln Gly Arg Leu Glu Ala Leu Leu Asn
115 120 125

Phe Gln Thr Met Val Gln Asp Leu Thr Gly Leu Pro Val Ala Gly Ala
130 135 140

Ser Leu Leu Asp Glu Ala Thr Ala Val Ala Glu Ala Val Gln Leu Met
145 150 155 160

Ala Arg Gly Asn Ala Lys Ala Ala Lys Lys Gly Gly Val Val Leu Leu
165 170 175

Asp Ser Ser Leu His Gln Gln Ser Ile Thr Val Thr Leu Ala Arg Ala
180 185 190

Glu Ala Ala Gly Ile Pro Val Glu Val Val Asp Leu Asp Gly Glu Asp
195 200 205

Ala Thr Ala Ala Phe Glu Gly Arg Glu Asn Leu Val Gly Val Val Leu
210 215 220

Ser Asn Pro Gly Ser Thr Gly Arg Val Arg Asp Leu Ser Gly Leu Ile
225 230 235 240

Ser Ala Ala Lys Glu Thr Gly Ala Leu Val Thr Val Ala Cys Asp Leu
245 250 255

Leu Ala Gln Val Leu Val Thr Ser Pro Gly Ser Gln Gly Ala Asp Ile
260 265 270

Ala Val Gly Ser Ala Gln Arg Phe Gly Val Pro Leu Phe Phe Gly Gly
275 280 285

Pro His Ala Gly Phe Ile Ser Cys Thr Glu Ala Leu Gln Arg Lys Leu
290 295 300

Pro Gly Arg Ile Val Gly Val Ser Val Asp Ala Glu Gly Thr Pro Ala
305 310 315 320

Sequence.txt

Tyr Arg Leu Ala Leu Gln Thr Arg Glu Gln His Ile Arg Arg Asp Lys
 325 330 335
 Ala Thr Ser Asn Ile Cys Thr Ala Gln Ala Leu Leu Ala Val Val Ala
 340 345 350
 Gly Phe Tyr Ala Val Trp His Gly Pro Ala Gly Leu Arg Ala Ile Ala
 355 360 365
 Glu Gly Val His Ala Arg Ala Thr Ala Leu Ala Val Ala Leu Ser Glu
 370 375 380
 Ala Gly Leu Thr Leu Ala His Asp Thr Phe Phe Asp Thr Val Thr Val
 385 390 395 400
 Asp Val Ser Gly Ser Ser Leu Gly Asp Ala Pro Thr Ala Leu Arg Ala
 405 410 415
 Ala Ala Glu Ala Gly Tyr Asn Leu Arg Gln Val Asn Asp Ser Phe Val
 420 425 430
 Gly Ile Ser Val Gly Glu Ser Thr Thr Asp Glu Asp Ile Ala Lys Leu
 435 440 445
 Ile Glu Val Leu Gly Ser Arg Thr Gly Glu Val Asn Ser Ala Ser Phe
 450 455 460
 Asp Val Thr Ala Gly Pro Leu Gly Glu Ala Gly Val Leu Arg Ala Glu
 465 470 475 480
 Asp Glu Glu Ile Leu Thr His Pro Ile Phe Thr Ala Ile Thr Ser Glu
 485 490 495
 Thr Gln Met Met Arg Tyr Met Arg Lys Leu Ala Asp Arg Asp Leu Ala
 500 505 510
 Leu Asp Arg Thr Met Ile Pro Leu Gly Ser Cys Thr Met Lys Leu Asn
 515 520 525
 Ala Ala Val Ser Met Glu Pro Ile Thr Trp Pro Gly Phe Ala Gly Ile
 530 535 540
 His Pro His Val Pro Ala Glu Gln Ala Gln Gly Trp Leu Glu Leu Ile
 545 550 555 560
 Glu Asp Leu Glu Glu Arg Leu Ala Lys Ile Thr Gly Tyr Ala Lys Val
 565 570 575
 Ser Val Gln Pro Asn Ala Gly Ser Gln Gly Glu Phe Ala Gly Leu Leu
 580 585 590

Sequence.txt

Ala Ile His Arg Tyr His Gln Ser Arg Gly Asp Asp Gln Arg Asp Ile
595 600 605

Val Leu Ile Pro Ala Ser Ala His Gly Thr Asn Ala Ala Ser Ala Ala
610 615 620

Leu Ala Gly Leu Lys Val Val Ala Val Lys Asn Ala Glu Asp Gly Ser
625 630 635 640

Ile Asp Val Pro Asp Leu Glu Ala Lys Leu Glu Lys Tyr Gly Glu Gln
645 650 655

Thr Ala Ala Ile Met Leu Thr Tyr Pro Ser Thr His Gly Val Phe Glu
660 665 670

Glu Gln Val Arg Asp Val Cys Gln Lys Val His Asp Ala Gly Gly Gln
675 680 685

Val Tyr Val Asp Gly Ala Asn Leu Asn Ala Leu Val Gly Leu Ala Gln
690 695 700

Pro Gly Glu Phe Gly Gly Asp Val Ser His Leu Asn Leu His Lys Thr
705 710 715 720

Phe Thr Ile Pro His Gly Gly Gly Gly Pro Gly Val Gly Pro Val Cys
725 730 735

Val Ala Glu His Leu Ile Pro Phe Leu Pro Thr Asp Pro Asn Ala Asp
740 745 750

Val Ile Glu Gly Asp Ala Ala Leu Gln Ser Gly Gln Pro Val Ser Gly
755 760 765

Ala Gln Tyr Gly Ser Ala Gly Val Leu Pro Ile Thr Trp Ser Tyr Ile
770 775 780

Ala Gln Met Gly Asp Glu Gly Leu Thr Glu Ala Ser Arg Met Ala Leu
785 790 795 800

Val Asn Ala Asn Tyr Val Ser Arg Lys Leu Glu Asp Tyr Tyr Pro Thr
805 810 815

Leu Tyr Lys Gly Asp Thr Gly Leu Val Ala His Glu Cys Ile Leu Asp
820 825 830

Leu Arg Glu Leu Thr Lys Ala Ser Gly Ile Thr Ala Glu Asp Val Ser
835 840 845

Lys Arg Leu Met Asp Phe Gly Phe His Ala Pro Thr Leu Ala Phe Pro
850 855 860

Sequence.txt

Val Ala Gly Thr Leu Met Met Glu Pro Thr Glu Ser Glu Asp Lys Glu
865 870 875 880

Glu Leu Asp Arg Phe Ile Glu Ala Met Ile Thr Ile His Gly Glu Ile
885 890 895

Gln Glu Val Ile Asp Gly Lys Val Thr Ala Glu Gln Ser Val Leu Arg
900 905 910

His Ala Pro Phe Thr Ala Tyr Ser Val Val Arg Asp Asp Phe Glu Glu
915 920 925

Ala Val Ser Gly Gly His Phe Ser Arg Ala Lys Ala Ala Tyr Pro Val
930 935 940

Ala Ser Leu Arg His Thr Lys Tyr Phe Thr Pro Val Arg Arg Ile Asp
945 950 955 960

Asn Ala Tyr Gly Asp Arg Asn Leu Val Cys Thr Cys Pro Pro Leu Glu
965 970 975

Asp Phe Ala Ile Asn Glu Asp
980

<210> 11
<211> 384
<212> DNA
<213> Corynebacterium jeikeium

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ggtgacatcg tgttcgtcga gctgccggag gttggctccg aggttgaggc cggcgaggct 180
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gcttaccagg cggttaacga gtaa 384

<210> 12
<211> 127
<212> PRT
<213> Corynebacterium jeikeium

<400> 12
Met Thr Ala Leu Pro Thr Asp Phe Leu Tyr Ser Glu Glu His Glu Trp
1 5 10 15

Val Asn Thr Ser Ala Val Val Glu Gly Glu Thr Val Arg Val Gly Ile
20 25 30

Sequence.txt

Thr His Ile Ala Ala Glu Ala Leu Gly Asp Ile Val Phe Val Glu Leu
35 40 45

Pro Glu Val Gly Ser Glu Val Glu Ala Gly Glu Ala Phe Gly Glu Val
50 55 60

Glu Ser Thr Lys Ser Val Ser Asp Ile Tyr Ala Pro Val Ser Gly Glu
65 70 75 80

Val Val Ala Val Asn Glu Ala Leu Glu Asp Asn Ala Gly Leu Ile Asn
85 90 95

Glu Asp Pro Tyr Gly Glu Gly Trp Leu Tyr Glu Val Lys Val Thr Glu
100 105 110

Ala Gly Glu Leu Met Glu Ala Glu Ala Tyr Gln Ala Ala Asn Glu
115 120 125

<210> 13
<211> 1170
<212> DNA
<213> Corynebacterium jeikeium

<400> 13
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accgacttcg gcggctggga catgcctctg aagtacagca gtgagctgga cgagcaccac 120
gctgtacgca atgccgtggg cgtattcgac ctctcccaca tgggtgaggt tcgctgacc 180
ggcccgagg cagcggagtt cctggaccac gcgctgattt cgaagctgtc ggcagtgaag 240
gtcggcaagg cgaagtactc gatgatctgc accgaatccg gtggcatcat cgacgacctg 300
atcacctacc gcctgggcga caacgagttc ctgatcgtgc cgaacgcggg caacgtggac 360
aacgtggtct ccgactgca gggccgacc gagggctttg acgtggaggt taacaacgag 420
tccgatgcga cctccatgat cgccgtacag gggcccaagg ccgcgaggc gatgctggag 480
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gctatcgagg ggctgggtta ctacgcggca ttcagcggtg ttgccgcagg tcagcccgtg 600
ctggtggccc gcacaggcta taccggcgag gacggtttcg agctgatcgt ggctaacgat 660
ggtgcggaga ccgtgtggac caaggctatg gaccaggctg cgcagctggg tggcctgccg 720
tgtggcctgg cctgccgca caccctgcgc ctggaggctg gcatgccgct gtacggcaac 780
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caggtaacta tcgggctggc gggcgagggt cgccgcgctg cccgtggggg atacgaggtg 960
tttgccggtg acggcgagaa ggccatcggg gccgtgacct ccggtgcact gtcgccgacg 1020
ctgggccacc cggtggcatt ggcatacgtc gcgaagtccg cagtgtcctc cggcgcggcc 1080

Sequence.txt

gctgaggggtg cgaccgtgga ggtagacatc cgcggaagc gctttgaata caaggttggtg 1140
gcgctgccgt tctactcccg cgagaagtaa 1170

<210> 14
<211> 389
<212> PRT
<213> Corynebacterium jeikeium
<400> 14

Met Thr Glu Leu Lys Lys Thr Ala Leu His Leu Val His Glu Lys Leu
1 5 10 15

Gly Ala Arg Phe Thr Asp Phe Gly Gly Trp Asp Met Pro Leu Lys Tyr
20 25 30

Ser Ser Glu Leu Asp Glu His His Ala Val Arg Asn Ala Val Gly Val
35 40 45

Phe Asp Leu Ser His Met Gly Glu Val Arg Val Thr Gly Pro Gln Ala
50 55 60

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

Val Gly Lys Ala Lys Tyr Ser Met Ile Cys Thr Glu Ser Gly Gly Ile
85 90 95

Ile Asp Asp Leu Ile Thr Tyr Arg Leu Gly Asp Asn Glu Phe Leu Ile
100 105 110

Val Pro Asn Ala Gly Asn Val Asp Asn Val Val Ser Ala Leu Gln Gly
115 120 125

Arg Thr Glu Gly Phe Asp Val Glu Val Asn Asn Glu Ser Asp Ala Thr
130 135 140

Ser Met Ile Ala Val Gln Gly Pro Lys Ala Ala Gln Ala Met Leu Glu
145 150 155 160

Ile Val Glu Asn Val Val Asp Ala Pro Glu Ala Ser Gly Ala Gly Glu
165 170 175

Thr Val Ala Glu Ala Ile Glu Gly Leu Gly Tyr Tyr Ala Ala Phe Ser
180 185 190

Gly Val Ala Ala Gly Gln Pro Val Leu Val Ala Arg Thr Gly Tyr Thr
195 200 205

Gly Glu Asp Gly Phe Glu Leu Ile Val Ala Asn Asp Gly Ala Glu Thr
210 215 220

Sequence.txt

Val Trp Thr Lys Ala Met Asp Gln Ala Ala Gln Leu Gly Gly Leu Pro
225 230 235 240

Cys Gly Leu Ala Cys Arg Asp Thr Leu Arg Leu Glu Ala Gly Met Pro
245 250 255

Leu Tyr Gly Asn Glu Leu Ser Leu Lys Leu Thr Pro Val Asp Ala Gly
260 265 270

Leu Gly Ile Leu Ala Ala Thr Lys Ser Lys Asp Ser Phe Val Gly Arg
275 280 285

Asp Ala Ile Val Ser Ala Lys Glu Lys Gly Thr Gln Gln Val Leu Ile
290 295 300

Gly Leu Ala Gly Glu Gly Arg Arg Ala Ala Arg Gly Gly Tyr Glu Val
305 310 315 320

Phe Ala Gly Asp Gly Glu Lys Ala Ile Gly Ala Val Thr Ser Gly Ala
325 330 335

Leu Ser Pro Thr Leu Gly His Pro Val Ala Leu Ala Tyr Val Ala Lys
340 345 350

Ser Ala Val Ser Ser Gly Ala Ala Ala Glu Gly Ala Thr Val Glu Val
355 360 365

Asp Ile Arg Gly Lys Arg Phe Glu Tyr Lys Val Val Ala Leu Pro Phe
370 375 380

Tyr Ser Arg Glu Lys
385

<210> 15
<211> 1017
<212> DNA
<213> Escherichia coli

<400> 15
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gaagagtgtg tttttcgcca aatgcccgcc acgcagcgcg ttctgtttct ctggcgcaat 120
gccgacacgg tagtaattgg tcgcgcgcag aaccctgga aagagtgtaa taccgcgcgg 180
atggaagaag ataacgtccg cctggcgcgg cgcagtagcg gtggcggcgc ggtgttccac 240
gatctcggca atacctgctt tacctttatg gctggcaagc cggagtacga taaaactatc 300
tccacgtcga ttgtgctcaa tgcgctgaac gcgctcggcg tcagcgccga agcgtccgga 360
cgtaacgatc tgggtggtgaa aaccgtcgaa ggcgaccgca aagtctcagg ctgcgcctat 420
cgcgaaacca aagatcgcgg cttccaccac ggcaccttgc tactcaatgc cgacctcagc 480
cgcctggcaa actatctcaa tccggataaa aagaaactgg cggcgaaagg cattacgtcg 540

Sequence.txt

```

gtacgttccc gcgtgaccaa cctcaccgag ctgttgccgg ggatcaccca tgagcaggtt 600
tgcgaggcca taaccgaggc ctttttcgcc cattatggcg agcgcgtgga agcggaatc 660
atctccccga acaaaacgcc agacttgcca aacttcgccg aaacctttgc ccgccagagt 720
agctgggaat ggaacttcgg tcaggctccg gcattctcgc atctgctgga tgaacgcttt 780
acctggggcg gcgtggaact gcatttcgac gttgaaaaag gccatatcac ccgcgccag 840
gtgtttaccg acagcctcaa ccccgcgccg ctggaagccc tcgccggacg actgcaaggc 900
tgcctgtacc gcgcagatat gctgcaacag gagtgcaag cgctgttggt tgacttcccg 960
gaacaggaaa aagagctacg ggagttatcg gcatggatgg cgggggctgt aaggtag 1017

```

```

<210> 16
<211> 338
<212> PRT
<213> Escherichia coli

```

```
<400> 16
```

```

Met Ser Thr Leu Arg Leu Leu Ile Ser Asp Ser Tyr Asp Pro Trp Phe
1           5           10           15

```

```

Asn Leu Ala Val Glu Glu Cys Ile Phe Arg Gln Met Pro Ala Thr Gln
          20           25           30

```

```

Arg Val Leu Phe Leu Trp Arg Asn Ala Asp Thr Val Val Ile Gly Arg
        35           40           45

```

```

Ala Gln Asn Pro Trp Lys Glu Cys Asn Thr Arg Arg Met Glu Glu Asp
        50           55           60

```

```

Asn Val Arg Leu Ala Arg Arg Ser Ser Gly Gly Gly Ala Val Phe His
65           70           75           80

```

```

Asp Leu Gly Asn Thr Cys Phe Thr Phe Met Ala Gly Lys Pro Glu Tyr
          85           90           95

```

```

Asp Lys Thr Ile Ser Thr Ser Ile Val Leu Asn Ala Leu Asn Ala Leu
        100           105           110

```

```

Gly Val Ser Ala Glu Ala Ser Gly Arg Asn Asp Leu Val Val Lys Thr
        115           120           125

```

```

Val Glu Gly Asp Arg Lys Val Ser Gly Ser Ala Tyr Arg Glu Thr Lys
        130           135           140

```

```

Asp Arg Gly Phe His His Gly Thr Leu Leu Leu Asn Ala Asp Leu Ser
145           150           155           160

```

```

Arg Leu Ala Asn Tyr Leu Asn Pro Asp Lys Lys Lys Leu Ala Ala Lys
        165           170           175

```


Sequence.txt

Gly Ile Thr Ser Val Arg Ser Arg Val Thr Asn Leu Thr Glu Leu Leu
180 185 190

Pro Gly Ile Thr His Glu Gln Val Cys Glu Ala Ile Thr Glu Ala Phe
195 200 205

Phe Ala His Tyr Gly Glu Arg Val Glu Ala Glu Ile Ile Ser Pro Asn
210 215 220

Lys Thr Pro Asp Leu Pro Asn Phe Ala Glu Thr Phe Ala Arg Gln Ser
225 230 235 240

Ser Trp Glu Trp Asn Phe Gly Gln Ala Pro Ala Phe Ser His Leu Leu
245 250 255

Asp Glu Arg Phe Thr Trp Gly Gly Val Glu Leu His Phe Asp Val Glu
260 265 270

Lys Gly His Ile Thr Arg Ala Gln Val Phe Thr Asp Ser Leu Asn Pro
275 280 285

Ala Pro Leu Glu Ala Leu Ala Gly Arg Leu Gln Gly Cys Leu Tyr Arg
290 295 300

Ala Asp Met Leu Gln Gln Glu Cys Glu Ala Leu Leu Val Asp Phe Pro
305 310 315 320

Glu Gln Glu Lys Glu Leu Arg Glu Leu Ser Ala Trp Met Ala Gly Ala
325 330 335

Val Arg

<210> 17
<211> 1050
<212> DNA
<213> Corynebacterium jeikeium

<400> 17
atgagtgtga ccgcagatgg acgccgatg ctacgcatcg aggcgaagaa tgccgaaacc 60
cccatcgagt cgaagcctcg gtggatccgc acgaccgca aggtcggccc ggagtatcgg 120
gatattaaga atcgcgtgaa gggcgctggc ctgcacaccg tgtgccaaga ggctggctgc 180
ccgaatatca acgagtgctg ggaggaccgc gaggcgacgt tcctcatcgg cggtgatacg 240
tgttccccgc gttgcgactt ctgccagatt aagtccggcc gcccgtcccc gctggatatg 300
gacgagccac gccgcgtggc ggagaatgtc cgcgagatgg gtctgcgcta cgccaccatc 360
accggcgtga cgcgcatga cctggatgat gagggcgcgt ggctgtatgc cgaggttgtg 420
aagaagattc acgagctgaa cccgaacacg ggtgtggaga atctgacgcc agatttttcc 480
aaccgcccgg agctgctgaa ggtcgtcttc gattcccagc cggaggtggt tgcccacaac 540

Sequence.txt

```

ctggagacag ttccgcgcat ctttaagcgc atccgcccgg cctttaagta cgaccgttcc 600
ctggagggtca ttcaggcagc tcacgattac ggcctggtga cgaagtccaa cctgatcctg 660
ggcatgggtg agaagaagga agagggtccgc gcggttatca aggacctggc agacgccggc 720
accgacattc tgacgattac ccagtacctg cgcccgtctt ccatgcacca cccgattgag 780
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aaggctgtta tgtccggccc gttggtgctg tcctcttacc gcgccggccg cctgtacgcg 900
caggccaagc aggcgcgcgg cgaggctatt ccggagaacc tgaagcactt ggaggagact 960
ctcgattcca ccacgtcgca ggaggcctct acactgctgg agcgctacgg cgcttcggag 1020
gacacgccgg tcactgcgtc gcgccgctag 1050

```

```

<210> 18
<211> 349
<212> PRT
<213> Corynebacterium jeikeium
<400> 18

```

```

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

```

```

Asn Ala Glu Thr Pro Ile Glu Ser Lys Pro Arg Trp Ile Arg Thr Thr
          20          25          30

```

```

Ala Lys Val Gly Pro Glu Tyr Arg Asp Ile Lys Asn Arg Val Lys Gly
          35          40          45

```

```

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

```

```

Glu Cys Trp Glu Asp Arg Glu Ala Thr Phe Leu Ile Gly Gly Asp Thr
65          70          75          80

```

```

Cys Ser Arg Arg Cys Asp Phe Cys Gln Ile Lys Ser Gly Arg Pro Ser
          85          90          95

```

```

Pro Leu Asp Met Asp Glu Pro Arg Arg Val Ala Glu Asn Val Arg Glu
          100          105          110

```

```

Met Gly Leu Arg Tyr Ala Thr Ile Thr Gly Val Thr Arg Asp Asp Leu
          115          120          125

```

```

Asp Asp Glu Gly Ala Trp Leu Tyr Ala Glu Val Val Lys Lys Ile His
          130          135          140

```

```

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

```

```

Asn Arg Pro Glu Leu Leu Lys Val Val Phe Asp Ser Gln Pro Glu Val
          165          170          175

```

Sequence.txt

Phe Ala His Asn Leu Glu Thr Val Pro Arg Ile Phe Lys Arg Ile Arg
 180 185 190
 Pro Ala Phe Lys Tyr Asp Arg Ser Leu Glu Val Ile Gln Ala Ala His
 195 200 205
 Asp Tyr Gly Leu Val Thr Lys Ser Asn Leu Ile Leu Gly Met Gly Glu
 210 215 220
 Lys Lys Glu Glu Val Arg Ala Ala Ile Lys Asp Leu Ala Asp Ala Gly
 225 230 235 240
 Thr Asp Ile Leu Thr Ile Thr Gln Tyr Leu Arg Pro Ser Ser Met His
 245 250 255
 His Pro Ile Glu Arg Trp Val Lys Pro Glu Glu Phe Met Glu His Ser
 260 265 270
 Asp Ala Ala Tyr Glu Leu Gly Ile Lys Ala Val Met Ser Gly Pro Leu
 275 280 285
 Val Arg Ser Ser Tyr Arg Ala Gly Arg Leu Tyr Ala Gln Ala Lys Gln
 290 295 300
 Ala Arg Gly Glu Ala Ile Pro Glu Asn Leu Lys His Leu Glu Glu Thr
 305 310 315 320
 Leu Asp Ser Thr Thr Ser Gln Glu Ala Ser Thr Leu Leu Glu Arg Tyr
 325 330 335
 Gly Ala Ser Glu Asp Thr Pro Val Thr Ala Ser Arg Arg
 340 345

<210> 19
 <211> 759
 <212> DNA
 <213> Corynebacterium jeikeium

<400> 19
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 ggggcaacca cccaccagc caacaccagc accccagccg tagacatcga cgtccgcgac 120
 ctgggcaccg tggactacga ggacacttgg cacctccagg caaatctcgc cgcccagcgc 180
 gccgaagaaa aaatcccaga caccatcctc ctactccagc atccgcccgc gtacaccgcc 240
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 cgcgagggcc gcatcacctg gcatggaccc ggccagttgg tcgcatatcc catcatcaag 360
 ctggccgacc cgggtggacgt ggtcgattat gtccgcccgc tggagcaggc gctaattccag 420
 acttgtgaag atcttggcct gcacggcacc ggccgcgtag aggggcgttc gggcgtgtgg 480

Sequence.txt

```

ctgcctgcgg gcgtcattaa tggcgagctc aagcccgcac gtaagatagc cgcgatcggc 540
atccgcgtga cgcgcggcgt gaccatgcac ggagtggccc tcaactgcga taacaccatg 600
gagtattacg accacattgt gccttgtggg ctggcggatg cgggtgtcac gacgctcacc 660
gaggagctgg ggcgcgatgt tagtgtttct gacgcctact catccctcgc ccacaacctc 720
gttgatgctt tgaacggcga cttgccggtg cattcctag 759

```

```

<210> 20
<211> 252
<212> PRT
<213> Corynebacterium jeikeium

```

```

<400> 20

```

```

Met Gly Phe Gln Gln Gly Ser Ile Arg Lys Ala Asn Met Gly Thr Thr
1           5           10          15

```

```

Gly Thr Asn Asp Gly Ala Thr Thr Pro Pro Ala Asn Thr Ser Thr Pro
          20          25          30

```

```

Ala Val Asp Ile Asp Val Arg Asp Leu Gly Thr Val Asp Tyr Glu Asp
          35          40          45

```

```

Thr Trp His Leu Gln Ala Asn Leu Ala Ala Gln Arg Ala Glu Glu Lys
          50          55          60

```

```

Ile Pro Asp Thr Ile Leu Leu Leu Gln His Pro Pro Thr Tyr Thr Ala
65          70          75          80

```

```

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

```

```

Val Asp Val Asp Arg Gly Gly Arg Ile Thr Trp His Gly Pro Gly Gln
          100          105          110

```

```

Leu Val Ala Tyr Pro Ile Ile Lys Leu Ala Asp Pro Val Asp Val Val
          115          120          125

```

```

Asp Tyr Val Arg Arg Leu Glu Gln Ala Leu Ile Gln Thr Cys Glu Asp
          130          135          140

```

```

Leu Gly Leu His Gly Thr Gly Arg Val Glu Gly Arg Ser Gly Val Trp
145          150          155          160

```

```

Leu Pro Ala Gly Val Ile Asn Gly Glu Leu Lys Pro Ala Arg Lys Ile
          165          170          175

```

```

Ala Ala Ile Gly Ile Arg Val Thr Arg Gly Val Thr Met His Gly Val
          180          185          190

```

```

Ala Leu Asn Cys Asp Asn Thr Met Glu Tyr Tyr Asp His Ile Val Pro
          195          200          205

```

Sequence.txt

Cys Gly Leu Ala Asp Ala Gly Val Thr Thr Leu Thr Glu Glu Leu Gly
210 215 220

Arg Asp Val Ser Val Ser Asp Ala Tyr Ser Ser Leu Ala His Asn Leu
225 230 235 240

Val Asp Ala Leu Asn Gly Asp Leu Pro Val His Ser
245 250

<210> 21
<211> 7070
<212> DNA
<213> artificial

<220>
<223> Plasmid pH273

<400> 21
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cccttttagg attcggaaca gtcggcactg aggtgatgcg tctgatgacc gagtacggtg 180
atgaacttgc gcaccgcatt ggtggccac tggaggttcg tggcattgct gtttctgata 240
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ttgcagctca ctctgctgag cttgctgatg cagcggaaag cgcaaacgtt gacctgtact 480
tcgagggtgc tggtgcaggc gcaattccag tgggtggccc actgcgtcgc tccctggctg 540
gcgatcagat ccagtctgtg atgggcatcg ttaacggcac caccaacttc atcttgacg 600
ccatggattc caccggcgct gactatgcag attctttggc tgaggcaact cgtttgggtt 660
acgccgaagc tgatccaact gcagacgtcg aaggccatga cgccgcatcc aaggctgcaa 720
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tcagcaacat cagcgtcgcc gacattgagg cagcacagca ggcaggccac accatcaagt 840
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acggtggccg tgctccaggt gattccacct acgctaacct gccgatcgct gatttcggtg 1140
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gcatgatga tgcacgtctg atcggtgtca ccactctgc gctggaatct gatctttccc 1320
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Sequence.txt

| | |
|--|------|
| tcgaaagggga ctaatthttac tgacatggca attgaactga acgtcgggtcg taaggttacc | 1440 |
| gtcacggtac ctggatcttc tgcaaacctc ggacctggct ttgacacttt aggtttggca | 1500 |
| ctgtcggtat acgacactgt cgaagtggaa attattccat ctggcttga agtggaagtt | 1560 |
| tttggcgaag gccaaaggcga agtccctctt gatggctccc acctggtggt taaagctatt | 1620 |
| cgtgctggcc tgaaggcagc tgacgctgaa gttcctggat tgcgagtgggt gtgccacaac | 1680 |
| aacattccgc agtctcgtgg tcttggctcc tctgctgcag cggcggttgc tgggtgttgc | 1740 |
| gcagctaata gtttggcgga tttcccgtg actcaagagc agattgttca gttgtcctct | 1800 |
| gcctttgaag gccacccaga taatgctgcg gcttctgtgc tgggtggagc agtggtgtcg | 1860 |
| tggacaaatc tgtctatcga cggcaagagc cagccacagt atgctgctgt accacttgag | 1920 |
| gtgcaggaca atattcgtgc gactgcgctg gttcctaatt tccacgcata caccgaagct | 1980 |
| gtgcgccgag tccttccac tgaagtcact cacatcgatg cgcgatttaa cgtgtccgc | 2040 |
| gttgacgtga tgatcgttgc gttgcagcag cgtcctgatt tgctgtggga gggactcgt | 2100 |
| gaccgtctgc accagcctta tcgtgcagaa gtgttgcccta ttacctctga gtgggtaaac | 2160 |
| cgcctgcgca accgtggcta cgcggcatac ctttccggtg ccggcccaac cgccatggtg | 2220 |
| ctgtccactg agccaattcc agacaagggt ttggaagatg ctcgtgagtc tggcattaag | 2280 |
| gtgcttgagc ttgaggttgc gggaccagtc aagggtgaag ttaaccaacc ttaggccaa | 2340 |
| caaggaaggc ccccttcgaa tcaagaagg ggccttatta gtgcagcaat tattcgctga | 2400 |
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| ggcgthttgc gttgaccaca aatgggcagc tgtgtagagc gagggagttt gcttcttcgg | 2580 |
| tttcggtggg gtcaaagccc atttcgcgga ggcggttaat gagcggggag agggcttcgt | 2640 |
| cgagthttc ggcttcggcg tggtaaatgc catgacgtg tgccactgg gttccgatgg | 2700 |
| aaagtgctt ggcgcgagg tgggggttgc gatttgcgtc atcgctgaca tcgccgagca | 2760 |
| tgthggccat gagttcgatc aggttgatgt attctttggc gacagcgcg ttgtcgggga | 2820 |
| cgcgtgtttg gaagatgagg gagggcggg atcctctaga cccgggattt aaatcgctag | 2880 |
| cggtgtgcta aaggaagcgg aacacgtaga aagccagtcc gcagaaacgg tgctgacccc | 2940 |
| ggatgaatgt cagctactgg gctatctgga caagggaaaa cgcaagcgca aagagaaagc | 3000 |
| aggtagcttg cagtgggctt acatggcgat agctagactg ggcggtthta tggacagcaa | 3060 |
| gcgaaccgga attgccagct ggggcgccct ctggttaagg tgggaagccc tgcaaagtaa | 3120 |
| actgatggc tttcttgccg ccaaggatct gatggcgagc gggatcaaga tctgatcaag | 3180 |
| agacaggatg aggatcgttt cgcattgatt aacaagatg attgcacgca ggttctccgg | 3240 |
| ccgcttgggt ggagaggcta ttcggctatg actgggcaca acagacaatc ggctgctctg | 3300 |
| atgccgccgt gttccggctg tcagcgagc ggcgcccgg tctthttgtc aagaccgacc | 3360 |
| tgtccggtgc cctgaatgaa ctgcaggacg aggcagcgcg gctatcgtgg ctggccacga | 3420 |

Sequence.txt

| | | | | | | |
|-------------|-------------|------------|-------------|------------|-------------|------|
| cgggcggttcc | ttgcgcagct | gtgctcgacg | ttgtcactga | agcgggaagg | gactggctgc | 3480 |
| tattgggcga | agtgccgggg | caggatctcc | tgtcatctca | ccttgctcct | gccgagaaag | 3540 |
| tatccatcat | ggctgatgca | atgcggcggc | tgcatacgct | tgatccggct | acctgcccac | 3600 |
| tcgaccacca | agcgaaacat | cgcatcgagc | gagcacgtac | tcggatggaa | gccggctctg | 3660 |
| tcgatcagga | tgatctggac | gaagagcatc | aggggctcgc | gccagccgaa | ctgttcgcca | 3720 |
| ggctcaaggc | gcgcatgccc | gacggcgagg | atctcgtcgt | gacctatggc | gatgcctgct | 3780 |
| tgccgaatat | catggtggaa | aatggccgct | tttctggatt | catcgactgt | ggccggctgg | 3840 |
| gtgtggcgga | ccgctatcag | gacatagcgt | tggctacccg | tgatattgct | gaagagcttg | 3900 |
| gcggcgaaatg | ggctgaccgc | ttcctcgtgc | tttacgggat | cgccgctccc | gattcgcagc | 3960 |
| gcatcgcctt | ctatcgcctt | cttgacgagt | tcttctgagc | gggactctgg | ggttcgaaat | 4020 |
| gaccgaccaa | gcgacgccc | acctgccatc | acgagatttc | gattccaccg | ccgccttcta | 4080 |
| tgaaagggtg | ggcttcggaa | tcgttttccg | ggacgccggc | tggatgatcc | tccagcgcg | 4140 |
| ggatctcatg | ctggagttct | tcgcccacgc | tagcggcgcg | ccggccggcc | cgggtgtgaaa | 4200 |
| taccgcacag | atgcgtaagg | agaaaatacc | gcatcaggcg | ctcttccgct | tcctcgctca | 4260 |
| ctgactcgct | gcgctcggtc | gttcggctgc | ggcgagcggg | atcagctcac | tcaaaggcgg | 4320 |
| taatacgggt | atccacagaa | tcaggggata | acgcaggaaa | gaacatgtga | gcaaaaggcc | 4380 |
| agcaaaaggc | caggaaaccgt | aaaaaggccg | cgttgctggc | gtttttccat | aggctccgcc | 4440 |
| cccctgacga | gcatcacaaa | aatcgacgct | caagtcagag | gtggcgaaac | ccgacaggac | 4500 |
| tataaagata | ccaggcgttt | ccccctggaa | gctccctcgt | gcgctctcct | gttccgaccc | 4560 |
| tgccgcttac | cggatacctg | tccgcctttc | tcccttcggg | aagcgtggcg | ctttctcata | 4620 |
| gctcacgctg | taggtatctc | agttcgggtg | aggctcgttcg | ctccaagctg | ggctgtgtgc | 4680 |
| acgaaccccc | cgttcagccc | gaccgctgcg | ccttatccgg | taactatcgt | cttgagtcca | 4740 |
| acccggtaag | acacgactta | tcgccactgg | cagcagccac | tggtaacagg | attagcagag | 4800 |
| cgaggatatgt | aggcgggtgct | acagagttct | tgaagtgggtg | gcctaactac | ggctacacta | 4860 |
| gaaggacagt | atttggtatc | tgcgctctgc | tgaagccagt | taccttcgga | aaaagagttg | 4920 |
| gtagctcttg | atccggcaaa | caaaccaccg | ctggtagcgg | tggttttttt | gtttgcaagc | 4980 |
| agcagattac | gcgcagaaaa | aaaggatctc | aagaagatcc | tttgatcttt | tctacgggggt | 5040 |
| ctgacgctca | gtggaacgaa | aactcacggt | aagggatttt | ggtcatgaga | ttatcaaaaa | 5100 |
| ggatcttcac | ctagatcctt | ttaaaggccg | gccgcggccg | ccatcggcat | tttcttttgc | 5160 |
| gtttttat | gttaactggt | aattgtcctt | gttcaaggat | gctgtctttg | acaacagatg | 5220 |
| ttttcttgcc | tttgatgttc | agcaggaagc | tcggcgcaaa | cgttgattgt | ttgtctgcgt | 5280 |
| agaatcctct | gtttgtcata | tagcttgtaa | tcacgacatt | gtttcctttc | gcttgaggta | 5340 |
| cagcgaagtg | tgagtaagta | aaggttacat | cgttaggatc | aagatccatt | tttaacacaa | 5400 |
| ggccagtttt | gttcagcggc | ttgtatgggc | cagttaaaga | attagaaaca | taaccaagca | 5460 |

Sequence.txt

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| tgtaaataatc gttagacgta atgccgtcaa tcgtcatttt tgatccgcgg gagtcagtga | 5520 |
| acaggtacca tttgccgttc attttaaaga cgttcgcgcg ttcaatttca tctgttactg | 5580 |
| tgttagatgc aatcagcggg ttcatacactt ttttcagtgt gtaatcatcg tttagctcaa | 5640 |
| tcataccgag agcgccgttt gctaactcag ccgtgcgttt tttatcgctt tgcagaagtt | 5700 |
| tttgactttc ttgacggaag aatgatgtgc ttttgccata gtatgctttg ttaaataaag | 5760 |
| attcttcgcc ttggtagcca tcttcagttc cagtgtttgc ttcaaatact aagtatttgt | 5820 |
| ggcctttatc ttctacgtag tgaggatctc tcagcgtatg gttgtcgcct gagctgtagt | 5880 |
| tgccctcatc gatgaactgc tgtacatttt gatacgtttt tccgtcaccg tcaaagattg | 5940 |
| atttataatc ctctacaccg ttgatgttca aagagctgtc tgatgctgat acgttaactt | 6000 |
| gtgcagttgt cagtgtttgt ttgccgtaat gtttaccgga gaaatcagtg tagaataaac | 6060 |
| ggatttttcc gtcagatgta aatgtggctg aacctgacca ttcttggtt ttggtctttta | 6120 |
| ggatagaatc atttgcacg aatttgcgc tgtcttttaa gacgcggcca gcgtttttcc | 6180 |
| agctgtcaat agaagtttcg ccgacttttt gatagaacat gtaaatcgat gtgtcatccg | 6240 |
| catttttagg atctccggct aatgcaaaga cgatgtggta gccgtgatag tttgcgacag | 6300 |
| tgccgtcagc gttttgtaat ggccagctgt cccaaacgtc caggcctttt gcagaagaga | 6360 |
| tatttttaat tgtggacgaa tcaaattcag aaacttgata tttttcattt ttttgctgtt | 6420 |
| cagggatttg cagcatatca tggcgtgtaa tatgggaaat gccgtatgtt tccttatatg | 6480 |
| gcttttggtt cgtttctttc gcaaacgctt gagttgcgcc tcctgccagc agtgcggtag | 6540 |
| taaagggtta tactgttgct tgttttgcaa actttttgat gttcatcgct catgtctcct | 6600 |
| tttttatgta ctgtgttagc ggtctgcttc ttccagccct cctgtttgaa gatggcaagt | 6660 |
| tagttacgca caataaaaaa agacctaaaa tatgtaaggg gtgacgcaa agtatacact | 6720 |
| ttgcccttta cacattttag gtcttgccct ctttatcagt aacaaacccg cgcgatttac | 6780 |
| ttttcgacct cattctatta gactctcgct tggattgcaa ctggtctatt ttctctttt | 6840 |
| gtttgataga aaatcataaa aggatttgca gactacgggc cttaaagaact aaaaaatcta | 6900 |
| tctgtttctt ttcatctctt gtatttttta tagtttctgt tgcattgggca taaagttgcc | 6960 |
| tttttaata caattcagaa aatatcataa tatctcattt cactaaataa tagtgaacgg | 7020 |
| caggtatatg tgatgggtta aaaaggatcg gcggccgctc gatttaaatac | 7070 |

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 <212> DNA
 <213> artificial

<220>
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| | |
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| cctcagcatc tgccccaagc ttaaaccccg gcaagggtcc cggtcagca gtcggaattg | 120 |

Sequence.txt

| | | | | | | |
|-------------|------------|------------|-------------|------------|-------------|------|
| cccttttagg | attcggaaca | gtcggcactg | aggtgatgcg | tctgatgacc | gagtacgggtg | 180 |
| atgaacttgc | gcaccgcatt | ggtggcccac | tggaggttcg | tggcattgct | gtttctgata | 240 |
| tctcaaagcc | acgtgaaggc | gttgcacctg | agctgctcac | tgaggacgct | tttgactca | 300 |
| tcgagcgcga | ggatgttgac | atcgtcgttg | aggttatcgg | cggcattgag | taccacgctg | 360 |
| aggtagtctt | cgcagctctg | aaggccggca | agtctgttgt | taccgccaat | aaggctcttg | 420 |
| ttgcagctca | ctctgctgag | cttgctgatg | cagcggaagc | cgcaaacggt | gacctgtact | 480 |
| tcgaggctgc | tgttgaggc | gcaattccag | tggttggccc | actgcgtcgc | tccctggctg | 540 |
| gcgatcagat | ccagtctgtg | atgggcatcg | ttaacggcac | caccaacttc | atcttgacg | 600 |
| ccatggattc | caccggcgct | gactatgcag | attctttggc | tgaggcaact | cgtttgggtt | 660 |
| acgccgaagc | tgatccaact | gcagacgtcg | aaggccatga | cgccgcatcc | aaggctgcaa | 720 |
| ttttggcatc | catcgctttc | cacaccgctg | ttaccgcgga | tgatgtgtac | tgcaaggta | 780 |
| tcagcaacat | cagcgtgcc | gacattgagg | cagcacagca | ggcaggccac | accatcaagt | 840 |
| tgttggccat | ctgtgagaag | ttaccaaca | aggaaggaaa | gtcggctatt | tctgctcgcg | 900 |
| tgcacccgac | tctattacct | gtgtcccacc | cactggcgtc | ggtaaacaag | tcctttaatg | 960 |
| caatctttgt | tgaagcagaa | gcagctggtc | gcctgatgtt | ctacggaaac | ggtgcagggtg | 1020 |
| gcgcgccaac | cggtctgtct | gtgcttggcg | acgtcgttgg | tgccgcacga | aacaagggtgc | 1080 |
| acggtggccg | tgtccaggt | gagtcacct | acgctaacct | gccgatcgct | gatttcgggtg | 1140 |
| agaccaccac | tcgttaccac | ctcgacatgg | atgtggaaga | tcgctggggg | gttttggctg | 1200 |
| aattggctag | cctgttctct | gagcaaggaa | tcttcctgcg | tacaatccga | caggaagagc | 1260 |
| gcgatgatga | tgcacgtctg | atcgtggtca | cccactctgc | gctggaatct | gatctttccc | 1320 |
| gcaccgttga | actgctgaag | gctaagcctg | ttgttaaggc | aatcaacagt | gtgatccgcc | 1380 |
| tcgaaaggga | ctaattttac | tgacatggca | attgaactga | acgtcggctg | taaggttacc | 1440 |
| gtcacggtac | ctggatcttc | tgcaaacctc | ggacctggct | ttgacacttt | aggtttggca | 1500 |
| ctgtcggtat | acgacactgt | cgaagtggaa | attattccat | ctggcttgga | agtggaagtt | 1560 |
| tttggcgaag | gccaaaggca | agtccctctt | gatggctccc | acctggtggt | taaagctatt | 1620 |
| cgtgctggcc | tgaaggcagc | tgacgtgaa | gttcctggat | tgcgagtggg | gtgccacaac | 1680 |
| aacattccgc | agtctcgtgg | tcttggctcc | tctgctgcag | cggcggttgc | tgggtgtgct | 1740 |
| gcagctaattg | gtttggcgga | tttcccgtg | actcaagagc | agattgttca | gttgtcctct | 1800 |
| gcctttgaag | gccaccaga | taatgctgcg | gcttctgtgc | tgggtggagc | agtgggtgctg | 1860 |
| tggacaaatc | tgtctatcga | cggcaagagc | cagccacagt | atgctgctgt | accacttgag | 1920 |
| gtgcaggaca | atattcgtgc | gactgcgctg | gttcctaatt | tccacgcata | caccgaagct | 1980 |
| gtgcgccgag | tccttccac | tgaagtcact | cacatcgatg | cgcgatttaa | cgtgtcccgc | 2040 |
| gttgacgtga | tgatcgttgc | gttgacgag | cgctcctgatt | tgctgtggga | gggtactcgt | 2100 |
| gaccgtctgc | accagcctta | tcgtgcagaa | gtgttgcccta | ttacctctga | gtgggtaaac | 2160 |

Sequence.txt

| | |
|--|------|
| cgctgcgca accgtggcta cgcgccatac ctttccggtg ccggcccaac cgccatggtg | 2220 |
| ctgtccactg agccaattcc agacaagggtt ttggaagatg ctcgtgagtc tggcattaag | 2280 |
| gtgcttgagc ttgaggttgc gggaccagtc aaggttgaag ttaaccaacc ttaggcccaa | 2340 |
| caaggaaggc ccccttcgaa tcaagaaggg ggccttatta gtgcagcaat tattcgctga | 2400 |
| acacgtgaac cttacagggtg cccggcgcgt tgagtggttt gagttccagc tggatgcggt | 2460 |
| tgttttcacc gaggctttct tggatgaatc cggcgtggat ggcgcagacg aaggctgatg | 2520 |
| ggcgtttgtc gttgaccaca aatgggcagc tgtgtagagc gagggagttt gcttcttcgg | 2580 |
| tttcggtggg gtcaaagccc atttcgcgga ggcggttaat gagcggggag agggcttcgt | 2640 |
| cgagttcttc ggcttcggcg tggttaatgc ccatgacgtg tgccactgg gttccgatgg | 2700 |
| aaagtgcttt ggcgcggagg tcggggttgt gcattgcgtc atcgtcgaca tcgccgagca | 2760 |
| tgttgccat gagttcgatc aggtgatgt attctttggc gacagcgcgg ttgtcggga | 2820 |
| cgctgtttg gaagatgagg gagggcggg atcctctaga cccgggattt aaatcgctag | 2880 |
| cggtgcta aaggaagcgg aacacgtaga aagccagtcc gcagaaacgg tgctgacccc | 2940 |
| ggatgaatgt cagctactgg gctatctgga caagggaaaa cgcaagcgca aagagaaagc | 3000 |
| aggtagcttg cagtgggctt acatggcgat agctagactg ggcggtttta tggacagcaa | 3060 |
| gcgaaccgga attgccagct ggggcgccct ctggtaaggt tgggaagccc tgcaaagtaa | 3120 |
| actggatggc tttcttgccg ccaaggatct gatggcgagc gggatcaaga tctgatcaag | 3180 |
| agacaggatg aggatcgttt cgcatgattg aacaagatgg attgcacgca ggttctccgg | 3240 |
| ccgcttgggt ggagaggcta ttcggctatg actgggcaca acagacaatc ggctgctctg | 3300 |
| atgccgccgt gttccggctg tcagcgcagg ggcgcccgt tctttttgtc aagaccgacc | 3360 |
| tgtccggtgc cctgaatgaa ctgcaggacg aggcagcgcg gctatcgtgg ctggccacga | 3420 |
| cggtgcttcc ttgagcagct gtgctcgacg ttgtactga agcgggaagg gactggctgc | 3480 |
| tattgggcga agtgccgggg caggatctcc tgtcatctca ccttgctcct gccgagaaag | 3540 |
| tatccatcat ggctgatgca atgcggcggc tgcatacgct tgatccggct acctgccc | 3600 |
| tcgaccacca agcgaacat cgcatcgagc gagcacgtac tcggatggaa gccggtcttg | 3660 |
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| gcacgcctt ctatgcctt cttgacgagt tcttctgagc gggactctgg ggttcgaaat | 4020 |
| gaccgaccaa gcgacgccc acctgccatc acgagatttc gattccaccg ccgccttcta | 4080 |
| tgaaggttg ggcttcggaa tcgttttccg ggacgccggc tggatgatcc tccagcgcgg | 4140 |
| ggatctcatg ctggagttct tcgcccacgc tagcggcgcg ccggccggcc cggtgtgaaa | 4200 |

Sequence.txt

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| taccgcacag atgcgtaagg agaaaataacc gcatcaggcg ctcttccgct tcctcgctca | 4260 |
| ctgactcgct gcgctcggtc gttcggctgc ggcgagcggc atcagctcac tcaaaggcgg | 4320 |
| taatacggtt atccacagaa tcaggggata acgcaggaaa gaacatgtga gcaaaaggcc | 4380 |
| agcaaaaggc caggaaccgt aaaaaggccg cgttgctggc gtttttccat aggctccgcc | 4440 |
| cccctgacga gcatcacaaa aatcgacgct caagtcagag gtggcgaaac ccgacaggac | 4500 |
| tataaagata ccaggcgttt ccccctggaa gctccctcgt gcgctctcct gttccgaccc | 4560 |
| tgccgcttac cggatacctg tccgcctttc tcccttcggg aagcgtggcg ctttctcata | 4620 |
| gctcacgctg taggtatctc agttcgggtg aggtcgttcg ctccaagctg ggctgtgtgc | 4680 |
| acgaaccccc cgttcagccc gaccgctgcg ccttatccgg taactatcgt cttgagtcca | 4740 |
| acccggttaag acacgactta tcgccactgg cagcagccac tggtaacagg attagcagag | 4800 |
| cgaggatatgt aggcggtgct acagagttct tgaagtggcg gcctaactac ggctacacta | 4860 |
| gaaggacagt atttggtatc tgcgctctgc tgaagccagt taccttcgga aaaagagttg | 4920 |
| gtagctcttg atccggcaaa caaaccaccg ctggtagcgg tggttttttt gtttgcaagc | 4980 |
| agcagattac gcgcagaaaa aaaggatctc aagaagatcc tttgatcttt tctacggggt | 5040 |
| ctgacgctca gtggaacgaa aactcacggt aagggatttt ggtcatgaga ttatcaaaaa | 5100 |
| ggatcttcac ctagatcctt ttaaaggccg gccgcggccg ccatcggcat tttcttttgc | 5160 |
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| ttttcttgcc tttgatgttc agcaggaagc tcggcgcaaa cgttgattgt ttgtctgcgt | 5280 |
| agaatcctct gtttgtcata tagcttgtaa tcacgacatt gtttcctttc gcttgaggta | 5340 |
| cagcgaagtg tgagtaagta aaggttacat cgtaggatc aagatccatt tttaacacaa | 5400 |
| ggccagtttt gttcagcggc ttgtatgggc cagttaaaga attagaaaca taaccaagca | 5460 |
| tgtaaataac gttagacgta atgccgtcaa tcgtcatttt tgatccgcgg gagtcaagtga | 5520 |
| acaggtacca tttgccgttc attttaaaga cgttcgcgcg ttcaatttca tctgttactg | 5580 |
| tgtagatgac aatcagcggc ttcacactt ttttcagtgt gtaatcatcg tttagctcaa | 5640 |
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| tttgactttc ttgacggaag aatgatgtgc ttttgccata gtatgctttg ttaaataaag | 5760 |
| attcttcgcc ttggtagcca tcttcagttc cagtgtttgc ttcaaatact aagtatttgt | 5820 |
| ggcctttatc ttctacgtag tgaggatctc tcagcgtatg gttgtcgctt gagctgtagt | 5880 |
| tgcttcatc gatgaactgc tgtacatttt gatacgtttt tccgtcaccg tcaaagattg | 5940 |
| atttataatc ctctacaccg ttgatgttca aagagctgtc tgatgctgat acgttaactt | 6000 |
| gtgcagttgt cagtgtttgt ttgccgtaat gtttaccgga gaaatcagt tagaataaac | 6060 |
| ggatttttcc gtcagatgta aatgtggctg aacctgacca ttcttggtt tggcttttta | 6120 |
| ggatagaatc atttgcatcg aatttgtcgc tgtcttttaa gacgcggcca gcgtttttcc | 6180 |
| agctgtcaat agaagtttcg ccgacttttt gatagaacat gtaaatacgat gtgtcatccg | 6240 |

Sequence.txt

| | |
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| catttttagg atctccggct aatgcaaaga cgatgtggta gccgtgatag tttgcgacag | 6300 |
| tgccgtcagc gttttgtaat ggccagctgt cccaaacgtc caggcctttt gcagaagaga | 6360 |
| tatttttaat tgtggacgaa tcaaattcag aaacttgata tttttcattt ttttgctgtt | 6420 |
| cagggatttg cagcatatca tggcgtgtaa tatgggaaat gccgtatgtt tccttatatg | 6480 |
| gcttttggtt cgtttctttc gcaaacgctt gagttgcgcc tcctgccagc agtgcggtag | 6540 |
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| tttttaatca caattcagaa aatatcataa tatctcattt cactaaataa tagtgaacgg | 7020 |
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<220>
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| tatcgtcgac atcgatgctc ttctgcgtta attaacaatt gggatctctc aactaatgca | 120 |
| gcatgctgtt ctttcagaa tgctttcatg acagggatgc tgccttgatc aggcaggcgt | 180 |
| ctgtgctgga tgccgaagct ggatttattg tcgcctttgg aggtgaagtt gacgctcact | 240 |
| cgagaatcat cggccaacca tttggcattg aatgttctag gttcggaggc ggaggttttc | 300 |
| tcaattagtg cgggatcgag cactgcgcc cgcaggatcat cgtctccgaa gagcttcac | 360 |
| actttttcga ccggcagggt aagggttttg gaggcattgg ccgcgaaccc atcgctggtc | 420 |
| atccggggtt tgcgatgcc acgttcgtat tcataaccaa tcgcgatgcc ttgagcccac | 480 |
| cagccactga catcaaagtt gtccacgatg tgctttgcga tgtgggtgtg agtccaagag | 540 |
| gtggctttta cgtcgtcaag caatttttag cactcttccc acggctttcc ggtgccgttg | 600 |
| aggatagctt caggggacat gcctgggtgt gagccttgcg gagtggagtc agtcatgcga | 660 |
| ccgagactag tggcgctttg ggtaccgggc cccccctcga ggtcgagcgg cttaaagttt | 720 |
| ggctgccatg tgaattttta gcaccctcaa cagttgagtg ctggcactct cgggggtaga | 780 |
| gtgccaaata gggtgtttga cacacagttg ttcacccgcg acgacggctg tgctggaac | 840 |
| ccacaaccgg cacacacaaa atttttctca tggagggtt catcatgtcg acttcagtta | 900 |

Sequence.txt

| | | | | | | |
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| tgttgatcgg | cgacggcgcc | atgggcaccc | agctccaagg | ctttgacctg | gacgtggaaa | 1020 |
| aggatttcct | tgatctggag | gggtgtaatg | agattctcaa | cgacacccgc | cctgatgtgt | 1080 |
| tgaggcagat | tcaccgcgcc | tactttgagg | cgggagctga | cttggttgag | accaatactt | 1140 |
| ttggttgcaa | cctgccgaac | ttggcggatt | atgacatcgc | tgatcgttgc | cgtgagcttg | 1200 |
| cctacaaggg | cactgcagtg | gctagggaa | tggtgatga | gatggggccg | ggccgaaacg | 1260 |
| gcatgcggcg | tttcgtgggt | ggttccttg | gacctggaac | gaagcttcca | tcgctgggcc | 1320 |
| atgcaccgta | tgacagattt | cgtgggcact | acaaggaagc | agcgttggc | atcatcgacg | 1380 |
| gtggtggcga | tgctttttt | attgagactg | ctcaggactt | gcttcaggtc | aaggctgcgg | 1440 |
| ttcacggcgt | tcaagatgcc | atggctgaac | ttgatacatt | cttgcccatt | atttgccacg | 1500 |
| tcaccgtaga | gaccaccggc | accatgctca | tgggttctga | gatcggtgcc | gcgttgacag | 1560 |
| cgctgcagcc | actgggtatc | gacatgattg | gtctgaactg | cgccaccggc | ccagatgaga | 1620 |
| tgagcgagca | cctgcgttac | ctgtccaagc | acgccgatat | tcctgtgtcg | gtgatgccta | 1680 |
| acgcaggctc | tcctgtcctg | ggtaaaaacg | gtgcagaata | cccacttgag | gctgaggatt | 1740 |
| tggcgcaggc | gctggctgga | ttcgtctccg | aatatggcct | gtccatggtg | ggtggttgtt | 1800 |
| gtggcaccac | acctgagcac | atccgtgcgg | tccgcgatgc | ggtggttgg | gttcagagc | 1860 |
| aggaaacctc | cacactgacc | aagatccctg | caggccctgt | tgagcaggcc | tccgcgagg | 1920 |
| tggagaaaga | ggactccgtc | gcgtcgctgt | acacctcgg | gccattgtcc | caggaaaccg | 1980 |
| gcatttccat | gatcggtgag | cgcaccaact | ccaacggttc | caaggcattc | cgtgaggcaa | 2040 |
| tgctgtctgg | cgattgggaa | aagtgtgtgg | atattgccaa | gcagcaaacc | cgcgatggtg | 2100 |
| cacacatgct | ggatctttgt | gtggattacg | tgggacgaga | cggcaccgcc | gatatggcga | 2160 |
| ccttggcagc | acttcttgct | accagctcca | ctttgccaat | catgattgac | tccaccgagc | 2220 |
| cagaggttat | tcgcacaggc | cttgagcact | tgggtggacg | aagcatcggt | aactccgtca | 2280 |
| actttgaaga | cggcgatggc | cctgagtccc | gctaccagcg | catcatgaaa | ctggtaaagc | 2340 |
| agcacggtgc | ggccgtgggt | gcgctgacca | ttgatgagga | aggccaggca | cgtaccgctg | 2400 |
| agcacaaggt | gcgcattgct | aaacgactga | ttgacgatat | caccggcagc | tacggcctgg | 2460 |
| atatcaaaga | catcgttgtg | gactgcctga | ccttcccgat | ctctactggc | caggaagaaa | 2520 |
| ccaggcgaga | tggcattgaa | accatcgaag | ccatccgcga | gctgaagaag | ctctaccag | 2580 |
| aaatccacac | caccctgggt | ctgtccaata | tttccttcgg | cctgaaccct | gctgcacgcc | 2640 |
| aggttcttaa | ctctgtgttc | ctcaatgagt | gcattgaggc | tggctctggac | tctgcgattg | 2700 |
| cgcacagctc | caagattttg | ccgatgaacc | gcattgatga | tcgccagcgc | gaagtggcgt | 2760 |
| tggatatggt | ctatgatcgc | cgcaccgagg | attacgatcc | gctgcaggaa | ttcatgcagc | 2820 |
| tgtttgaggg | cgtttctgct | gccgatgcca | aggatgctcg | cgctgaacag | ctggccgcta | 2880 |
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Sequence.txt

| | |
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| atgatctgga agcaggcatg aaggagaagt ctcctattgc gatcatcaac gaggaccttc | 3000 |
| tcaacggcat gaagaccgtg ggtgagctgt ttggttccgg acagatgcag ctgccattcg | 3060 |
| tgctgcaatc ggcagaaacc atgaaaactg cgggtggccta tttggaaccg ttcattggaag | 3120 |
| aggaagcaga agctaccgga tctgctgagg cagagggcaa gggcaaaatc gtcgtggcca | 3180 |
| ccgtcaaggg tgacgtgcac gatatcggca agaacttggg ggacatcatt ttgtccaaca | 3240 |
| acggttacga cgtggtgaac ttgggcatca agcagccact gtccgcatg ttggaagcag | 3300 |
| cgaagaaca caaagcagac gtcacggca tgtcgggact tcttgtgaag tccaccgtgg | 3360 |
| tgatgaagga aaaccttgag gagatgaaca acgccggcgc atccaattac ccagtcattt | 3420 |
| tggtggtggc tgctgtgacg cgtacctacg tggaaaacga tctcaacgag gtgtacaccg | 3480 |
| gtgaggtgta ctacgcccgt gatgctttcg agggcctgcg cctgatggat gaggtgatgg | 3540 |
| cagaaaagcg tggatgaagga cttgatccca actcaccaga agctattgag caggcgaaga | 3600 |
| agaaggcgga acgtaaggct cgtaatgagc gttcccga gattgccgcg gagcgtaaag | 3660 |
| ctaattcggc tcccgatgatt gttccggagc gttctgatgt ctccaccgat actccaaccg | 3720 |
| cggcaccacc gttctgggga acccgcatg tcaaggggtct gcccttggcg gagttcttgg | 3780 |
| gcaaccttga tgagcgcgcc ttgttcatgg ggcagtgggg tctgaaatcc acccgcgga | 3840 |
| acgaggttcc aagctatgag gatttgggtg aaactgaagg ccgaccacgc ctgctgact | 3900 |
| ggctggatcg cctgaagtct gagggcattt tggaccacgt ggccttgggtg tatggctact | 3960 |
| tcccagcggg cgcggaaggc gatgacgtgg tgatcttggga atccccggat ccacacgcag | 4020 |
| ccgaacgcat gcgcttttagc ttcccacgcc agcagcgcgg caggttcttg tgcatcgcg | 4080 |
| atttcattcg cccacgcgag caagctgtca aggacggcca agtggaagtc atgccattcc | 4140 |
| agctggtcac catgggtaat cctattgctg atttcgcca cgagttgttc gcagccaatg | 4200 |
| aataccgcga gtacttggaa gttcacggca tcggcggtgca gctcaccgaa gcattggccg | 4260 |
| agtactggca ctcccagtg cgacgcgaac tcaagctgaa cgacgggtgga tctgtcgtg | 4320 |
| atattgatcc agaagacaag accaagtctc tcgacctgga ttaccgcggc gcccgcttct | 4380 |
| cctttggtta cggttcttgc cctgatctgg aagaccgcgc aaagctggtg gaattgctcg | 4440 |
| agccaggccg tatcggcgtg gagttgtccg aggaactcca gctgcacca gagcagtcca | 4500 |
| cagacgcgtt tgtgtcttac caccagagg caaagtactt taacgtctaa tctagaccgg | 4560 |
| ggatttaaat cgctagcggg ctgctaaagg aagcggaaca cgtagaaagc cagtccgcag | 4620 |
| aaacggtgct gaccccgat gaatgtcagc tactgggcta tctggacaag ggaaaacgca | 4680 |
| agcgcaaaga gaaagcaggt agcttgagc gggcttacat ggcgatagct agactgggcg | 4740 |
| gttttatgga cagcaagcga accggaattg ccagctgggg cgccctctgg taaggttggg | 4800 |
| aagccctgca aagtaaaactg gatggctttc ttgccgcaa ggatctgatg gcgcagggga | 4860 |
| tcaagatctg atcaagagac aggatgagga tcgtttcgca tgattgaaca agatggattg | 4920 |
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Sequence.txt

| | |
|--|------|
| acaatcggct gctctgatgc cgccgtgttc cggctgtcag cgcaggggcg cccggttctt | 5040 |
| tttgtcaaga ccgacctgtc cggtgccctg aatgaactgc aggacgaggc agcgcggtta | 5100 |
| tcgtggctgg ccacgacggg cgttccttgc gcagctgtgc tcgacgttgt cactgaagcg | 5160 |
| ggaagggact ggctgctatt gggcgaagtg cgggggcagg atctcctgtc atctcacctt | 5220 |
| gctcctgccg agaaagtatc catcatggct gatgcaatgc ggcggctgca tacgcttgat | 5280 |
| ccggctacct gccattcga ccaccaagcg aaacatcgca tcgagcgagc acgtactcgg | 5340 |
| atggaagccg gtctttgtcga tcaggatgat ctggacgaag agcatcaggg gtcgcgcca | 5400 |
| gccgaactgt tcgccaggct caaggcgcgc atgcccagc gcgaggatct cgtcgtgacc | 5460 |
| catggcgtatg cctgtttgcc gaatatcatg gtggaaaatg gccgcttttc tggattcatc | 5520 |
| gactgtggcc ggctgggtgt ggcggaccgc tatcaggaca tagcgttggc taccctgat | 5580 |
| attgctgaag agcttggcgg cgaatgggct gaccgcttcc tcgtgcttta cggtatcgcc | 5640 |
| gctcccgatt cgcagcgcat cgccttctat cgccttcttg acgagttctt ctgagcggga | 5700 |
| ctctgggggt cgaaatgacc gaccaagcga cgcccaacct gccatcacga gatttcgatt | 5760 |
| ccaccgccgc cttctatgaa aggttgggct tcggaatcgt tttccgggac gccggctgga | 5820 |
| tgatcctcca gcgcggggat ctcatgctgg agttcttcgc ccacgctagc ggcgcgccgg | 5880 |
| ccggcccggg gtgaaatacc gcacagatgc gtaaggagaa aataccgcat caggcgctct | 5940 |
| tccgcttctt cgctcactga ctcgctgcgc tcggctcgtt ggctgcggcg agcggtatca | 6000 |
| gctcactcaa aggcggtaat acggttatcc acagaatcag gggataacgc aggaaagaac | 6060 |
| atgtgagcaa aaggccagca aaaggccagg aaccgtaaaa aggccgcgtt gctggcgttt | 6120 |
| ttccataggc tccgcccccc tgacgagcat cacaaaaatc gacgctcaag tcagaggtgg | 6180 |
| cgaaacccga caggactata aagataccag gcgtttcccc ctggaagctc cctcgtgcgc | 6240 |
| tctcctgttc cgaccctgcc gcttaccgga tacctgtccg cctttctccc ttcgggaagc | 6300 |
| gtggcgcttt ctcatagctc acgctgtagg tatctcagtt cgggtgtaggt cgttcgctcc | 6360 |
| aagctgggct gtgtgcacga accccccgtt cagcccagcc gctgcgcctt atccggtaac | 6420 |
| tatcgtcttg agtccaaccc ggtaagacac gacttatcgc cactggcagc agccactggg | 6480 |
| aacaggatta gcagagcgag gtatgtaggc ggtgctacag agttcttgaa gtggtggcct | 6540 |
| aactacggct acactagaag gacagtattt ggtatctgcg ctctgctgaa gccagttacc | 6600 |
| ttcggaaaaa gagttggtag ctcttgatcc ggcaaaaaa ccaccgctgg tagcggtggt | 6660 |
| ttttttgttt gcaagcagca gattacgcgc agaaaaaaag gatctcaaga agatcctttg | 6720 |
| atcttttcta cggggtctga cgctcagtgg aacgaaaact cacgttaagg gattttggtc | 6780 |
| atgagattat caaaaaggat cttcacctag atccttttaa aggccggccg cgcccgccat | 6840 |
| cggcattttc ttttgcgttt ttatttgtaa actgttaatt gtccttgttc aaggatgctg | 6900 |
| tctttgacaa cagatgtttt cttgcctttg atgttcagca ggaagctcgg cgcaaacgtt | 6960 |
| gattgtttgt ctgcgtagaa tcctctgttt gtcatatagc ttgtaatcac gacattgttt | 7020 |

Sequence.txt

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| tccattttta | acacaaggcc | agttttgttc | agcggcttgt | atggggccagt | taaagaatta | 7140 |
| gaaacataac | caagcatgta | aatatcggtta | gacgtaatgc | cgtaatcgt | catttttgat | 7200 |
| ccgcgggagt | cagtgaacag | gtaccatttg | ccgttcattt | taaagacgtt | cgcgcggtta | 7260 |
| atttcatctg | ttactgtgtt | agatgcaatc | agcggtttca | tcactttttt | cagtgtgtaa | 7320 |
| tcacggttta | gctcaatcat | accgagagcg | ccgtttgcta | actcagccgt | gcgtttttta | 7380 |
| tcgctttgca | gaagtttttg | actttcttga | cggaagaatg | atgtgctttt | gccatagtat | 7440 |
| gctttgttaa | ataaagattc | ttcgccttgg | tagccatctt | cagttccagt | gtttgcttca | 7500 |
| aataactaag | atttgtggcc | tttatcttct | acgtagtgag | gatctctcag | cgtatggttg | 7560 |
| tcgcctgagc | tgtagtggcc | ttcatcgatg | aactgctgta | cattttgata | cgtttttccg | 7620 |
| tcaccgtcaa | agattgattt | ataatcctct | acaccgttga | tgttcaaaga | gctgtctgat | 7680 |
| gctgatacgt | taacttgtgc | agttgtcagt | gtttgtttgc | cgtaatgttt | accggagaaa | 7740 |
| tcagtgtaga | ataaacggat | ttttccgtca | gatgtaaata | tggctgaacc | tgaccattct | 7800 |
| tgtgtttggt | cttttaggat | agaatcattt | gcatcgaatt | tgtcgtgtgc | tttaaagacg | 7860 |
| cggccagcgt | ttttccagct | gtcaatagaa | gtttcgccga | ctttttgata | gaacatgtaa | 7920 |
| atcgaatgtg | catccgcatt | tttaggatct | ccggctaata | caaagacgat | gtggtagccg | 7980 |
| tgatagtttg | cgacagtggc | gtcagcgttt | tgtaatggcc | agctgtccca | aacgtccagg | 8040 |
| ccttttgtag | aagagatatt | tttaattgtg | gacgaatcaa | attcagaaac | ttgatatttt | 8100 |
| tcattttttt | gctgttcagg | gatttgcagc | atatcatggc | gtgtaatatg | ggaaatgccg | 8160 |
| tatgtttcct | tatatggcct | ttggttcgtt | tctttcgcaa | acgcttgagt | tgcgccctct | 8220 |
| gccagcagtg | cggtagttaa | ggtaataact | gttgcttggt | ttgcaaactt | tttgatgttc | 8280 |
| atcgttcagt | tctccttttt | tatgtactgt | gttagcggtc | tgcttcttcc | agccctcctg | 8340 |
| tttgaagatg | gcaagttagt | tacgcacaat | aaaaaaagac | ctaaaatatg | taaggggtga | 8400 |
| cgccaaagta | tacactttgc | cctttacaca | ttttaggtct | tgccgtgctt | atcagtaaca | 8460 |
| aaccgcgcg | atttactttt | cgacctcatt | ctattagact | ctcgtttgga | ttgcaactgg | 8520 |
| tctattttcc | tcttttggtt | gatagaaaat | cataaaaagga | tttgagact | acgggcctaa | 8580 |
| agaactaaaa | aatctatctg | tttcttttca | ttctctgtat | tttttatagt | ttctgttgca | 8640 |
| tgggcataaa | gttgcccttt | taatcacaat | tcagaaaata | tcataatatc | tcatttcact | 8700 |
| aaataatagt | gaacggcagg | tatatgtgat | gggttaaaaa | ggatcggcgg | ccgctcgatt | 8760 |
| taaatc | | | | | | 8766 |

<210> 24
 <211> 7070
 <212> DNA
 <213> artificial

<220>

Sequence.txt

<223> Plasmid pH399

<400> 24

| | | | | | | |
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| tcgagaggcc | tgacgtcggg | cccggtagca | cgcgatcatat | gactagttgg | agaatcatga | 60 |
| cctcagcatc | tgccccaagc | tttaaccccc | gcaaggggtcc | cggtcagca | gtcgggaattg | 120 |
| cccttttagg | attcggaaca | gtcggcactg | aggtgatgcg | tctgatgacc | gagtacggtg | 180 |
| atgaacttgc | gcaccgcatt | ggtggcccac | tggaggttcg | tggcattgct | gtttctgata | 240 |
| tctcaaagcc | acgtgaaggc | gttgacactg | agctgctcac | tgaggacgct | tttgactca | 300 |
| tcgagcgcga | ggatgttgac | atcgctggtg | aggttatcgg | cggcattgag | taccacggtg | 360 |
| aggtagttct | cgcagctctg | aaggccggca | agtctgttgt | taccgccaat | aaggctcttg | 420 |
| ttgcagctca | ctctgctgag | cttgctgatg | cagcggaagc | cgcaaacggt | gacctgtact | 480 |
| tcgaggctgc | tggtgcaggc | gcaattccag | tggttggccc | actgcgtcgc | tccctggctg | 540 |
| gcgatcagat | ccagtctgtg | atgggcatcg | ttaacggcac | caccaacttc | atcttgacg | 600 |
| ccatggattc | caccggcgct | gactatgcag | attctttggc | tgaggcaact | cgtttgggtt | 660 |
| acgccgaagc | tgatccaact | gcagacgtcg | aaggccatga | cgccgatcc | aaggctgcaa | 720 |
| ttttggcatc | catcgctttc | cacacccgtg | ttaccgcgga | tgatgtgtac | tgcaaggta | 780 |
| tcagcaacat | cagcgtgcc | gacattgagg | cagcacagca | ggcaggccac | accatcaagt | 840 |
| tgttggccat | ctgtgagaag | ttaccaaca | aggaaggaaa | gtcggctatt | tctgctcgcg | 900 |
| tgcacccgac | tctattacct | gtgtcccacc | cactggcgtc | ggtaaacaag | tcctttaatg | 960 |
| caatctttgt | tgaagcagaa | gcagctggtc | gcctgatgtt | ctacggaaac | ggtgcagggtg | 1020 |
| gcgcgccaac | cgcgctctgt | gtgcttggcg | acgtcgttgg | tgccgcacga | aacaagggtgc | 1080 |
| acggtggccg | tgctccaggt | gagttcacct | acgctaacct | gccgatcgct | gatttcggtg | 1140 |
| agaccaccac | tcgttaccac | ctcgacatgg | atgtggaaga | tcgctggggg | gttttggtg | 1200 |
| aattggctag | cctgtttctt | gagcaaggaa | tcttcctgcg | tacaatccga | caggaagagc | 1260 |
| gcgatgatga | tgcacgtctg | atcggtgtca | cccactctgc | gctggaatct | gatctttccc | 1320 |
| gcaccgttga | actgctgaag | gctaagcctg | ttgttaaggc | aatcaacagt | gtgatccgcc | 1380 |
| tcgaaagga | ctaattttac | tgacatggca | attgaactga | acgtcgggtc | taaggttacc | 1440 |
| gtcacggtac | ctggatcttc | tgcaaaccct | ggacctggct | ttgacacttt | aggtttggca | 1500 |
| ctgtcggtat | acgacactgt | cgaagtggaa | attattccat | ctggcttggg | agtgggaagt | 1560 |
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| cgtgctggcc | tgaaggcagc | tgacgtgaa | gttcctggat | tgcgagtggg | gtgccacaac | 1680 |
| aacattccgc | agtctctgtg | tcttggctcc | gctgctgcag | cggcggttgc | tggtgttgct | 1740 |
| gcagctaata | gtttggcgga | tttcccgtcg | actcaagagc | agattgttca | gttgtcctct | 1800 |
| gcctttgaag | gccaccacga | taatgctgcg | gcttctgtgc | tgggtggagc | agtgggtgtcg | 1860 |
| tggacaaaac | tgtctatcga | cggcaagagc | cagccacagt | atgctgctgt | accacttgag | 1920 |
| gtgcaggaca | atattcgtgc | gactgcgctg | gttcctaatt | tccacgcac | caccgaagct | 1980 |

Sequence.txt

| | | | | | | |
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| gtgcgccgag | tccttccac | tgaagtcact | cacatcgatg | cgcgatttaa | cgtgtcccgc | 2040 |
| gttgacgtga | tgatcgttgc | gttgacgacg | cgctctgatt | tgctgtggga | gggtactcgt | 2100 |
| gaccgtctgc | accagcctta | tcgtgcagaa | gtgttgcccta | ttacctctga | gtgggtaaac | 2160 |
| cgcttgccga | accgtggcta | cggggcatac | ctttccggtg | ccggcccaac | cgccatggtg | 2220 |
| ctgtccactg | agccaattcc | agacaagggt | ttggaagatg | ctcgtgagtc | tggcattaag | 2280 |
| gtgcttgagc | ttgaggttgc | gggaccagtc | aagggtgaag | ttaaccaacc | ttaggcccaa | 2340 |
| caaggaaggc | ccccttcgaa | tcaagaaggg | ggccttatta | gtgcagcaat | tattcgctga | 2400 |
| acacgtgaac | cttacagggt | cccggcgcgt | tgagtgggtt | gagttccagc | tggatgcggt | 2460 |
| tgttttcacc | gaggctttct | tggatgaatc | cggcgtggat | ggcgcagacg | aaggctgatg | 2520 |
| ggcgtttctc | gttgaccaca | aatgggcagc | tgtgtagagc | gagggagttt | gcttcttcgg | 2580 |
| tttcggtggg | gtcaaagccc | atttcgcgga | ggcggttaat | gagcggggag | agggttcgt | 2640 |
| cgagttcttc | ggcttcggcg | tggtaaatgc | ccatgacgtg | tgcccactgg | gttccgatgg | 2700 |
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| gcgaaccgga | attgccagct | ggggcgccct | ctggtaagggt | tgggaagccc | tgcaaagtaa | 3120 |
| actggtggc | tttcttgccg | ccaaggatct | gatggcgag | gggatcaaga | tctgatcaag | 3180 |
| agacaggatg | aggatcgttt | cgcatgattg | aacaagatgg | attgcacgca | ggttctccgg | 3240 |
| ccgcttggtg | ggagaggcta | ttcggtatg | actgggcaca | acagacaatc | ggctgctctg | 3300 |
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| tgtccggtgc | cctgaatgaa | ctgcaggacg | aggcagcgcg | gctatcggtg | ctggccacga | 3420 |
| cgggcttcc | ttgcgcagct | gtgctcgacg | ttgtcactga | agcgggaagg | gactggctgc | 3480 |
| tattgggcga | agtgccgggg | caggatctcc | tgtcatctca | ccttgctcct | gccgagaaag | 3540 |
| tatccatcat | ggctgatgca | atgcggcggc | tgcatacgct | tgatccggct | acctgcccct | 3600 |
| tcgaccacca | agcgaaacat | cgcatcgagc | gagcacgtac | tcggatggaa | gccggtcttg | 3660 |
| tcgatcagga | tgatctggac | gaagagcatc | aggggctcgc | gccagccgaa | ctgttcgcca | 3720 |
| ggctcaaggc | gcgcatgccc | gacggcgagg | atctcgtcgt | gacccatggc | gatgcctgct | 3780 |
| tgccgaatat | catggtggaa | aatggccgct | tttctggatt | catcgactgt | ggccggctgg | 3840 |
| gtgtggcgga | ccgctatcag | gacatagcgt | tggctacccg | tgatattgct | gaagagcttg | 3900 |
| gcggcgaatg | ggctgaccgc | ttcctcgtgc | tttacgggtat | cgccgctccc | gattcgagc | 3960 |
| gcatcgcctt | ctatcgcctt | cttgacgagt | tcttctgagc | gggactctgg | ggttcgaaat | 4020 |

Sequence.txt

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|--|------|
| gaccgaccaa gcgacgcccc acctgccatc acgagatttc gattccaccg ccgccttcta | 4080 |
| tgaaagggtt ggcttcggaa tcgttttccg ggacgccggc tggatgatcc tccagcgcg | 4140 |
| ggatctcatg ctggagttct tcgcccacgc tagcggcgcg ccggccggcc cgggtgtgaaa | 4200 |
| taccgcacag atgcgtaagg agaaaatacc gcatcaggcg ctcttccgct tcctcgctca | 4260 |
| ctgactcgct gcgctcggtc gttcggctgc ggcgagcggg atcagctcac tcaaaggcgg | 4320 |
| taatacgggt atccacagaa tcaggggata acgcaggaaa gaacatgtga gcaaaaggcc | 4380 |
| agcaaaaggc caggaaccgt aaaaaggccg cgttgctggc gtttttccat aggtcccgcc | 4440 |
| cccctgacga gcatcacaaa aatcgacgct caagtcagag gtggcgaaac ccgacaggac | 4500 |
| tataaagata ccaggcgttt cccctggaa gctccctcgt gcgctctcct gttccgaccc | 4560 |
| tgccgcttac cggatacctg tccgcctttc tcccttcggg aagcgtggcg ctttctcata | 4620 |
| gctcacgctg taggtatctc agttcgggtg aggtcgttcg ctccaagctg ggctgtgtgc | 4680 |
| acgaaccccc cgttcagccc gaccgctgcg ccttatccgg taactatcgt cttgagtcca | 4740 |
| acccggtaa acacgactta tcgccactgg cagcagccac tggtaacagg attagcagag | 4800 |
| cgaggatagt aggcgggtgt acagagttct tgaagtgggt gcctaactac ggctacacta | 4860 |
| gaaggacagt atttggtatc tgcgctctgc tgaagccagt taccttcgga aaaagagttg | 4920 |
| gtagctcttg atccggcaaa caaaccaccg ctggtagcgg tggttttttt gtttgcaagc | 4980 |
| agcagattac gcgcagaaaa aaaggatctc aagaagatcc tttgatcttt tctacggggt | 5040 |
| ctgacgctca gtggaacgaa aactcacgtt aagggatttt ggtcatgaga ttatcaaaaa | 5100 |
| ggatcttcac ctagatcctt ttaaaggccg gccgcggccg ccatcggcatt tttcttttgc | 5160 |
| gtttttatct gttactgtt aattgtcctt gttcaaggat gctgtctttg acaacagatg | 5220 |
| ttttcttgcc tttgatgttc agcaggaagc tcggcgcaaa cgttgattgt ttgtctgcgt | 5280 |
| agaatcctct gtttgtcata tagcttgtaa tcacgacatt gtttcctttc gcttgaggta | 5340 |
| cagcgaagtg tgagtaagta aaggttacat cgttaggatc aagatccatt tttacacaa | 5400 |
| ggccagtttt gttcagcggc ttgtatgggc cagttaaaga attagaaaca taaccaagca | 5460 |
| tgtaaatac gttagacgta atgccgtcaa tcgtcatttt tgatccgcgg gagtcagtga | 5520 |
| acaggtacca tttgccgttc attttaaaga cgttcgcgcg ttcaatttca tctgttactg | 5580 |
| tgttagatgc aatcagcggg ttcatacctt ttttcagtgt gtaatcatcg tttagctcaa | 5640 |
| tcataccgag agcgccgttt gctaactcag ccgtgcgttt tttatcgctt tgcagaagtt | 5700 |
| tttgactttc ttgacggaag aatgatgtgc ttttgccata gtatgctttg ttaaataaag | 5760 |
| attcttcgcc ttggtagcca tcttcagttc cagtgtttgc ttcaaatact aagtatttgt | 5820 |
| ggcctttatc ttctacgtag tgaggatctc tcagcgtagt gttgtgcct gagctgtagt | 5880 |
| tgcttcatc gatgaactgc tgtacatttt gatacgtttt tccgtcaccg tcaaagattg | 5940 |
| atttataatc ctctacaccg ttgatgttca aagagctgtc tgatgctgat acgttaactt | 6000 |
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Sequence.txt

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| agctgtcaat agaagTTtcg ccgactTTTT gatagaacat gtaaatcgat gtgtcatccg | 6240 |
| cattTTtagg atctccggct aatgcaaaga cgatgtggta gccgtgatag tttgcgacag | 6300 |
| tgccgtcagc gTTTTgtaat ggccagctgt cccaaacgtc caggcctTTt gcagaagaga | 6360 |
| tattTTtaat tgtggacgaa tcaaattcag aaacttgata tTTTtattt tTTTgtgtt | 6420 |
| cagggattTg cagcatatca tggcgtgtaa tatgggaaat gccgtatgtt tccttatatg | 6480 |
| gctTTtggtt cgTTTctTtC gcaaacgctt gagttgcgcc tcctgccagc agtgcggtag | 6540 |
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| TTTTtatgta ctgtgttagc ggtctgcttC ttccagccct cctgtTTgaa gatggcaagt | 6660 |
| tagttacgca caataaaaaa agacctaaaa tatgtaaggg gtgacgcaa agtatacact | 6720 |
| ttgccctTTa cacattTTtag gtcttgccTg cTTtatcagt aacaaacccg cgcgatttac | 6780 |
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| gtttgataga aaatcataaa aggattTgca gactacgggc ctaaagaact aaaaaatcta | 6900 |
| tctgtTTctt ttcatTctct gtattTTtta tagttTctgt tgcattgggca taaagttgcc | 6960 |
| TTTTaatca caattcagaa aatatcataa tatctcattt cactaaataa tagtgaacgg | 7020 |
| caggtatatg tgatgggtta aaaaggatcg gcggccgctc gattTaaatc | 7070 |

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 <211> 6625
 <212> DNA
 <213> artificial

<220>
 <223> Plasmid pH484

| | |
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| tgtattcaat cagtcgggca tagaaagaaa acgcaatgat ataggaacca actgccgcca | 120 |
| aaaccagcca cacagagttg attgtttcgc cacgggagaa agcgattgct cccaaccca | 180 |
| ccgccgcgat aaccccaaag acaaggagac caacgcgggc ggTcggtgac attttagggg | 240 |
| acttcttcac gcctactgga aggtcagtag cgTtgctgta caccaaTca tcgtcattga | 300 |
| tgtTgtcagt ctgtTTtatg gTcacgatct ttactgtttt ctcttcgggt cgTTTcaaag | 360 |
| ccactatgcg tagaaacagc gggcagaaac agcgggcaga aactgtgtgc agaaatgcat | 420 |
| gcagaaaaag gaaagtTcgg ccagatgggt gTTTctgtat gccgatgatc ggatctTTga | 480 |
| cagctgggta tgcgacaaat caccgagagt tGTTaattct taacaatgga aaagtaacat | 540 |
| tgagagatga tttataccat cctgcaccat ttagagtggg gctagtcata ccccataac | 600 |
| cctagctgta cgcaatcgat ttcaaTcag ttggaaaaag tcaagaaaat tacccgagac | 660 |
| atatgcggct taaagTTtg ctgccatgtg aattTTtagc accctcaaca gttgagtgt | 720 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| ggcactctcg | agggtagagt | gccaaatagg | ttgtttgaca | cacagttggt | cacccgcgac | 780 |
| gacggctgtg | ctggaaaccc | acaaccggca | cacacaaaat | ttttctcatg | gccgttaccc | 840 |
| tgcaatgtc | cacagggtag | ctggtagttt | gaaaatcaac | gccgttgccc | ttaggattca | 900 |
| gtaactggca | cattttgtaa | tgcgctagat | ctgtgtgctc | agtcttccag | gctgcttadc | 960 |
| acagtgaag | caaaaccaat | tcgtggctgc | gaaagtcgta | gccaccacga | agtccaggag | 1020 |
| gacatacaat | gccaaagtac | gacaattcca | atgctgacca | gtggggcttt | gaaacccgct | 1080 |
| ccattcacgc | aggccagtca | gtagacgcac | agaccagcgc | acgaaacctt | ccgatctacc | 1140 |
| aatccaccgc | tttcgtgttc | gactccgctg | agcacgccaa | gcagcgtttc | gcacttgagg | 1200 |
| atctaggccc | tgtttactcc | cgctcacca | acccaaccgt | tgaggctttg | gaaaaccgca | 1260 |
| tcgcttcct | cgaagggtgg | gtccacgctg | tagcgttctc | ctccggacag | gccgcaacca | 1320 |
| ccaacgcat | tttgaacctg | gcaggagcgg | gcgaccacat | cgtcacctcc | ccacgcctct | 1380 |
| acgggtggc | cgagactcta | ttccttatca | ctcttaaccg | cctgggtatc | gatgtttcct | 1440 |
| tcgtggaaaa | ccccgacgac | cctgagtcct | ggcaggcagc | cgttcagcca | aacaccaaag | 1500 |
| cattcttcgg | cgagactttc | gccaaccac | aggcagacgt | cctggatatt | cctgcggtgg | 1560 |
| ctgaagtgc | gcaccgcaac | agcgttcac | tgatcatcga | caacaccatc | gctaccgcag | 1620 |
| cgctcgtgcg | cccgcctgag | ctcggcgcag | acgttgctgt | cgcttccttc | accaagttct | 1680 |
| acaccggcaa | cggctccgga | ctgggcggcg | tgcttatcga | cggcggaag | ttcgattgga | 1740 |
| ctgtcgaaaa | ggatggaaag | ccagtattcc | cctacttcgt | cactccagat | gctgcttacc | 1800 |
| acggattgaa | gtacgcagac | cttggtgcac | cagccttcgg | cctcaagggt | cgcggttgcc | 1860 |
| ttctacgcga | caccggctcc | accctctccg | cattcaacgc | atgggctgca | gtccagggca | 1920 |
| tcgacaccct | ttccctgcgc | ctggagcgcc | acaacgaaaa | cgccatcaag | gttgacgaat | 1980 |
| tcctcaacaa | ccacgagaag | gtggaaaagg | ttaacttcgc | aggcctgaag | gattccccct | 2040 |
| ggtagcgaac | caaggaaaag | cttggcctga | agtacaccgg | ctccgttctc | accttcgaga | 2100 |
| tcaaggcgcg | caaggatgag | gcttgggcat | ttatcgacgc | cctgaagcta | cactccaacc | 2160 |
| ttgcaaacat | cggcgatggt | cgctccctcg | ttgttcaccc | agcaaccacc | accattcac | 2220 |
| agtccgacga | agctggcctg | gcacgcgcgg | gcgttaccca | gtccaccgtc | cgctgtccg | 2280 |
| ttggcatcga | gaccattgat | gatatcatcg | ctgacctcga | aggcggtttt | gctgcaatct | 2340 |
| agcactagtt | cggacctagg | gatatcgctg | acatcgatgc | tcttctgcgt | taattaacaa | 2400 |
| ttgggatcct | ctagaccggg | gatttaaadc | gctagcgggc | tgctaaagga | agcggaacac | 2460 |
| gtagaaagcc | agtccgcaga | aacggtgctg | accccgatg | aatgtcagct | actgggctat | 2520 |
| ctggacaagg | gaaaacgcaa | gcgcaaagag | aaagcaggta | gcttgacgtg | ggcttacatg | 2580 |
| gcgatagcta | gactgggcgg | ttttatggac | agcaagcgaa | ccggaattgc | cagctggggc | 2640 |
| gccctctggt | aaggttggga | agccctgcaa | agtaaactgg | atggctttct | tgccgccaag | 2700 |
| gatctgatgg | cgcaggggat | caagatctga | tcaagagaca | ggatgaggat | cgtttcgcat | 2760 |

Sequence.txt

| | |
|---|------|
| gattgaacaa gatggattgc acgcagggttc tccggccgct tgggtggaga ggctattcgg | 2820 |
| ctatgactgg gcacaacaga caatcggtcg ctctgatgcc gccgtgttcc ggctgtcagc | 2880 |
| gcagggggcg ccggttcttt ttgtcaagac cgacctgtcc ggtgccctga atgaactgca | 2940 |
| ggacgaggca gcgcggctat cgtggctggc cagcagggc gttccttgcg cagctgtgct | 3000 |
| cgacgttgtc actgaagcgg gaagggactg gctgctattg ggcgaagtgc cggggcagga | 3060 |
| tctcctgtca tctcaccttg ctctgccga gaaagtatcc atcatggctg atgcaatgcg | 3120 |
| gcggctgcat acgcttgatc cggctacctg cccattcgac caccaagcga aacatcgcat | 3180 |
| cgagcgagca cgtactcgga tggaaagccgg tcttgctgat caggatgatc tggacgaaga | 3240 |
| gcatcagggg ctgcgcgccag ccgaactgtt cgccaggctc aaggcgcgca tgcccagcgg | 3300 |
| cgaggatctc gtcgtgacct atggcgatgc ctgcttgccg aatatcatgg tggaaaatgg | 3360 |
| ccgcttttct ggattcatcg actgtggccg gctgggtgtg gcggaccgct atcaggacat | 3420 |
| agcgttggtt acccgtagata ttgctgaaga gcttgccggc gaatgggctg accgcttcct | 3480 |
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| ccatcacgag atttcgatcc caccgccgcc ttctatgaaa ggttgggctt cggaatcggt | 3660 |
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| cacgctagcg gcgcgccggc cggcccgggtg tgaaataaccg cacagatgcg taaggagaaa | 3780 |
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| ggataacgca ggaaagaaca tgtgagcaaa aggccagcaa aaggccagga accgtaaaaa | 3960 |
| ggccgcgttg ctggcggttt tccataggct ccgccccctt gacgagcatc acaaaaatcg | 4020 |
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| ggccggccgc ggccgccatc ggcattttct tttgcgtttt tatttggtta ctgttaattg | 4740 |
| tccttgttca aggatgctgt ctttgacaac agatgttttc ttgcctttga tgttcagcag | 4800 |

Sequence.txt

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 <213> artificial

Sequence.txt

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aca 363

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<213> artificial

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tcccggcaaa gccatcaaca ctgatattta ctgcgtgatc tgtaccaacg tcatcggtgg 1200

Sequence.txt

| | |
|--|------|
| ttgcaacggt tccaccggac ctggctccat gcatccagat ggaaatttct ggggtaatcg | 1260 |
| cttccccgcc acgtccattc gtgatcaggt aaacgccgaa aaacaattcc tcgacgcact | 1320 |
| cggcatcacc acggtcgccg cagtacttgg tggttccatg ggtggtgccc gcaccctaga | 1380 |
| gtggggccgca atgtaccag aaactgttgg cgcagctgct gttcttgacg tttctgcacg | 1440 |
| cgccagcgcc tggcaaatcg gcattcaatc cgcccaaatt aaggcgattg aaaacgacca | 1500 |
| ccactggcac gaaggcaact actacgaatc cggctgcaac ccagccaccg gactcggcgc | 1560 |
| cgcccgcacgc atcgcccacc tcacctaccg tggcgaacta gaaatcgacg aacgcttcgg | 1620 |
| caccaaagcc caaaagaacg aaaaccact cggctccctac cgcaagccc accagcgctt | 1680 |
| cggcgtggaa tcctacttgg actaccaagc agacaagcta gtacagcggt tcgacgccgg | 1740 |
| ctcctacgtc ttgctcaccg acgccctcaa cggccacgac attggtcgcg accgcggagg | 1800 |
| cctcaacaag gcactcgaat ccatcaaagt tccagtcctt gtcgcaggcg tagataccga | 1860 |
| tatttgtac ccctaccacc agcaagaaca cctctccaga aacctgggaa atctactggc | 1920 |
| aatggcaaaa atcgtatccc ctgtcggcca cgatgctttc ctcaccgaaa gccgccaat | 1980 |
| ggatcgcacg gtgaggaact tcttcagcct catctccca gacgaagaca acccttcgac | 2040 |
| ctacatcgag ttctacatct aacatatgac tagttcggac ctagggatat cgtcgacatc | 2100 |
| gatgctcttc tgcgttaatt aacaattggg atcctctaga cccgggattt aaatcgctag | 2160 |
| cgggctgcta aaggaagcgg aacacgtaga aagccagtcc gcagaaacgg tgctgacccc | 2220 |
| ggatgaatgt cagctactgg gctatctgga caagggaaaa cgcaagcgca aagagaaagc | 2280 |
| aggtagcttg cagtgggctt acatggcgat agctagactg ggcggtttta tggacagcaa | 2340 |
| gcgaaccgga attgccagct ggggcgccct ctggttaagg tgggaagccc tgcaaagtaa | 2400 |
| actggatggc tttcttgccg ccaaggatct gatggcgacg gggatcaaga tctgatcaag | 2460 |
| agacaggatg aggatcggtt cgcagtattg aacaagatgg attgcacgca ggttctccgg | 2520 |
| ccgcttgggt ggagaggcta ttcggctatg actgggcaca acagacaatc ggctgctctg | 2580 |
| atgccgccgt gttccggctg tcagcgcagg ggcgcccggg tctttttgtc aagaccgacc | 2640 |
| tgtccggtgc cctgaatgaa ctgcaggacg aggcagcgcg gctatcgtgg ctggccacga | 2700 |
| cgggcgttcc ttgctcagct gtgctcgacg ttgtactga agcgggaagg gactggctgc | 2760 |
| tattgggcga agtgccgggg caggatctcc tgtcatctca ccttgctcct gccgagaaag | 2820 |
| tatccatcat ggctgatgca atgcggcggc tgcatacgct tgatccggct acctgccc | 2880 |
| tcgaccacca agcgaaacat cgcacgagc gagcacgtac tcggatggaa gccggtcttg | 2940 |
| tcgatcagga tgatctggac gaagagcatc aggggctcgc gccagccgaa ctgttcgcca | 3000 |
| ggctcaaggc gcgcatgccc gacggcgagg atctcgtcgt gacccatggc gatgcctgct | 3060 |
| tgccgaatat catggtggaa aatggccgct tttctggatt catcgactgt ggccggctgg | 3120 |
| gtgtggcgga ccgctatcag gacatagcgt tggctacccg tgatattgct gaagagcttg | 3180 |
| gcggcgaatg ggctgaccgc ttcctcgtgc tttacgggat cgccgctccc gattcgcagc | 3240 |

Sequence.txt

| | |
|---|------|
| gcatcgcctt ctatcgcctt cttgacgagt tcttctgagc gggactctgg ggttcgaaat | 3300 |
| gaccgaccaa gcgacgcca acctgccatc acgagatttc gattccaccg ccgccttcta | 3360 |
| tgaaggttg ggcttcggaa tcgttttccg ggacgccggc tggatgatcc tccagcgcg | 3420 |
| ggatctcatg ctggagttct tcgcccacgc tagcggcgcg ccggccggcc cgggtgtgaaa | 3480 |
| taccgcacag atgcgtaagg agaaaatacc gcatcaggcg ctcttccgct tcctcgctca | 3540 |
| ctgactcgct gcgctcggtc gttcggctgc ggcgagcggc atcagctcac tcaaaggcgg | 3600 |
| taatacgggt atccacagaa tcaggggata acgcaggaaa gaacatgtga gcaaaaggcc | 3660 |
| agcaaaaggc caggaaccgt aaaaaggccg cgttgctggc gtttttccat aggctccgcc | 3720 |
| cccctgacga gcatcacaaa aatcgacgct caagtcagag gtggcgaaac ccgacaggac | 3780 |
| tataaagata ccaggcgttt cccctggaa gctccctcgt gcgctctcct gttccgaccc | 3840 |
| tgccgcttac cggatacctg tccgcctttc tcccttcggg aagcgtggcg ctttctcata | 3900 |
| gctcacgctg taggtatctc agttcgggtg aggtcgttcg ctccaagctg ggctgtgtgc | 3960 |
| acgaaccccc cgttcagccc gaccgctgcg ccttatccgg taactatcgt cttgagtcca | 4020 |
| accggttaag acacgactta tcgccactgg cagcagccac tggtaacagg attagcagag | 4080 |
| cgaggtatgt aggcgggtgct acagagtctt tgaagtgggt gcctaactac ggctacacta | 4140 |
| gaaggacagt atttggtatc tgcgctctgc tgaagccagt taccttcgga aaaagagttg | 4200 |
| gtagctcttg atccggcaaa caaacaccg ctggtagcgg tgggtttttt gtttgcaagc | 4260 |
| agcagattac gcgcagaaaa aaaggatctc aagaagatcc tttgatcttt tctacggggt | 4320 |
| ctgacgctca gtggaacgaa aactcacgtt aagggtatctt ggtcatgaga ttatcaaaaa | 4380 |
| ggatcttcac ctagatcctt ttaaaggccg gccgcggccg ccatcggcatt tttcttttgc | 4440 |
| gtttttatct gtttaactgtt aattgtcctt gttcaaggat gctgtctttg acaacagatg | 4500 |
| ttttcttgcc tttgatgttc agcaggaagc tcggcgcaaa cgttgattgt ttgtctgcgt | 4560 |
| agaatcctct gtttgtcata tagcttgtaa tcacgacatt gtttcctttc gcttgaggta | 4620 |
| cagcgaagtg tgagtaagta aaggttacat cgttaggatc aagatccatt tttaacacaa | 4680 |
| ggccagtttt gttcagcggc ttgtatgggc cagttaaaga attagaaaca taaccaagca | 4740 |
| tgtaaataatc gtttagacgta atgccgtcaa tcgtcatttt tgatccgcgg gagtcagtga | 4800 |
| acaggtacca tttgccgttc attttaaaga cgttcgcgcg ttcaatttca tctgttactg | 4860 |
| tgtttagatgc aatcagcggc ttcatcactt ttttcagtgt gtaatcatcg tttagctcaa | 4920 |
| tcataccgag agcgccgttt gctaactcag ccgtgcgttt tttatcgctt tgcagaagtt | 4980 |
| tttgactttc ttgacggaag aatgatgtgc ttttgccata gtatgctttg ttaaataaag | 5040 |
| attcttcgcc ttggtagcca tcttcagttc cagtgtttgc ttcaaatact aagtatttgt | 5100 |
| ggcctttatc ttctacgtag tgaggatctc tcagcgtatg gttgtcgcct gagctgtagt | 5160 |
| tgcttcatc gatgaactgc tgtacatttt gatacgtttt tccgtcaccg tcaaagattg | 5220 |
| atttataatc ctctacaccg ttgatgttca aagagctgtc tgatgctgat acgttaactt | 5280 |

Sequence.txt

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tttttaata caattcagaa aatatcataa tatctcattt cactaaataa tagtgaacgg 6300
caggtatatg tgatgggtta aaaaggatcg gcggccgctc gatttaaatac 6350
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<212> DNA
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<220>
<223> Plasmid pH429
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cctttggagc ggagccggtt aaaattggca gcattcaccg aaagaaaagg agaaccacat 180
gcttgcccta gggtggatta catggatcat tattggtggt ctagctggtt ggattgcctc 240
caagattaaa ggcactgatg ctgagcaagg aattttgctg aacatagtcg tcggtattat 300
cgggtggttg ttaggcggct ggctgcttg aatcttcgga gtggatggtt ccggtggcgg 360
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actatacgaa ccggtttgtc tatattggtg ttagacagtt cgctgtatct tgaaacagac 600
caaccgaaa ggacgtggcc gaacgtggct gctagctaata cttgatggt ggacttgctg 660
```

Sequence.txt

| | |
|---|------|
| gatctcgatt ggtccacaac atcagtcctc ttgagacggc tcgcgatttg gctcggcagt | 720 |
| tggtgtcggc tccacctgcy gactactcaa tttagtttct tcattttccg aaggggtatc | 780 |
| ttcgttgggg gaggcgtcga taagcccctt ctttttagct ttaacctcag cgcgacgctg | 840 |
| ctttaagcgc tgcattggcg cgcggttcat ttcacgttgc gtttcgcgcc tcttggtcgc | 900 |
| gatttctttg cgggcctggt ttgcttcgtt gatttcggca gtacggggtt tggtaggttc | 960 |
| cacgtttgtt gcgtgaagcg ttgagcggtt ccatgggggt agaatacatca gggcgcgggt | 1020 |
| tttgcgctgt gtccacagga agatgcgctt ttctttttgt ttgdcgcggg agatgtcgcg | 1080 |
| ctgctctagg tggtagcatt tgaaatcgtc ggtaagtggg tatttgcgtt ccaaaatgac | 1140 |
| catcatgatg attgtttgga ggagcgtcca cagggtgttg ctgacgcgtc atatgactag | 1200 |
| ttcggaccta gggatatcgt cgacatcgat gctcttctgc gtttaattaac aattgggatac | 1260 |
| ctctagacct gggatttaaa tcgctagcgg gctgctaaag gaagcgggac acgtagaaag | 1320 |
| ccagtcgcga gaaacggtgc tgaccccgga tgaatgtcag ctactgggct atctggacaa | 1380 |
| gggaaaacgc aagcgcgaaag agaaagcagg tagcttgcag tgggcttaca tggcgatagc | 1440 |
| tagactgggc ggttttatgg acagcaagcg aaccggaatt gccagctggg gcgccctctg | 1500 |
| gtaagggttg gaagccctgc aaagtaaact ggatggcctt cttgccgcca aggatctgat | 1560 |
| ggcgcagggg atcaagatct gatcaagaga caggatgagg atcgtttcgc atgattgaac | 1620 |
| aagatggatt gcacgcaggt tctccggccg cttgggtgga gaggctattc ggctatgact | 1680 |
| gggcacaaca gacaatcggc tgctctgatg ccgccgtgtt ccggctgtca gcgcaggggc | 1740 |
| gcccggttct ttttgtcaag accgacctgt ccgggtgccct gaatgaactg caggacgagg | 1800 |
| cagcgcgggt atcgtgggtg gccacgacgg gcgttccttg cgcagctgtg ctcgacgttg | 1860 |
| tactgaagc ggaaggggac tggctgctat tgggcgaagt gccggggcag gatctcctgt | 1920 |
| catctcacct tgctcctgcc gagaaagtat ccatcatggc tgatgcaatg cggcggctgc | 1980 |
| atacgcttga tccggctacc tgccattcg accaccaagc gaaacatcgc atcgagcgag | 2040 |
| cacgtactcg gatggaagcc ggtcttgcg atcaggatga tctggacgaa gagcatcagg | 2100 |
| ggctcgcgcc agccgaactg ttcgccaggc tcaaggcgcg catgcccgcg ggcgaggatc | 2160 |
| tcgtcgtgac ccatggcgat gcctgcttgc cgaatatcat ggtggaaaat ggccgctttt | 2220 |
| ctggattcat cgactgtggc cggctgggtg tggcggaccg ctatcaggac atagcgttgg | 2280 |
| ctacccgtga tattgctgaa gagcttggcg gcgaatgggc tgaccgcttc ctcgtgcttt | 2340 |
| acggtatcgc cgctcccgat tcgcagcgca tcgccttcta tcgccttctt gacgagttct | 2400 |
| tctgagcggg actctggggg tcgaaatgac cgaccaagcg acgcccacc tgccatcacg | 2460 |
| agatttcgat tccaccgccg ctttctatga aagggtgggc ttcggaatcg ttttccggga | 2520 |
| cgcgggctgg atgatcctcc agcgcgggga tctcatgctg gagttcttcg cccacgctag | 2580 |
| cggcgcgccg gccggcccg tgtgaaatac cgcacagatg cgtaaggaga aaataaccgca | 2640 |
| tcaggcgtc ttccgcttcc tcgctcactg actcgtgcg ctcggctggt cggtgcggc | 2700 |

Sequence.txt

| | | | | | | |
|-------------|------------|------------|-------------|-------------|-------------|------|
| gagcggatc | agctcactca | aaggcggtaa | tacggttatc | cacagaatca | ggggataacg | 2760 |
| caggaaagaa | catgtgagca | aaaggccagc | aaaaggccag | gaaccgtaaa | aaggccgcgt | 2820 |
| tgctggcggt | tttccatagg | ctccgcccc | ctgacgagca | tcacaaaaat | cgacgctcaa | 2880 |
| gtcagagggtg | gcgaaacccg | acaggactat | aaagatacca | ggcgtttccc | cctggaagct | 2940 |
| ccctcgtgcg | ctctcctggt | ccgaccctgc | cgcttaccgg | atacctgtcc | gcctttctcc | 3000 |
| cttcgggaag | cgtggcgctt | tctcatagct | cacgctgtag | gtatctcagt | tcggtgtagg | 3060 |
| tcgttcgctc | caagctgggc | tgtgtgcacg | aaccccccg | tcagcccgac | cgctgcgctt | 3120 |
| tatccggtaa | ctatcgtctt | gagtccaacc | cggtaagaca | cgacttatcg | ccactggcag | 3180 |
| cagccactgg | taacaggatt | agcagagcga | ggtagttagg | cgggtgctaca | gagttcttga | 3240 |
| agtggtagcc | taactacggc | tacactagaa | ggacagtatt | tggtagctgc | gctctgctga | 3300 |
| agccagttac | cttcggaaaa | agagttggta | gctcttgatc | cggcaaacia | accaccgctg | 3360 |
| gtagcggtag | tttttttggt | tgcaagcagc | agattacg | cagaaaaaaa | ggatctcaag | 3420 |
| aagatccttt | gatcttttct | acggggtctg | acgctcagtg | gaacgaaaac | tcacgttaag | 3480 |
| ggattttggt | catgagatta | tcaaaaagga | tcttcaccta | gatcctttta | aaggccggcc | 3540 |
| gcggccgcca | tcggcatttt | cttttgcggt | tttatttggt | aactgttaat | tgtccttggt | 3600 |
| caaggatgct | gtctttgaca | acagatgttt | tcttgccctt | gatgttcagc | aggaagctcg | 3660 |
| gcgcaaacgt | tgattgtttg | tctgcgtaga | atcctctggt | tgtcatatag | cttgtaatca | 3720 |
| cgacattggt | tcctttcgct | tgaggtagag | cgaagtgtga | gtaagtaaag | gttacatcgt | 3780 |
| taggatcaag | atccattttt | aacacaaggc | cagttttggt | cagcggcttg | tatgggcccag | 3840 |
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| tcatttttga | tccgcgggag | tcagtgaaca | ggtagcattt | gccgttcatt | ttaaagacgt | 3960 |
| tcgcgcgttc | aatttcatct | gttactgtgt | tagatgcaat | cagcgggttc | atcacttttt | 4020 |
| tcagtgtgta | atcatcggtt | agctcaatca | taccgagagc | gccgtttgct | aactcagccg | 4080 |
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| tgccatagta | tgctttgtta | aataaagatt | cttcgccttg | gtagccatct | tcagttccag | 4200 |
| tgtttgcttc | aaatactaag | tatttggtgc | ctttatcttc | tacgtagtga | ggatctctca | 4260 |
| gcgtatgggt | gtgcgctgag | ctgtagtgtc | cttcacgat | gaactgctgt | acattttgat | 4320 |
| acgtttttcc | gtcaccgtca | aagattgatt | tataatcctc | tacaccgttg | atgttcaaag | 4380 |
| agctgtctga | tgctgatacg | ttaacttgtg | cagttgtcag | tgtttggttg | ccgtaatgtt | 4440 |
| taccggagaa | atcagtgtag | aataaacgga | tttttccgtc | agatgtaa | gtggctgaac | 4500 |
| ctgaccattc | ttgtgtttgg | tcttttagga | tagaatcatt | tgcacgaat | ttgtcgctgt | 4560 |
| ctttaaagac | gcggccagcg | tttttccagc | tgtcaataga | agtttcgccc | actttttgat | 4620 |
| agaacatgta | aatcgatgtg | tcatccgc | tttttaggatc | tccggcta | gcaaagacga | 4680 |
| tgtggtagcc | gtgatagttt | gcgacagtgc | cgtcagcggt | ttgtaatggc | cagctgtccc | 4740 |

Sequence.txt

| | |
|---|------|
| aaacgtccag gccttttgca gaagagatat ttttaattgt ggacgaatca aattcagaaa | 4800 |
| cttgatattt ttcatttttt tgctgttcag ggatttgcag catatcatgg cgtgtaatat | 4860 |
| gggaaatgcc gtatgtttcc ttatatggct tttggttcgt ttctttcgca aacgcttgag | 4920 |
| ttgcgctcc tgccagcagt gcggtagtaa aggttaatac tgttgcttgt tttgcaaact | 4980 |
| ttttgatgtt catcgttcat gtctcctttt ttatgtactg tgttagcggg ctgcttcttc | 5040 |
| cagccctcct gtttgaagat ggcaagttag ttacgcacaa taaaaaaga cctaaaatat | 5100 |
| gtaaggggtg acgccaaagt atacactttg ccctttacac attttaggtc ttgcctgctt | 5160 |
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| attgcaactg gtctattttc ctcttttggt tgatagaaaa tcataaaagg atttgagac | 5280 |
| tacgggccta aagaactaaa aaatctatct gtttcttttc attctctgta tttttatag | 5340 |
| tttctgttgc atgggcataa agttgccttt ttaatcacia ttcagaaaat atcataatat | 5400 |
| ctcatttcac taaataatag tgaacggcag gtatatgtga tgggttaaaa aggatcggcg | 5460 |
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 <213> artificial

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| cccctgcagc atgttcagca accattggca gcggcgata gcgaacttcc ccctttctc | 180 |
| ccgttgccat tttcgctca ctgatcagg gactgagctt tttgtagcct tccgatttt | 240 |
| tacacaagac tgtcaacacg cttcttgca gactcagctc cgcaccataa acggtatgca | 300 |
| ttccagcttc cgcggcagct tccgcaaata tcaactgcacc ataaaaacca tccctatcca | 360 |
| tgactgatag agcaacaagt cctaactttt tggcctgcac aaccacatca gacgatccg | 420 |
| atgcgccagt gagaaagtta taactgctgg tggcatgcag ctcggcaaaa ggaaccgacg | 480 |
| cttccccctg catggcagat gaaggcgct gcgcatccgg ctcatgcagc accggacgca | 540 |
| gagattcgac ctttttacct gagaggattc tttccaattt ggaccacgat aatggcctgc | 600 |
| cgttaaagct tccccgccca ttccattcca taatgatagg atacattttt agaacaaatt | 660 |
| ttccaataag ttttcacgc cagccggaga aggaaataga ccaagctgta cagatcgacg | 720 |
| cgtcctggct gagtacaacg tcggctccgg cgcagacctc accccagttg gctccagcga | 780 |
| aatcgtgcc ctggcactat tctggaagga ccacgactcc atcgacggca ttgacggcga | 840 |
| gtccgttgcc atccctaacg atccttccaa ccagggccgc gccatcaacg ttctcgttca | 900 |
| ggcaggctctg gtcaccctga agaccccagg tctggtcacc ccagctccag tcgatatcga | 960 |

Sequence.txt

| | | | | | | |
|------------|-------------|------------|-------------|------------|------------|------|
| cgaggcagct | tccaaggttt | ccgtcatccc | agtcgacgca | gctcaggcac | caaccgctta | 1020 |
| ccaggagggt | cgcccagcga | tcatacaaa | ctccttcctt | gaccgcgcag | gcatcgatcc | 1080 |
| aaacctcgcg | gtcttcgaag | atgatcctga | gtctgaagaa | gcagagccat | acatcaacgt | 1140 |
| cttcgtcacc | aaggctgagg | acaaggacga | tgccaacatc | gcccgcctcg | ttgagctgtg | 1200 |
| gcacgacca | gaggttctgg | ctgcagtaga | ccgcgactct | gagggcacct | ccgtcccagt | 1260 |
| tgatcgtcca | ggagctgacc | ttcaggaaat | ccttgatcgc | cttgaggctg | atcaggaaaa | 1320 |
| cgcataatct | cttttgagtt | ctttgcatac | ccatgtgcag | atttctttgc | acaatcacag | 1380 |
| cctgaaaatc | agactgtgaa | cttcaaacgc | atatgactag | ttcggaccta | gggatatcgt | 1440 |
| cgacatcgat | gctcttctgc | gttaattaac | aattgggatc | ctctagaccc | gggatttaaa | 1500 |
| tcgctagcgg | gctgctaaag | gaagcggaac | acgtagaaag | ccagtccgca | gaaacggtgc | 1560 |
| tgaccccgga | tgaatgtcag | ctactgggct | atctggacaa | gggaaaacgc | aagcgcaaag | 1620 |
| agaaagcagg | tagcttgtag | tgggcttaca | tggcgatagc | tagactgggc | ggttttatgg | 1680 |
| acagcaagcg | aaccggaatt | gccagctggg | gcgccctctg | gtaaggttgg | gaagccctgc | 1740 |
| aaagtaaact | ggatggcttt | cttgccgcca | aggatctgat | ggcgagggg | atcaagatct | 1800 |
| gatcaagaga | caggatgagg | atcgtttcgc | atgattgaac | aagatggatt | gcacgcaggt | 1860 |
| tctccggccg | cttgggttga | gaggctattc | ggctatgact | gggcacaaca | gacaatcggc | 1920 |
| tgctctgatg | ccgccgtgtt | ccggctgtca | gcgagggggc | gcccggttct | ttttgtcaag | 1980 |
| accgacctgt | ccggtgccct | gaatgaactg | caggacgagg | cagcgcggtc | atcgtggctg | 2040 |
| gccacgacgg | gcgttccttg | cgcagctgtg | ctcgacgttg | tactgaagc | gggaaggagc | 2100 |
| tggctgctat | tgggcggaagt | gccggggcag | gatctcctgt | catctcacct | tgctcctgcc | 2160 |
| gagaaagtat | ccatcatggc | tgatgcaatg | cggcggtctg | atacgcttga | tccggctacc | 2220 |
| tgccatttcg | accaccaagc | gaaacatcgc | atcgagcgag | cacgtactcg | gatggaagcc | 2280 |
| ggtcttgtcg | atcaggatga | tctggacgaa | gagcatcagg | ggctcgcgcc | agccgaactg | 2340 |
| ttcgccaggc | tcaaggcgcg | catgcccagc | ggcgaggatc | tcgtcgtgac | ccatggcgat | 2400 |
| gcctgcttgc | cgaatatcat | ggtggaaaat | ggccgctttt | ctggattcat | cgactgtggc | 2460 |
| cggctgggtg | tggcggaccg | ctatcaggac | atagcgttgg | ctaccggtga | tattgctgaa | 2520 |
| gagcttggcg | gcgaatgggc | tgaccgcttc | ctcgtgcttt | acggtatcgc | cgctcccgat | 2580 |
| tcgcagcgca | tcgccttcta | tcgccttctt | gacgagttct | tctgagcggg | actctggggg | 2640 |
| tcgaaatgac | cgaccaagcg | acgccaacc | tgccatcacg | agatttcgat | tccaccgccg | 2700 |
| ccttctatga | aaggttgggc | ttcggaatcg | ttttccggga | cgccggctgg | atgatcctcc | 2760 |
| agcgcgggga | tctcatgctg | gagttcttcg | cccacgctag | cggcgcgccg | gccggcccgg | 2820 |
| tgtgaaatac | cgcacagatg | cgtaaggaga | aaataaccgca | tcaggcgctc | ttccgcttcc | 2880 |
| tcgctcactg | actcgctgcg | ctcggtcggt | cggctgcggc | gagcggtatc | agctcactca | 2940 |
| aaggcggtaa | tacggttatc | cacagaatca | ggggataacg | caggaaagaa | catgtgagca | 3000 |

Sequence.txt

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|------|
| aaaggccagc | aaaaggccag | gaaccgtaaa | aaggccgcgt | tgctggcggtt | tttccatagg | 3060 |
| ctccgcccc | ctgacgagca | tcacaaaaat | cgacgctcaa | gtcagagggtg | gcgaaacccg | 3120 |
| acaggactat | aaagatacca | ggcgtttccc | cctggaagct | ccctcgtgcg | ctctcctgtt | 3180 |
| ccgaccctgc | cgcttaccgg | atacctgtcc | gcctttctcc | cttcgggaag | cgtaggcgctt | 3240 |
| tctcatagct | cacgctgtag | gtatctcagt | tcgggtgtagg | tcgttcgctc | caagctgggc | 3300 |
| tgtgtgcacg | aaccccccg | tcagcccgac | cgctgcgcc | tatccggtaa | ctatcgtctt | 3360 |
| gagtccaacc | cggtaaagaca | cgacttatcg | ccactggcag | cagccactgg | taacaggatt | 3420 |
| agcagagcga | ggatatgtagg | cggtgctaca | gagttcttga | agtgggtggc | taactacggc | 3480 |
| tacactagaa | ggacagtatt | tggtatctgc | gctctgctga | agccagttac | cttcggaaaa | 3540 |
| agagttggta | gctcttgatc | cggcaaaaca | accaccgctg | gtacgggtgg | ttttttgtt | 3600 |
| tgcaagcagc | agattacgcg | cagaaaaaaa | ggatctcaag | aagatccttt | gatcttttct | 3660 |
| acggggctcg | acgctcagtg | gaacgaaaac | tcacgttaag | ggatttttgt | catgagatta | 3720 |
| tcaaaaagga | tcttcaccta | gatcctttta | aaggccggcc | gcggccgcca | tcggcatttt | 3780 |
| cttttgcgtt | tttatttgtt | aactgttaat | tgtccttggt | caaggatgct | gtctttgaca | 3840 |
| acagatgttt | tcttgccttt | gatgttcagc | aggaagctcg | gcgcaaacgt | tgattgtttg | 3900 |
| tctgcgtaga | atcctctgtt | tgtcatatag | cttgtaatca | cgacattggt | tcctttcgct | 3960 |
| tgaggtagag | cgaagtgtga | gtaagtaaag | gttacatcgt | taggatcaag | atccattttt | 4020 |
| aacacaaggc | cagttttgtt | cagcggcttg | tatgggccag | ttaaagaatt | agaaacataa | 4080 |
| ccaagcatgt | aaatatcggt | agacgtaatg | ccgtcaatcg | tcatttttga | tccgcgggag | 4140 |
| tcagtgaaca | ggtaccatct | gccgttcatt | ttaaagacgt | tcgcgcgttc | aatttcacct | 4200 |
| gttactgtgt | tagatgcaat | cagcggtttc | atcacttttt | tcagtgtgta | atcatcgttt | 4260 |
| agctcaatca | taccgagagc | gccgtttgct | aactcagccg | tcggtttttt | atcgctttgc | 4320 |
| agaagttttt | gactttcttg | acggaagaat | gatgtgcttt | tgccatagta | tgctttgtta | 4380 |
| aataaagatt | cttcgccttg | gtagccatct | tcagttccag | tgtttgcttc | aaataactaag | 4440 |
| tatttggtgc | ctttatcttc | tacgtagtga | ggatctctca | gcgtatgggt | gtcgcctgag | 4500 |
| ctgtagtgtc | cttcacgat | gaactgctgt | acattttgat | acgtttttcc | gtcaccgtca | 4560 |
| aagattgatt | tataatcctc | tacaccgttg | atgttcaaag | agctgtctga | tgctgatacg | 4620 |
| ttaacttggt | cagttgtcag | tgtttggttg | ccgtaatggt | taccggagaa | atcagtgtag | 4680 |
| aataaacgga | tttttccgtc | agatgtaaat | gtggctgaac | ctgaccattc | ttgtgtttgg | 4740 |
| tcttttagga | tagaatcatt | tgcacgaat | ttgtcgctgt | ctttaaagac | gcggccagcg | 4800 |
| tttttccagc | tgtcaataga | agtttcgccg | actttttgat | agaacatgta | aatcgatgtg | 4860 |
| tcatccgcat | ttttaggatc | tccggctaata | gcaaagacga | tgtggtagcc | gtgatagttt | 4920 |
| gcgacagtgc | cgtcagcggt | ttgtaatggc | cagctgtccc | aaacgtccag | gccttttgca | 4980 |
| gaagagatat | ttttaattgt | ggacgaatca | aattcagaaa | cttgatattt | ttcatttttt | 5040 |

Sequence.txt

| | | | | | | |
|------------|-------------|------------|-------------|------------|------------|------|
| tgctgttcag | ggatttgcag | catatcatgg | cgtgtaatat | gggaaatgcc | gtatgtttcc | 5100 |
| ttatatggct | tttggttcgt | ttctttcgca | aacgcttgag | ttgcgcctcc | tgccagcagt | 5160 |
| gcggtagtaa | aggttaatac | tggtgcttgt | tttgcaaaact | ttttgatgtt | catcgttcat | 5220 |
| gtctcctttt | ttatgtactg | tgtagcgggt | ctgcttcttc | cagccctcct | gtttgaagat | 5280 |
| ggcaagttag | ttacgcacaa | taaaaaaaga | cctaaaatat | gtaaggggtg | acgccaaagt | 5340 |
| atacactttg | cccttttacac | attttaggtc | ttgcctgctt | tatcagtaac | aaacccgcgc | 5400 |
| gatttacttt | tcgacctcat | tctattagac | tctcgttttg | attgcaactg | gtctattttc | 5460 |
| ctcttttgtt | tgatagaaaa | tcataaaagg | atttgcagac | tacgggccta | aagaactaaa | 5520 |
| aaatctatct | gtttcttttc | attctctgta | ttttttatag | tttctgttgc | atgggcataa | 5580 |
| agttgccttt | ttaatcacia | ttcagaaaat | atcataatat | ctcatttcac | taaataatag | 5640 |
| tgaacggcag | gtatatgtga | tgggttaaaa | aggatcggcg | gccgctcgat | ttaaatc | 5697 |

<210> 30
 <211> 7318
 <212> DNA
 <213> artificial

<220>
 <223> Plasmid pOM427

| | |
|-------------|-------------|
| <400> 30 | |
| ggccgctcga | tttaaattctc |
| gagctctgga | gtgcgacagg |
| tttgatgata | aaaaattagc |
| | 60 |
| gcaagaagac | aaaaatcacc |
| ttgcgctaata | gctctgttac |
| aggtcactaa | taccatctaa |
| | 120 |
| gtagttgatt | catagtgact |
| gcatatgtaa | gtatttcctt |
| agataacaat | tgattgaatg |
| | 180 |
| tatgcaaata | aatgcataca |
| ccataggtgt | ggtttaattt |
| gatgcccttt | ttcagggctg |
| | 240 |
| gaatgtgtaa | gagcgggggt |
| atttatgctg | ttgttttttt |
| gttactcggg | aagggcttta |
| | 300 |
| cctcttccgc | ataaacgctt |
| ccatcagcgt | ttatagttaa |
| aaaaatcttt | cgggggggatg |
| | 360 |
| gggagtaagc | ttgtgttatc |
| cgctcgggcc | caatccgcaa |
| gctccaccga | ctcgttggcg |
| | 420 |
| tgcgactcta | gataaatatc |
| aagcagctgg | ccgccaataa |
| cctcagtagc | catgccacgc |
| | 480 |
| caagcatccc | tcgtgcgggc |
| caatgcctct | gcactcaaac |
| cggaatcctg | cagcatgtct |
| | 540 |
| tctgccaca | ccaatgccat |
| atcgccagcc | aaaatcgaga |
| ctgaaacgcc | aaagtgctcg |
| | 600 |
| ggatcgctt | cgaattattt |
| ggcgcggtga | tcagcttcca |
| cagcccgggtg | aactgtgggg |
| | 660 |
| gctccgcgcc | gggtatcaga |
| agaatcgata | atatcgtcac |
| gaatcaaggc | acaagcctgg |
| | 720 |
| atgaattcga | gactcgctgc |
| ggcgtcaagg | acggactcaa |
| gtttttcaga | agaattctta |
| | 780 |
| tgcccttgcg | ccgccaggaa |
| accagcccac | gcataaagag |
| gacggattcg | ctttcctcca |
| | 840 |
| ttgagcacga | aactgcgaag |
| atgggccaca | gcattctgtga |
| caggagcgcc | gatatcagca |
| | 900 |
| attgttagct | cttgagcatc |
| gaggaaactgc | gtcaaacgat |
| ctcgcacgac | ctccggaaat |
| | 960 |
| ttgtcgaggt | caaggtcatg |
| ggcatcgaaa | ctgctcaagg |
| agacgtcctt | caatcgaata |
| | 1020 |
| gggggatgcg | ggctgaattt |
| tgggtggaggt | gaataaatgc |
| cagaggcagt | cccaacaaaa |
| | 1080 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|------------|-------------|--------------|------|
| cactctcatc | acactaagat | acccgtcgac | tcatacgtta | aatctatcac | cgcaagggat | 1140 |
| aaatatctaa | caccgtgcgt | gttgactatt | ttacctctgg | cggtgataat | ggttgcatgt | 1200 |
| actaaggagg | attaattaat | gtccctaacg | aacatcccag | cctcatctca | atgggcaatt | 1260 |
| agcgacgttt | tgaagcgtcc | ttcacccggc | cgagtacctt | tttctgtcga | gtttatgcca | 1320 |
| ccccgcgacg | atgcagctga | agagcgtctt | taccgcgcag | cagaggtctt | ccatgacctc | 1380 |
| ggtgcatcgt | ttgtctccgt | gacttatggg | gctggcggat | caaccctga | gagaacctca | 1440 |
| cgtattgtct | gacgattagc | gaaacaaccg | ttgaccactc | tgggtgcacct | gaccctgggt | 1500 |
| aaccacactc | gcgaagagat | gaaggcaatt | cttcgggaat | acctagagct | gggattaaca | 1560 |
| aacctgttgg | cgcttcgagg | agatccgcct | ggagacccat | taggcgattg | ggtgagcacc | 1620 |
| gatggaggac | tgaactatgc | ctctgagctc | atcgatctta | ttaagtccac | tcctgagttc | 1680 |
| cgggaattcg | acctcggtat | cgctccttc | cccgaagggc | atttccgggc | gaaaactcta | 1740 |
| gaagaagaca | caaatacac | tctggcgaag | ctgcgtggag | gggcagagta | ctccatcacg | 1800 |
| cagatgttct | ttgatgtgga | agactacctg | cgacttcgtg | atcgccggat | cctgttttgg | 1860 |
| cggatgagag | aagattttca | gcctgataca | gattaaatca | gaacgcagaa | gcggtctgat | 1920 |
| aaaacagaat | ttgcctggcg | gcagtagcgc | ggtggtccca | cctgaccca | tgccgaactc | 1980 |
| agaagtga | cgccgtagcg | ccgatggtag | tgtggggtct | ccccatgcga | gagtagggaa | 2040 |
| ctgccaggca | tcaataaaaa | cgaaaggctc | agtcgaaaga | ctgggccttt | cgttttatct | 2100 |
| gttgtttgtc | ggtgaacgct | ctcctgagta | ggacaaatcc | gccgggagcg | gatttgaacg | 2160 |
| ttgcgaagca | acggcccgga | gggtggcggg | caggacgcc | gccataaact | gccaggcatc | 2220 |
| aaattaagca | gaaggccatc | ctgacggatg | gcctttttgc | gtttctacaa | actcttggtg | 2280 |
| cgggatttaa | atgatccgct | agcgggctgc | taaaggaagc | ggaacacgta | gaaagccagt | 2340 |
| ccgcagaaac | ggtgctgacc | ccggatgaat | gtcagctact | gggctatctg | gacaagggaa | 2400 |
| aacgcaagcg | caaagagaaa | gcaggtagct | tgcagtgggc | ttacatggcg | atagctagac | 2460 |
| tgggcggttt | tatggacagc | aagcgaaccg | gaattgccag | ctggggcgcc | ctctggtgtaag | 2520 |
| gttgggaagc | cctgcaaagt | aaactggatg | gctttcttgc | cgccaaggat | ctgatggcgc | 2580 |
| aggggatcaa | gatctgatca | agagacagga | tgaggatcgt | ttcgcgatgat | tgaacaagat | 2640 |
| ggattgcacg | caggttctcc | ggccgcttgg | gtggagaggc | tattcggtta | tgactgggca | 2700 |
| caacagacaa | tcggctgctc | tgatgccgcc | gtgttcgggc | tgtcagcgca | ggggcgcccg | 2760 |
| gttctttttg | tcaagaccga | cctgtccggg | gccctgaatg | aactgcagga | cgaggcagcg | 2820 |
| cggctatcgt | ggctggccac | gacgggcgtt | ccttgccgag | ctgtgctcga | cgttgtcact | 2880 |
| gaagcgggaa | gggactggct | gctattgggc | gaagtgccgg | ggcaggatct | cctgtcatct | 2940 |
| caccttgctc | ctgccgagaa | agtatccatc | atggctgatg | caatgcggcg | gctgcatacg | 3000 |
| cttgatccgg | ctacctgccc | attcgaccac | caagcgaaac | atcgcatcga | gcgagcacgt | 3060 |
| actcggatgg | aagccggtct | tgtcgatcag | gatgatctgg | acgaagagca | tcaggggctc | 3120 |

Sequence.txt

| | |
|---|------|
| gcgccagccg aactgttcgc caggctcaag gcgcgcacatgc ccgacggcga ggatctcgtc | 3180 |
| gtgacccatg gcgatgcctg cttgccgaat atcatgggtg aaaatggccg cttttctgga | 3240 |
| ttcatcgact gtggccggct ggggtgtggc gaccgctatc aggacatagc gttggctacc | 3300 |
| cgtgatattg ctgaagagct tggcggcgaa tgggctgacc gcttcctcgt gctttacggt | 3360 |
| atcgccgctc ccgattcgca gcgcacatgcc ttctatcgcc ttcttgacga gttcttctga | 3420 |
| gcgggactct ggggttcgaa atgaccgacc aagcgacgcc caacctgcca tcacgagatt | 3480 |
| tcgattccac cgccgccttc tatgaaagggt tgggcttcgg aatcgttttc cgggacgccg | 3540 |
| gctggatgat cctccagcgc ggggatctca tgctggagtt cttcgcccac gctagcggcg | 3600 |
| cggcacgggt gcgcacatgc gtgctcctgt cgttgaggac ccggctaggc tggcgggggt | 3660 |
| gccttactgg ttagcagaat gaatcaccga tacgcgagcg aacgtgaagc gactgctgct | 3720 |
| gcaaaacgtc tgcgacctga gcaacaacat gaatggtctt cggtttccgt gtttcgtaaa | 3780 |
| gtctggaaac gcggaagtca gcgccctgca ccattatggt ccggatctgc atcgaggat | 3840 |
| gctgctggct accctgtgga acacctacat ctgtattaac gaagcgtgg cattgaccct | 3900 |
| gagtgatattt tctctggtcc cgccgcaccc ataccgccag ttgtttacc tcacaacgtt | 3960 |
| ccagtaaccg ggcattgttca tcatcagtaa cccgtatcgt gagcatcctc tctcgtttca | 4020 |
| tcggtatcat taccctcatg aacagaaatc ccccttacac ggaggcatca gtgaccaaac | 4080 |
| aggaaaaaac cgcccttaac atggcccgtt ttatcagaag ccagacatta acgcttctgg | 4140 |
| agaaactcaa cgagctggac gcggatgaac aggcagacat ctgtgaatcg cttcacgacc | 4200 |
| acgctgatga gctttaccgc agctgcctcg cgcgtttcgg tgatgacggg gaaaacctct | 4260 |
| gacacatgca gctcccggag acggtcacag cttgtctgta agcggatgcc gggagcagac | 4320 |
| aagcccgtca gggcgcgtca gcgggtgttg gcgggtgtcg gggcgcagcc atgaccagt | 4380 |
| cacgtagcga tagcggagtg tatactggct taactatgcg gcatcagagc agattgtact | 4440 |
| gagagtgcac catatgcggg gtgaaatacc gcacagatgc gtaaggagaa aataccgcat | 4500 |
| caggcgtctt tccgcttcct cgctcactga ctcgctgcgc tcggctcgtt ggctgcggcg | 4560 |
| agcggatca gctcactcaa aggcggaat acggttatcc acagaatcag gggataacgc | 4620 |
| aggaaagaac atgtgagcaa aaggccagca aaaggccagg aaccgtaaaa aggccgcgtt | 4680 |
| gctggcgttt ttccataggc tccgcccccc tgacgagcat cacaaaaatc gacgctcaag | 4740 |
| tcagagggtg cgaaacccga caggactata aagataccag gcgtttcccc ctggaagctc | 4800 |
| cctcgtgcgc tctcctgttc cgaccctgcc gcttaccgga tacctgtccg cttttctccc | 4860 |
| ttcgggaagc gtggcgcttt ctcatagctc acgctgtagg tatctcagtt cgggttaggt | 4920 |
| cgttcgctcc aagctgggct gtgtgcacga accccccgtt cagcccagcc gctgcgcctt | 4980 |
| atccggtaac tatcgtcttg agtccaaccc ggtaagacac gacttatcgc cactggcagc | 5040 |
| agccactggg aacaggatta gcagagcgag gtatgtaggc ggtgctacag agttcttgaa | 5100 |
| gtggtggcct aactacggct acactagaag gacagtattt ggtatctgcg ctctgctgaa | 5160 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|------------|-------------|------------|------|
| gccagttacc | ttcggaaaaa | gagttggtag | ctcttgatcc | ggcaaacaaa | ccaccgctgg | 5220 |
| tagcggtggt | ttttttgttt | gcaagcagca | gattacgcgc | agaaaaaaag | gatctcaaga | 5280 |
| agatcctttg | atcttttcta | cggggtctga | cgctcagtgg | aacgaaaact | cacgttaagg | 5340 |
| gattttggtc | atgagattat | caaaaaggat | cttcacctag | atccttttaa | aggccggccg | 5400 |
| cggccgccat | cggcattttc | ttttgcgttt | ttatttggtt | actgttaatt | gtccttgttc | 5460 |
| aaggatgctg | tctttgacaa | cagatgtttt | cttgcccttg | atgttcagca | ggaagctcgg | 5520 |
| cgcaaacggt | gattgtttgt | ctgcgtagaa | tcctctgttt | gtcatatagc | ttgtaatcac | 5580 |
| gacattgttt | cctttcgctt | gaggtacagc | gaagtgtgag | taagtaaagg | ttacatcggt | 5640 |
| aggatcaaga | tccattttta | acacaaggcc | agttttgttc | agcggcttgt | atgggccagt | 5700 |
| taaagaatta | gaaacataac | caagcatgta | aatatcggtt | gacgtaatgc | cgtcaatcgt | 5760 |
| catttttgat | ccgcgggagt | cagtgaacag | gtaccatttg | ccgttcattt | taaagacggt | 5820 |
| cgcgcggtca | atttcatctg | ttactgtggt | agatgcaatc | agcggtttca | tcactttttt | 5880 |
| cagtgtgtaa | tcatcgttta | gctcaatcat | accgagagcg | ccgtttgcta | actcagccgt | 5940 |
| gcgtttttta | tcgctttgca | gaagtttttg | actttcttga | cggaagaatg | atgtgctttt | 6000 |
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| gaacatgtaa | atcgatgtgt | catccgcatt | tttaggatct | ccggctaattg | caaagacgat | 6540 |
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| aacgtccagg | ccttttgtag | aagagatatt | tttaattgtg | gacgaatcaa | attcagaaac | 6660 |
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| tgcgccctct | gccagcagtg | cggtagtaaa | ggtaataact | gttgcttggt | ttgcaaactt | 6840 |
| tttgatgttc | atcgttcatg | tctccttttt | tatgtactgt | gttagcggtc | tgcttcttcc | 6900 |
| agccctcctg | tttgaagatg | gcaagttagt | tacgcacaat | aaaaaaagac | ctaaaatatg | 6960 |
| taaggggtga | cgccaaagta | tacactttgc | cctttacaca | ttttaggtct | tgcttgcttt | 7020 |
| atcagtaaca | aaccgcgcgc | atttactttt | cgacctcatt | ctattagact | ctcgtttgga | 7080 |
| ttgcaactgg | tctatttttc | tcttttggtt | gatagaaaat | cataaaaagga | tttgagact | 7140 |
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Sequence.txt

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| acttttattt ccacttcata aaaactgcct gtgacgattc cgttaaagat tgtgccaaat | 180 |
| cactgcgcaa aactcgcgcg gaaccagacc ttgccatgct atcgccattt cacactattt | 240 |
| gagtaatcgg aaatagatgg gtgtagacgc ttgattggcg gacggttcac agcggacgat | 300 |
| ttcaggccct cgtagctcga gagtttgaag ggggtccgatt cgttccgttc gtgacgcttt | 360 |
| gtgaggtttt ttgacgttgc accgtattgc ttgccgaaca tttttctttt cttttcggtt | 420 |
| tttcgagaat ttccacctac aaaagccac gtcacagctc ccagacttaa gattgatcac | 480 |
| acctttgaca catttgaacc acagttgggt ataaaatggg ttcaacatca ctatggtag | 540 |
| aggtgttgac gggtcagatt aagcaaagac tactttcggg gtagatcacc ttgccaaat | 600 |
| ttgaaccaat taacctaatg cgtagatctg atcatcggat ctaacgaaaa cgaacaaaa | 660 |
| ctttggtccc ggtttaaccc aggaaggata gctgccattt attccgggct tgtgaccgcg | 720 |
| tacccgataa ataggtcggc tgaaaaattt cgttgcaata tcaacaaaaa ggcctatcat | 780 |
| tgggaggtgt cgcaccaagt acttttgca agcgccatct gacggatttt caaaagatgt | 840 |
| atatgctcgg tgcggaaacc tacgaaagga ttttttacct ttgaccacct tgacgctgtc | 900 |
| acctgaactt caggcgctca ctgtacgcaa ttaccctctt gattgggtccg atgtggacac | 960 |
| caaggctgta gacactgttc gtgtcctcgc tgcagacgct gtagaaaact gtggctccgg | 1020 |
| ccaccaggc accgcaatga gcctggctcc ccttgcatat accctgtacc agcgggttat | 1080 |
| gaacgtagat ccacaggaca ccaactgggc aggccgtgac cgcttcgttc tttcttgtgg | 1140 |
| ccactcctct ttgaccaggt acatccagct ttacttgggt ggattcggcc ttgagatgga | 1200 |
| tgacctgaag gctctgcgca cctgggattc cttgaccca ggacacctg agtaccgcca | 1260 |
| caccaagggc gttgagatca ccaactggcc tcttgccag ggtcttgcac ctgcagttgg | 1320 |
| tatggccatg gctgctcgtc gtgagcgtgg cctattcgac ccaaccgctg ctgagggcga | 1380 |
| atccccattc gaccaccaca tctacgtcat tgcttctgat gggtcgacat cgatgctctt | 1440 |
| ctgcgttaat taacaattgg gatcctctag acccgggatt taaatgatcc gctagcgggc | 1500 |
| tgctaaagga agcggaaacac gtagaaagcc agtccgcaga aacgggtgctg acccgggatg | 1560 |
| aatgtcagct actgggctat ctggacaagg gaaaacgcaa gcgcaaagag aaagcaggta | 1620 |

Sequence.txt

| | | | | | | |
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| ccggaattgc | cagctggggc | gccctctggt | aagggtggga | agccctgcaa | agtaaactgg | 1740 |
| atggctttct | tgccgccaag | gatctgatgg | cgcaggggat | caagatctga | tcaagagaca | 1800 |
| ggatgaggat | cgtttcgcat | gattgaacaa | gatggattgc | acgcagggtc | tccggccgct | 1860 |
| tgggtggaga | ggctattcgg | ctatgactgg | gcacaacaga | caatcggtcg | ctctgatgcc | 1920 |
| gccgtgttcc | ggctgtcagc | gcaggggagc | ccggttcttt | ttgtcaagac | cgacctgtcc | 1980 |
| ggtgccctga | atgaactgca | ggacgaggca | gcgcggctat | cgtggctggc | cacgacgggc | 2040 |
| gttccttgcg | cagctgtgct | cgacgttgct | actgaagcgg | gaagggactg | gctgctattg | 2100 |
| ggcgaagtgc | cggggcagga | tctcctgtca | tctcaccttg | ctcctgccga | gaaagtatcc | 2160 |
| atcatggctg | atgcaatgcg | gcggctgcat | acgcttgatc | cggctacctg | cccattcgac | 2220 |
| caccaagcga | aacatcgcat | cgagcgagca | cgtactcgga | tggaagccgg | tcttgtcgat | 2280 |
| caggatgatc | tggaagcaga | gcacgagggg | ctcgcgccag | ccgaactgtt | cgccaggctc | 2340 |
| aaggcgcgca | tggccgacgg | cgaggatctc | gtcgtgacct | atggcgatgc | ctgcttgccg | 2400 |
| aatatcatgg | tggaataatg | ccgcttttct | ggattcatcg | actgtggccg | gctgggtgtg | 2460 |
| gcggaccgct | atcaggacat | agcgttggct | acccgtgata | ttgctgaaga | gcttggcggc | 2520 |
| gaatgggctg | accgcttcct | cgtgctttac | ggatcgcggc | ctcccgattc | gcagcgcac | 2580 |
| gccttctatc | gccttcttga | cgagttcttc | tgagcgggac | tctgggggtc | gaaatgaccg | 2640 |
| accaagcgac | gccaacctg | ccatcacgag | atttcgattc | caccgccgcc | ttctatgaaa | 2700 |
| ggttgggctt | cggaatcggt | ttccgggacg | ccggctggat | gatcctccag | cgcggggac | 2760 |
| tcatgctgga | gttcttcgcc | cacgctagcg | gcgcgcgggc | cggcccgggtg | tgaaataaccg | 2820 |
| cacagatgcg | taaggagaaa | ataccgcatc | aggcgctctt | ccgcttcctc | gctcactgac | 2880 |
| tcgctgcgct | cggtcggttc | gctgcggcga | gcgggtatcag | ctcactcaaa | ggcggttaata | 2940 |
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| aaggccagga | accgtaaaaa | ggccgcgttg | ctggcggttt | tccataggct | ccgccccct | 3060 |
| gacgagcatc | acaaaaatcg | acgctcaagt | cagaggtggc | gaaacccgac | aggactataa | 3120 |
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| cgctgtaggt | atctcagttc | ggtgtaggtc | gttcgctcca | agctgggctg | tgtgcacgaa | 3300 |
| cccccgctc | agcccgaccg | ctgcgcctta | tccggtaact | atcgtcttga | gtccaacccg | 3360 |
| gtaagacacg | acttatcgcc | actggcagca | gccactggta | acaggattag | cagagcgagg | 3420 |
| tatgtaggag | gtgctacaga | gttcttgaag | tgggtggccta | actacggcta | cactagaagg | 3480 |
| acagtatttg | gtatctgcgc | tctgctgaag | ccagttacct | tcggaaaaag | agttggtagc | 3540 |
| tcttgatccg | gcaaaaaaac | caccgctggg | agcgggtggg | tttttggttg | caagcagcag | 3600 |
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Sequence.txt

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| ttcacctaga | tcctttttaa | ggccggccgc | ggccgccatc | ggcattttct | tttgcgtttt | 3780 |
| tatttgttaa | ctgttaattg | tccttgttca | aggatgctgt | ctttgacaac | agatgttttc | 3840 |
| ttgcctttga | tgttcagcag | gaagctcggc | gcaaacgttg | attgtttgtc | tgcgtagaat | 3900 |
| cctctgtttg | tcatatagct | tgtaatcacg | acattgtttc | ctttcgcttg | aggtacagcg | 3960 |
| aagtgtgagt | aagtaaaggt | tacatcgtta | ggatcaagat | ccatttttaa | cacaaggcca | 4020 |
| gttttgttca | gcggcttgta | tgggccagtt | aaagaattag | aaacataacc | aagcatgtaa | 4080 |
| atatcgttag | acgtaatgcc | gtcaatcgtc | atthtttgatc | cgcgggagtc | agtgaacagg | 4140 |
| taccatttgc | cgttcatttt | aaagacgttc | gcgcgttcaa | tttcatctgt | tactgtgtta | 4200 |
| gatgcaatca | gcggtttcat | cacttttttc | agtgtgtaat | catcgtttag | ctcaatcata | 4260 |
| ccgagagcgc | cgtttgctaa | ctcagccgtg | cgthttttat | cgctttgcag | aagtthttga | 4320 |
| ctttcttgac | ggaagaatga | tgtgcttttg | ccatagtatg | ctttgtttaa | taaagattct | 4380 |
| tcgccttggt | agccatcttc | agttccagtg | tttgcttcaa | atactaagta | tttgtggcct | 4440 |
| ttatcttcta | cgtagtgagg | atctctcagc | gtatggttgt | cgcttgagct | gtagtgcct | 4500 |
| tcatcgatga | actgctgtac | atthtgatac | gtthttccgt | caccgtcaaa | gattgattta | 4560 |
| taatcctcta | caccgttgat | gttcaaagag | ctgtctgatg | ctgatacgtt | aacttgtgca | 4620 |
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| tttccgtcag | atgtaaatgt | ggctgaacct | gaccattctt | gtgtttggtc | ttttaggata | 4740 |
| gaatcatttg | catcgaattt | gtcgtgtgtt | ttaaagacgc | ggccagcgth | tttccagctg | 4800 |
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Sequence.txt

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Sequence.txt

| | | | | | | |
|-------------|-------------|------------|------------|-------------|------------|------|
| ctcgtgcgct | ctcctgtttcc | gaccctgccg | cttaccggat | acctgtccgc | ctttctccct | 1740 |
| tcgggaagcg | tggcgctttc | tcatagctca | cgctgtaggt | atctcagttc | ggtgtaggtc | 1800 |
| gttcgctcca | agctgggctg | tgtgcacgaa | cccccgttc | agcccgaccg | ctgcgctta | 1860 |
| tccggttaact | atcgtcttga | gtccaacccg | gtaagacacg | acttatcgcc | actggcagca | 1920 |
| gccactggta | acaggattag | cagagcgagg | tatgtaggcg | gtgctacaga | gttcttgaag | 1980 |
| tgggtggccta | actacggcta | cactagaagg | acagtatttg | gtatctgcmc | tctgctgaag | 2040 |
| ccagttacct | tcggaaaaag | agttggtagc | tcttgatccg | gcaaacaaac | caccgctggt | 2100 |
| agcggtggtt | tttttgtttg | caagcagcag | attacgcgca | gaaaaaaagg | atctcaagaa | 2160 |
| gatcctttga | tcttttctac | gggtcttgac | gctcagtgga | acgaaaactc | acgttaaggg | 2220 |
| attttggcca | tgagattatc | aaaaaggatc | ttcacctaga | tccttttaaa | ggccggccgc | 2280 |
| ggccgccatc | ggcattttct | tttgcgtttt | tatttggtta | ctgttaattg | tccttgttca | 2340 |
| aggatgctgt | ctttgacaac | agatgttttc | ttgcctttga | tgttcagcag | gaagctcggc | 2400 |
| gcaaacgttg | attgtttgtc | tgcgtagaat | cctctgtttg | tcatatagct | tgtaatcacg | 2460 |
| acattgtttc | ctttcgcttg | aggtacagcg | aagtgtgagt | aagtaaaggt | tacatcgtta | 2520 |
| ggatcaagat | ccatttttaa | cacaaggcca | gttttgttca | gcggcttgta | tgggccagtt | 2580 |
| aaagaattag | aaacataacc | aagcatgtaa | atatcgttag | acgtaatgcc | gtcaatcgtc | 2640 |
| atttttgatc | cgcgggagtc | agtgaacagg | taccatttgc | cgttcatttt | aaagacgttc | 2700 |
| gcgcgttcaa | tttcatctgt | tactgtgtta | gatgcaatca | gcggtttcat | cacttttttc | 2760 |
| agtgtgtaat | catcgtttag | ctcaatcata | ccgagagcmc | cgtttgctaa | ctcagccgtg | 2820 |
| cgttttttat | cgctttgcag | aagtttttga | ctttcttgac | ggaagaatga | tgtgcttttg | 2880 |
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| ctgtctgatg | ctgatacgtt | aacttgtgca | gttgtcagtg | tttgtttgcc | gtaatgttta | 3180 |
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| aacatgtaaa | tcgatgtgtc | atccgcattt | ttaggatctc | cggctaattgc | aaagacgatg | 3420 |
| tggtagccgt | gatagtttgc | gacagtgccg | tcagcgtttt | gtaatggcca | gctgtcccaa | 3480 |
| acgtccaggc | cttttgcaga | agagatatct | ttaattgtgg | acgaatcaaa | ttcagaaact | 3540 |
| tgatattttt | catttttttg | ctgttcaggg | atttgcagca | tatcatggcg | tgtaatatgg | 3600 |
| gaaatgccgt | atgtttcctt | atatggcttt | tggttcgttt | ctttcgcaaa | cgcttgagtt | 3660 |
| gcgcctcctg | ccagcagtcg | ggtagtaaag | gttaatactg | ttgcttgttt | tgcaaaactt | 3720 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|------------|-------------|------------|------|
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| gccctcctgt | ttgaagatgg | caagttagtt | acgcacaata | aaaaaagacc | taaaatatgt | 3840 |
| aaggggtgac | gccaaagtat | acactttgcc | ctttacacat | tttaggtctt | gcctgcttta | 3900 |
| tcagtaacaa | acccgcgcga | tttacttttc | gacctcattc | tattagactc | tcgtttggat | 3960 |
| tgcaactggg | ctattttcct | cttttgtttg | atagaaaatc | ataaaaggat | ttgcagacta | 4020 |
| cgggcctaaa | gaactaaaaa | atctatctgt | ttcttttcat | tctctgtatt | ttttatagtt | 4080 |
| tctgttgcag | gggcataaag | ttgccttttt | aatcacaatt | cagaaaatat | cataatatct | 4140 |
| catttcacta | aataatagtg | aacggcagg | atatgtgatg | ggttaaaaag | gatcggcggc | 4200 |
| cgtctgattt | aaatctcgag | aggcctgacg | tcggggcccg | taccacgcgt | gccgatcttc | 4260 |
| tcaaaggaca | cgacggaaac | ggctaaattc | gcggatctcc | gtttaaggca | ttgaagcatt | 4320 |
| tggaggcccc | aagacatgac | ccagaccctg | taaagcgctt | aaacggcggt | ttagagggtc | 4380 |
| atagttttgg | gacaagtggg | acaagtgtga | atcctgaaag | cttccagggc | aaggatccac | 4440 |
| cacaaaccgg | ccatcgccct | ttggaatcgg | tccgaaaatt | gcaggtacag | agccttttac | 4500 |
| cgagaaaatc | caccacagat | tgctgaaatt | tcgtgatctg | tgggtggattc | gtgcaacttc | 4560 |
| agactcttac | ggaggcgatg | gaccaaaaa | aactacaatc | aagcagatca | ccttgtagac | 4620 |
| caccatagaa | aaggcccacc | ctcagcccgg | tacggcttta | acacggcttg | gattttgtct | 4680 |
| tgcttgccga | ggtaggactg | gcactgggcg | tcgataagct | cagctgacca | cccggtgacc | 4740 |
| tgcgccattg | cttcggccgt | cgacgcacg | gcagccgggt | gcacataacc | cagcgtgccg | 4800 |
| agcacgatgc | gacgatccag | cacgtccgcc | aggctcgacg | ccgcctctc | ggcgacagca | 4860 |
| aaaacggcct | gcgccgcgat | atcaagggtg | tctgggtcaa | gtcggcgccc | caggtcgggt | 4920 |
| tgctttgcga | cgagatccag | cactttttca | tgctcagttc | catacagtct | ggccagatgc | 4980 |
| acgcggattt | catcatccac | atccagctcg | gggtggctgc | gaagcgctga | ctcaaaggaa | 5040 |
| tcagccacgg | actcatacgc | gccaaaagaa | gtactcaacg | gct | | 5083 |

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<220>
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| | |
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| tgctgacccc | ggatgaatgt cagctactgg gctatctgga caagggaaaa cgcaagcgca 120 |
| aagagaaaagc | aggtagcttg cagtgggctt acatggcgat agctagactg ggcggtttta 180 |
| tggaacagcaa | gcgaaccgga attgccagct gggggcgccct ctggtaagggt tgggaagccc 240 |
| tgcaaagtaa | actggatggc tttcttgccg ccaaggatct gatggcgag gggatcaaga 300 |
| tctgatcaag | agacaggatg aggatcgttt cgcatgattg aacaagatgg attgcacgca 360 |

Sequence.txt

| | | | | | | |
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| ggctgctctg | atgccgccgt | gttccggctg | tcagcgcagg | ggcggccggt | tctttttgtc | 480 |
| aagaccgacc | tgtccggtgc | cctgaatgaa | ctgcaggacg | aggcagcgcg | gctatcgtgg | 540 |
| ctggccacga | cgggcgttcc | ttgcgcagct | gtgctcgacg | ttgtcactga | agcgggaagg | 600 |
| gactggctgc | tattgggcga | agtgccgggg | caggatctcc | tgatcatctca | ccttgctcct | 660 |
| gccgagaaag | tatccatcat | ggctgatgca | atgcggcggc | tgcatacgct | tgatccggct | 720 |
| acctgcccac | tcgaccacca | agcgaaacat | cgcacgcagc | gagcacgtac | tcggatggaa | 780 |
| gccggtcttg | tcgatcagga | tgatctggac | gaagagcatc | aggggctcgc | gccagccgaa | 840 |
| ctgttcgccca | ggctcaaggc | gcgcgatgcc | gacggcgagg | atctcgtcgt | gacctatggc | 900 |
| gatgcctgct | tgccgaatat | catggtggaa | aatggccgct | tttctggatt | catcgactgt | 960 |
| ggccggctgg | gtgtggcgga | ccgctatcag | gacatagcgt | tggctacccg | tgatattgct | 1020 |
| gaagagcttg | gcggcgcaatg | ggctgaccgc | ttcctcgtgc | tttacgggat | cgccgctccc | 1080 |
| gattcgcagc | gcacgcctt | ctatcgctt | cttgacgagt | tcttctgagc | gggactctgg | 1140 |
| ggttcgaaat | gaccgaccaa | gcgacgcca | acctgccatc | acgagatttc | gattccaccg | 1200 |
| ccgccttcta | tgaaagggtg | ggcttcggaa | tcgttttccg | ggacgccggc | tgatgatcc | 1260 |
| tccagcgcgg | ggatctcatg | ctggagttct | tcgccacgc | tagcggcgcg | ccggccggcc | 1320 |
| cgggtgtgaa | taccgcacag | atgcgtaagg | agaaaatacc | gcacagggcg | ctcttccgct | 1380 |
| tcctcgtca | ctgactcgt | gcgctcggtc | gttcggctgc | ggcagcggt | atcagctcac | 1440 |
| tcaaaggcgg | taatacgggt | atccacagaa | tcaggggata | acgcaggaaa | gaacatgtga | 1500 |
| gcaaaaggcc | agcaaaaggc | caggaaccgt | aaaaaggccg | cgttgctggc | gtttttccat | 1560 |
| aggctccgcc | cccctgacga | gcacacaaa | aatcgacgct | caagtcagag | gtggcgaaac | 1620 |
| ccgacaggac | tataaagata | ccaggcgttt | ccccctggaa | gctccctcgt | gcgctctcct | 1680 |
| gttccgaccc | tgccgcttac | cggatacctg | tccgcctttc | tcccttcggg | aagcgtggcg | 1740 |
| ctttctcata | gctcacgctg | taggtatctc | agttcggtgt | aggctcgttcg | ctccaagctg | 1800 |
| ggctgtgtgc | acgaaccccc | cgttcagccc | gaccgctgcg | ccttatccgg | taactatcgt | 1860 |
| cttgagtcca | acccggtaag | acacgactta | tcgccactgg | cagcagccac | tggtaacagg | 1920 |
| attagcagag | cgaggatatgt | aggcgggtgt | acagagttct | tgaagtgggtg | gcctaactac | 1980 |
| ggctacacta | gaaggacagt | atttggtatc | tcgctctctg | tgaagccagt | taccttcgga | 2040 |
| aaaagagttg | gtagctcttg | atccggcaaa | caaaccaccg | ctggtagcgg | tggttttttt | 2100 |
| gtttgcaagc | agcagattac | gcgcagaaaa | aaaggatctc | aagaagatcc | tttgatcttt | 2160 |
| tctacggggg | ctgacgtca | gtggaacgaa | aactcacgtt | aagggatttt | ggcatgaga | 2220 |
| ttatcaaaaa | ggatcttcac | ctagatcctt | ttaaaggccg | gccgcggccg | ccatcggcat | 2280 |
| tttcttttgc | gtttttat | gttaactgtt | aattgtcctt | gttcaaggat | gctgtctttg | 2340 |
| acaacagatg | tttcttgcc | tttgatgttc | agcaggaagc | tcggcgcaaa | cgttgattgt | 2400 |

Sequence.txt

| | | | | | | |
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| gcttgaggta | cagcgaagt | tgagtaagta | aaggttacat | cgtaggatac | aagatccatt | 2520 |
| tttaacacaa | ggccagtttt | gttcagcggc | ttgtatgggc | cagttaaaga | attagaaaca | 2580 |
| taaccaagca | tgtaaatac | gttagacgta | atgccgtcaa | tcgtcatttt | tgatccgcgg | 2640 |
| gagtcagtga | acaggtacca | tttgccgttc | attttaaaga | cgttcgcgcg | ttcaatttca | 2700 |
| tctgttactg | tgtagatgc | aatcagcgg | ttcatcactt | ttttcagtg | gtaatcatcg | 2760 |
| tttagctcaa | tcataccgag | agcgcggtt | gctaactcag | ccgtgcgttt | tttatcgctt | 2820 |
| tgcagaagtt | tttgactttc | ttgacggaag | aatgatgtgc | ttttgccata | gtatgctttg | 2880 |
| ttaaataaag | attcttcgcc | ttggtagcca | tcttcagttc | cagtgtttgc | ttcaaatact | 2940 |
| aagtatttgt | ggcctttatc | ttctacgtag | tgaggatctc | tcagcgtag | gttgtcgctt | 3000 |
| gagctgtagt | tgcttcatc | gatgaactgc | tgtacatttt | gatacgtttt | tccgtcaccg | 3060 |
| tcaaagattg | atttataatc | ctctacaccg | ttgatgttca | aagagctgtc | tgatgctgat | 3120 |
| acgttaactt | gtgcagttgt | cagtgtttgt | ttgccgtaat | gtttaccgga | gaaatcagtg | 3180 |
| tagaataaac | ggatttttcc | gtcagatgta | aatgtggctg | aacctgacca | ttcttgtgtt | 3240 |
| tggtctttta | ggatagaatc | atttgcacgc | aatttgtcgc | tgtctttaaa | gacgcggcca | 3300 |
| gcgtttttcc | agctgtcaat | agaagtttcg | ccgacttttt | gatagaacat | gtaaatcgat | 3360 |
| gtgtcatccg | catttttagg | atctccggct | aatgcaaaga | cgatgtggta | gccgtgatag | 3420 |
| tttgcgacag | tgccgtcagc | gttttgtaat | ggccagctgt | cccaaacgtc | caggcctttt | 3480 |
| gcagaagaga | tatttttaat | tgtggacgaa | tcaaattcag | aaacttgata | tttttcattt | 3540 |
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| catgtctcct | tttttatgta | ctgtgttagc | ggcttgcttc | ttccagccct | cctgtttgaa | 3780 |
| gatggcaagt | tagttacgca | caataaaaaa | agacctaaaa | tatgtaaggg | gtgacgccaa | 3840 |
| agtatacact | ttgcccttta | cacattttag | gtcttgccctg | ctttatcagt | aacaaaccg | 3900 |
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| aaaaaatcta | tctgtttctt | ttcattctct | gtatttttta | tagtttctgt | tgcatgggca | 4080 |
| taaagttgcc | tttttaata | caattcagaa | aatatcataa | tatctcattt | cactaaataa | 4140 |
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| tagaggaggt | gaaacaatgt | cccagaatgg | ccgtccagta | gtcctcatcg | ccgataagct | 4260 |
| tgcgagtc | actgttgacg | cgcttgagaa | tgcagtagaa | gtccgttggg | ttgacggacc | 4320 |
| taaccgcca | gaactgcttg | atgcagttaa | ggaagcggac | gactgctcg | tgcgttctgc | 4380 |
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Sequence.txt

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| cggcgtgggc ttggacaacg ttgacatccc tgctgccact gaagctggcg tcatggttgc | 4500 |
| taacgcaccg acctctaata ttcactccgc ttgtgagcac gcaatttctt tgctgctgtc | 4560 |
| tactgctcgc cagatccctg ctgctgatgc gacgctgcgt gagggcgagt ggaagcggtc | 4620 |
| ttctttcaac ggtgtggaaa ttttcggaaa aactgtcggg atcgtcgggt ttggccacat | 4680 |
| tggtcagttg tttgctcagc gtcttgctgc gtttgagacc accattgttg cttacgatcc | 4740 |
| ttacgctaac cctgctcgtg cggctcagct gaacgttgag ttggttgagt tggatgagct | 4800 |
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| tggtggcctt gttgatgagc aggccttggc tgatgcgatt gagtccggtc acatctgcgg | 4980 |
| ccgcacagcg atcccagagg aaatatcctc tggggctcgt gtgtcgacct taaagtttgg | 5040 |
| ctgccatgtg aatttttagc accctcaaca gttgagtgtc ggcaactctg ggggtagagt | 5100 |
| gccaaatagg ttgtttgaca cacagttgtt caccgcgcac gacggctgtg ctggaaaccc | 5160 |
| acaaccggca cacacaaaat ttttctagag gagggattca tcatgaatac atacgaacaa | 5220 |
| attaataaag tgaaaaaaat acttcggaaa catttaaaaa ataacccttat tggttacttac | 5280 |
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| attttaacta tggacacggg taaaatcata ccaaagata ttgcgggaaa tgcagtggct | 5820 |
| gaatcttctc cattagaaca tagggagaga attttgtag cagttcgtag ttatcttgga | 5880 |
| gagaatattg aatggactaa tgaaaatgta aatttaacta taaactatth aaataacaga | 5940 |
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| ctttgcggga gggcgggtacc aggggtgctt ctactgaaga ggctcaggat cgtgcgggta | 6180 |
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| acgtttccgg tggtcgcgtg ggcgaagagg ttgctgtgtg gatggatctg gctcgcaagc | 6300 |
| ttggtcttct tgctggcaag cttgtcgacg ccgccccagt ctccattgag gttgaggctc | 6360 |
| gaggcgagct ttcttccgag caggctgatg cacttggttt gtccgctgtt cgtggtttgt | 6420 |
| tctccggaat tatcgaagag tccgttactt tcgtcaacgc tcctcgcatt gctgaagagc | 6480 |

Sequence.txt

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| ttgagcgcgt tgagaagatc acccgcatca atggccgtgg cctggatctg cgcgagagg | 6660 |
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| acggcgctgt cctgatacctg cgtgttgagt ccgctgtctc tgaagagctg gaagctgaaa | 6840 |
| tcaacgctga gttgggtgct acttccttcc aggttgatct tgactaatta gagatccatt | 6900 |
| tgcttgaacc gccttcccat ctttgaattc attcaagggt gtaaggcggg tttcgctctt | 6960 |
| ttaatacagt tttaatggta gatttgggat ccctc | 6995 |

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| | |
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| ttaaagtttg gctgccatgt gaatttttag caccctcaac agttgagtgc tggcactctc | 120 |
| gggggtagag tgccaaatag gttgtttgac acacagttgt tcacccgcga cgacggctgt | 180 |
| gctggaacc cacaaccggc acacacaaaa tttttctaga aggaggtgat agtatgtctt | 240 |
| ctgcagctac ccgccgtaat tcagccccct tcgttcagcg ccacatcggc ccaaaccagg | 300 |
| ccgataccca ggagatcctc gattacctgg gctatgaatc ttccgccgcg ctggccgacg | 360 |
| atgccctccc gaagtcgacg cgccaggcag gcccgatcgg cctgccggag gactgggatg | 420 |
| agacggacac cctggccgcc ctgcgtgctt acgctgacaa gaacgtgcag aagcagcagc | 480 |
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| gtgcttcgct gttagacgaa gccaccgcag tggccgaggc cgtgcagctg atggctcgcg | 720 |
| gcaatgcgaa ggctgccaaag aagggcggcg tgggtgctgct ggattcctcc ctgcaccagc | 780 |
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| acctggacgg cgaagatgct accgccgcgt ttgagggccg cgagaacctc gtcggcgtgg | 900 |
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| cctccccggg ctcccaagggt gccgacattg ctgtcggtc cgcccagcgc ttcggcgtgc | 1080 |
| cgctattctt cggtgggccc cacgcgggct tcattctctg caccgaggct ctgcagcgta | 1140 |
| agctgccggg ccgcatacgtg ggcgtgtccg tggatgccga gggcaccccg gcctaccgct | 1200 |

Sequence.txt

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| gcctgcgcg catcgccgag ggggtgcacg cccgcgcgac cgccctggcc gttgccctgt | 1380 |
| ccgaggctgg cctgacgctg ggcgacgata ctttcttcga caccgtcacc gttgacgtgt | 1440 |
| ctggttcttc tcttggtgac gccccacgg ctctgcgcg cgagccgag gcaggctaca | 1500 |
| acctgcgcca ggtaaacgat tccttcgtcg gcatctctgt cggcgagtcc accacggacg | 1560 |
| aggacattgc caagctgacg gaggtgctgg gctcccgac cggcgaggtc aactccgca | 1620 |
| gcttcgacgt caccgccggc ccgctggcg aggccggcgt gctgcgcg gaggacgagg | 1680 |
| agattctgac ccacccgatc ttcaccgcca tcaactccga gaccagatg atgcgctaca | 1740 |
| tgcgcaagct ggccgaccgc gacctggcg tggatcgta gatgatccg ctgggctcct | 1800 |
| gcacatgaa gctgaacgcg gccgtctcca tggagccgat cacctggcct ggcttcgag | 1860 |
| gcatccacc gcacgtccc gccgagcagg cgagggctg gctggagctc atcaggacc | 1920 |
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| acatcgaca gatgggcgac gaaggcctga ctgaggcctc ccgatggcc ctggtgaacg | 2640 |
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| ccgccgagga cgtatccaag cgcctgatgg acttcggctt ccacgccccg accttggcct | 2820 |
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| gggacgactt cgaggaagct gtatccggtg gtcacttcag ccgtgccaag gccgcatacc | 3060 |
| cggtggctag cctgcgacac accaagtact tcacccccgt gcgtcgatc gacaacgcct | 3120 |
| atggcgaccg caatctcgtg tgcacctgcc cgcccctgga agacttcgca attaacgagg | 3180 |
| actagggtcc gctggagcta agggcgtcac aaagagaaga aggagaacaa gacatgaccg | 3240 |

Sequence.txt

| | |
|---|------|
| aacttaagaa gaccgcgctg cacctggtgc acgagaagtt gggcgcgcgga tttaccgact | 3300 |
| tcggcgggctg ggacatgcct ctgaagtaca gcagtgagct ggacgagcac cacgctgtac | 3360 |
| gcaatgccgt gggcgtattc gacctctccc acatgggtga ggttcgcgtg accggcccgc | 3420 |
| aggcagcgga gttcctggac cacgcgctga tttcgaagct gtcggcagtg aaggtcggca | 3480 |
| aggcgaagta ctcgatgac tgcaccgaat cgggtggcat catcgacgac ctgatcacct | 3540 |
| accgcctggg cgacaacgag ttcctgatcg tgccgaacgc gggcaacgtg gacaacgtgg | 3600 |
| tctccgact gcagggccgc accgagggct ttgacgtgga ggtaacaac gagtccgatg | 3660 |
| cgacctccat gatcgccgta caggggcccga aggccgcgca ggcgatgctg gagatcgtgg | 3720 |
| agaacgtcgt ggatgcaccc gaggcattccg gcgcgggcgga gaccgttgcc gaggtatcgc | 3780 |
| aggggctggg ttactacgcg gcattcagcg gtgttgccgc aggtcagccc gtgctggtgg | 3840 |
| cccgcacagg ctataccggc gaggacggtt tcgagctgat cgtggctaac gatggtgcgg | 3900 |
| agaccgtgtg gaccaaggct atggaccagg ctgcgagct ggggtggcctg ccgtgtggcc | 3960 |
| tggcctgccg cgacaccctg cgcttgagg ctggcatgcc gctgtacggc aacgagctat | 4020 |
| cgctgaagct caccgccgtc gatgctgggc tgggcattct tgcggcgacg aagtctaagg | 4080 |
| actctttcgt tggtcgtgac gccatcgttt ccgccaagga aaagggtagc cagcaggtac | 4140 |
| ttatcgggct ggcgggagc ggtcgccgcg ctgcccgtgg gggatacgag gtgtttgccg | 4200 |
| gtgacggcga gaaggccatc ggtgccgtga cctccggtgc actgtcgccg acgctgggcc | 4260 |
| acccggtggc attggcatac gtcgcgaagt ccgagctgtc ctccggcgcg gccgctgagg | 4320 |
| gtgcgaccgt ggaggtagac atccgcggca agcgctttga atacaagggt gtggcgctgc | 4380 |
| cgttctactc ccgcgagaag taacgcaaga agtaacgaaa agggttgtct gcccgtggt | 4440 |
| gtaaggtttg ggcagacaac cacagaagta accacacaag gtttcacaag agaggcttaa | 4500 |
| aacaatgact gcactgcaa ctgacttcct gtactccgaa gagcacgagt gggtaaacac | 4560 |
| ctccgctgtt gttgagggcg agaccgtgcg cgtgggcatt acccacatcg ccgctgaggc | 4620 |
| gctgggtgac atcgtgttcg tcgagctgcc ggaggttggc tccgaggttg aggccggcga | 4680 |
| ggctttcggc gaggttgagt ccaccaagtc cgtttccgac atctacgcac cggtttctgg | 4740 |
| cgaggttggt gctgtcaacg aggcgctgga agacaacgct ggcctgatca acgaagatcc | 4800 |
| atacggtgag ggctggctgt acgaggtcaa ggtgaccgag gccggcgagc tgatggaggc | 4860 |
| tgaggcttac caggcggcta acgagtaaaa caagacccta tggtcggttc catgttcgca | 4920 |
| ttaatcctcg gcttggccct gttgggcctt gccgtgtggt tactcctgcg agcaaaagat | 4980 |
| agcaccggat ccgccctccc gcacgctttg cgggagggct tttcttttcc cggtatttaa | 5040 |
| atcgctagcg ggctgctaaa ggaagcgga cacgtagaaa gccagtcgcg agaaacggtg | 5100 |
| ctgaccccg atgaatgtca gctactgggc tatctggaca agggaaaacg caagcgcaaa | 5160 |
| gagaaagcag gtagcttgca gtgggcttac atggcgatag ctagactggg cggttttatg | 5220 |
| gacagcaagc gaaccggaat tgccagctgg ggcgccctct ggtaagggtt ggaagccctg | 5280 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|-------------|------------|------------|------|
| caaagtaaac | tggatggctt | tcttgccgcc | aaggatctga | tggcgcaggg | gatcaagatc | 5340 |
| tgatcaagag | acaggatgag | gatcgtttcg | catgattgaa | caagatggat | tgcacgcagg | 5400 |
| ttctccggcc | gcttgggtgg | agaggctatt | cggctatgac | tgggcacaac | agacaatcgg | 5460 |
| ctgctctgat | gccgccgtgt | tccggctgtc | agcgcagggg | cgcccgggtt | tttttgtcaa | 5520 |
| gaccgacctg | tccggtgccc | tgaatgaact | gcaggacgag | gcagcgcggc | tatcgtggct | 5580 |
| ggccacgacg | ggcgttcctt | gcgcagctgt | gctcgacgtt | gtcactgaag | cggaaggga | 5640 |
| ctggctgcta | ttgggcgaag | tgccggggca | ggatctcctg | tcatctcacc | ttgctcctgc | 5700 |
| cgagaaagta | tccatcatgg | ctgatgcaat | gcggcggctg | catacgcttg | atccggctac | 5760 |
| ctgcccattc | gaccaccaag | cgaaacatcg | catcgagcga | gcacgtactc | ggatggaagc | 5820 |
| cggctcttgc | gatcaggatg | atctggacga | agagcatcag | gggctcgcgc | cagccgaact | 5880 |
| gttcgccagg | ctcaaggcgc | gcatgcccga | cggcgaggat | ctcgtcgtga | cccatggcga | 5940 |
| tgctgcttg | ccgaatatca | tgggtgaaaa | tggccgcttt | tctggattca | tcgactgtgg | 6000 |
| ccggctgggt | gtggcggacc | gctatcagga | catagcgttg | gctacccgtg | atattgctga | 6060 |
| agagcttggc | ggcgaatggg | ctgaccgctt | cctcgtgctt | tacggtatcg | ccgctcccga | 6120 |
| ttcgcagcgc | atcgccttct | atcgccttct | tgacgagttc | ttctgagcgg | gactctgggg | 6180 |
| ttcgaaatga | ccgaccaagc | gacgccaac | ctgccatcac | gagatttcga | ttccaccgcc | 6240 |
| gccttctatg | aaaggttggg | cttcggaatc | gttttccggg | acgccggctg | gatgatcctc | 6300 |
| cagcgcgggg | atctcatgct | ggagtcttct | gcccacgcta | gtttaaactg | cggatcagtg | 6360 |
| agggtttgta | actgcggttc | aaggatctgg | atttcgatca | cggcacgata | atcgtgcggg | 6420 |
| agggaagg | ctccaaggat | cgggccttga | tgttacccga | gagcttggca | cccagcctgc | 6480 |
| gcgagcagg | gaattgatcc | ggtggatgac | cttttgaatg | acctttaata | gattatatta | 6540 |
| ctaattaatt | ggggacccta | gaggctccct | tttttatatt | aaaaattttt | tcacaaaacg | 6600 |
| gtttacaagc | ataacgggtt | ttgctgccc | caaacgggct | gttctgggtg | tgctagtgtg | 6660 |
| ttatcagaat | cgcagatccg | gcttcagggt | tgccggctga | aagcgcattt | tcttcagaa | 6720 |
| ttgccatgat | tttttcccc | cgggaggcgt | cactggctcc | cgtgttgctg | gcagctttga | 6780 |
| ttcgataagc | agcatgcct | gtttcaggct | gtctatgtgt | gactgttgag | ctgtaacaag | 6840 |
| ttgtctcagg | tgttcaattt | catgttctag | ttgctttgtt | ttactggttt | cacctgttct | 6900 |
| attaggtgtt | acatgctgtt | catctgttac | attgtcgatc | tgttcatggg | gaacagcttt | 6960 |
| aaatgcacca | aaaactcgta | aaagctctga | tgtatctatc | ttttttacac | cgttttcatc | 7020 |
| tgtgcatatg | gacagttttc | cctttgatat | ctaacgggtga | acagttgttc | tacttttggt | 7080 |
| tgtagtctt | gatgcttcac | tgatagatac | aagagccata | agaacctcag | atccttccgt | 7140 |
| attagccag | tatgttctct | agtgtgggtt | gttggttttt | cgtgagccat | gagaacgaac | 7200 |
| cattgagatc | atgcttactt | tgcatgtcac | tcaaaaattt | tgcttcaaaa | ctggtgagct | 7260 |
| gaatttttgc | agttaaagca | tcgtgtagtg | tttttcttag | tccgttacgt | aggtaggaat | 7320 |

Sequence.txt

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|------------|------|
| ctgatgtaat | ggttgttgg | atthttgtcac | cattcatttt | tatctggttg | ttctcaagtt | 7380 |
| cggttacgag | atccatttgt | ctatctagtt | caacttgga | aatcaacgta | tcagtcgggc | 7440 |
| ggcctcgctt | atcaaccacc | aatttcatat | tgctgtaagt | gtttaaatct | ttacttattg | 7500 |
| gtttcaaaac | ccattgggta | agccttttaa | actcatggta | gttattttca | agcattaaca | 7560 |
| tgaacttaaa | ttcatcaagg | ctaactctta | tatttgcctt | gtgagttttc | ttttgtgtta | 7620 |
| gttcttttaa | taaccactca | taaatcctca | tagagtattt | gttttcaaaa | gacttaacat | 7680 |
| gttccagatt | atattttatg | aattttttta | actggaaaag | ataaggcaat | atctcttcac | 7740 |
| taaaaactaa | ttctaatttt | tcgcttgaga | acttggcata | gtttgtccac | tggaatctct | 7800 |
| caaagccttt | aaccaaagga | ttcctgattt | ccacagttct | cgatcatcagc | tctctggttg | 7860 |
| cttttagctaa | tacaccataa | gcattttccc | tactgatgtt | catcatctga | gcgtattggg | 7920 |
| tataagtga | cgataccgtc | cgttctttcc | ttgtaggggt | ttcaatcgtg | gggttgagta | 7980 |
| gtgccacaca | gcataaaatt | agcttggttt | catgctccgt | taagtcatag | cgactaatcg | 8040 |
| ctagttcatt | tgctttgaaa | acaactaatt | cagacataca | tctcaattgg | tctaggtgat | 8100 |
| tttaatcact | ataccaattg | agatgggcta | gtcaatgata | attactagtc | cttttccttt | 8160 |
| gagttgtggg | tatctgtaaa | ttctgctaga | cctttgctgg | aaaacttgta | aattctgcta | 8220 |
| gaccctctgt | aaattccgct | agacctttgt | gtgttttttt | tgtttatatt | caagtgggta | 8280 |
| taatttatag | aataaagaaa | gaataaaaaa | agataaaaag | aatagatccc | agccctgtgt | 8340 |
| ataactcact | acttttagtca | gttccgcagt | attacaaaag | gatgtcgcaa | acgctgtttg | 8400 |
| ctcctctaca | aaacagacct | taaaacccta | aaggcttaag | tagcaccctc | gcaagctcgg | 8460 |
| gcaaatcgct | gaatattcct | tttgtctccg | accatcaggc | acctgagtcg | ctgtcttttt | 8520 |
| cgtgacattc | agttcgctgc | gctcacggct | ctggcagtga | atgggggtaa | atggcactac | 8580 |
| aggcgctttt | tatggattca | tgcaaggaaa | ctaccataa | tacaagaaaa | gcccgtcacg | 8640 |
| ggcttctcag | ggcgttttat | ggcgggtctg | ctatgtgggtg | ctatctgact | ttttgctgtt | 8700 |
| cagcagttcc | tgccctctga | ttttccagtc | tgaccacttc | ggattatccc | gtgacaggtc | 8760 |
| attcagactg | gctaattgcac | ccagtaaggc | agcgggtatca | tcaacaggct | tagtttaaac | 8820 |
| cgcaaagtcc | cgcttcgtga | aaattttcgt | gccgcgtgat | tttccgcaa | aaactttaac | 8880 |
| gaacgttcgt | tataatgggtg | tcatgacctt | cacgacgaag | tactaaaatt | ggcccgaatc | 8940 |
| atcagctatg | gatctctctg | atgtcgcgct | ggagtccgac | gcgctcgatg | ctgccgtcga | 9000 |
| tttaaaaacg | gtgatcggat | ttttccgagc | tctcgatacg | acggacgcgc | cagcatcacg | 9060 |
| agactggggc | agtgccgcga | gcgacctaga | aactctctgtg | gcggatcttg | aggagctggc | 9120 |
| tgacgagctg | cgtgctcggc | cagcgccagg | aggacgcaca | gtagtggagg | atgcaatcag | 9180 |
| ttgcgcctac | tgcggtggcc | tgattcctcc | ccggcctgac | ccgcgaggac | ggcgcgcaaa | 9240 |
| atattgtctca | gatgcgtgtc | gtgccgcagc | cagccgcgag | cgcgccaaca | aacgccacgc | 9300 |
| cgaggagctg | gaggcggcta | ggtcgcaa | ggcgctggaa | gtgcgtcccc | cgagcgaa | 9360 |

Sequence.txt

| | |
|---|-------|
| tttggccatg gtcgtcacag agctggaagc ggcagcgaga attatcgcgga tcgtggcgggt | 9420 |
| gcccgcaggc atgacaaaca tcgtaaatgc cgcgtttcgt gtgccgtggc cgcccaggac | 9480 |
| gtgtcagcgc cgccaccacc tgcaccgaat cggcagcagc gtcgcgcgtc gaaaaagcgc | 9540 |
| acaggcggca agaagcgata agctgcacga atacctgaaa aatgttgaac gccccgtgag | 9600 |
| cggtaactca cagggcgctc gctaaccccc agtccaaacc tgggagaaaag cgctcaaaaa | 9660 |
| tgactctagc ggattcacga gacattgaca caccggcctg gaaattttcc gctgatctgt | 9720 |
| tcgacacca tcccgagctc gcgctgcgat cacgtggctg gacgagcgaa gaccgccgcg | 9780 |
| aattcctcgc tcacctgggc agagaaaatt tccagggcag caagaccgcg gacttcgcca | 9840 |
| gcgcttgat caaagacccg gacacggaga aacacagccg aagttatacc gagttggttc | 9900 |
| aaaatcgctt gcccggtgcc agtatgttg cctgacgcac gcgcagcacg cagccgtgct | 9960 |
| tgtcctggac attgatgtgc cgagccacca ggccggcggg aaaatcgagc acgtaaacc | 10020 |
| cgaggtctac gcgattttgg agcgtgggc acgcctggaa aaagcgccag cttggatcgg | 10080 |
| cgtgaatcca ctgagcggga aatgccagct catctggctc attgatccgg tgtatgccgc | 10140 |
| agcaggcatg agcagcccga atatgcgcct gctggctgca acgaccgagg aaatgacccg | 10200 |
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| acgatcccag ccgtaccgct ggcatgccc gcacaatcg gtggatcgcc tagctgatct | 10320 |
| tatggaggtt gctcgcatga tctcaggcac agaaaaacct aaaaaacgct atgagcagga | 10380 |
| gttttctagc ggacgggcac gtatcgaagc ggcaagaaaa gccactgcgg aagcaaaagc | 10440 |
| acttgccacg cttgaagcaa gcctgccgag cgccgctgaa gcgtctggag agctgatcga | 10500 |
| cggcgctccg gtctcttgga ctgctccagg gcgtgccgcc cgtgatgaga cggcttttcg | 10560 |
| ccacgctttg actgtgggat accagttaa agcggctggg gagcgccaa aagacaccaa | 10620 |
| gggtcatcga gcctacgagc gtgcctacac cgtcgtcag gcggtcggag gaggccgtga | 10680 |
| gcctgatctg ccgccggact gtgaccgcca gacggattgg ccgcgacgtg tgcgcggcta | 10740 |
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| gcgaaaagct ctggccacta tgggaagacg tggcggtaaa aaggccgcag aacgctggaa | 10860 |
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| agcttcccag taaatgtgcc atctcgtagg cagaaaacgg ttccccgta gggctctctt | 11160 |
| cttggcctcc tttctaggtc gggctgattg ctcttgaagc tctctagggg ggctcacacc | 11220 |
| ataggcagat aacgttcccc accggctcgc ctcgtaagcg cacaaggact gctcccaaag | 11280 |
| atcttcaaag ccaactgccg gactgccttc gcgaagcctt gcccgcgga aatttcctcc | 11340 |
| accgagttcg tgcacacccc tatgccaagc ttctttcacc ctaaattcga gagattggat | 11400 |

Sequence.txt

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 ggtgccgctg gttgcgcttg gcttgaccga c 11491

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 <211> 11639
 <212> DNA
 <213> artificial

<220>
 <223> Plasmid pOM616

<400> 35
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 tgtccggttt ttgcaaaagt ggctgtgact gtaaaaagaa atcgaaaaag accgttttgt 120
 gtgaaaacgg tctttttgtt tccttttaac caactgccat aactcgaggc tattgacgac 180
 agctatggtt cactgtccac caacaaaaac tgtgctcagt accgccaata tttctccctt 240
 gaggggtaca aagaggtgtc cctagaagag atccacgctg tgtaaaaatt ttacaaaaag 300
 gtattgactt tccctacagg gtgtgtaata atttaattac aggcgggggc aaccccgctt 360
 gttctagaag gaggtgatag tatgtcttct gcagctaccc gccgtaattc agcccccttc 420
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 cgcgcgaccg ccctggccgt tgccctgtcc gaggtggcc tgacgctggc gcacgatacc 1560
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Sequence.txt

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| ctgcgcgccg | cagccgaggc | aggctacaac | ctgcgccagg | ttaacgattc | cttcgtcggc | 1680 |
| atctctgtcg | gcgagtccac | cacggacgag | gacattgcc | agctgatcga | ggtgctggg | 1740 |
| tcccgcaccg | gcgaggtcaa | ctccgcgagc | ttcgacgtca | ccgccggccc | gctgggagag | 1800 |
| gccggcgctg | tgcgcgcgga | ggacgaggag | attctgaccc | acccgatctt | caccgccatc | 1860 |
| acttccgaga | cccagatgat | gcgctacatg | cgcaagctgg | ccgaccgcga | cctggcgctg | 1920 |
| gatcgtacga | tgatcccgt | gggctcctgc | accatgaagc | tgaacgcggc | cgtctccatg | 1980 |
| gagccgatca | cctggcctgg | cttcgcaggc | atccaccgc | acgtcccggc | cgagcaggcg | 2040 |
| cagggctggc | tggagctcat | cgaggacctg | gaggagcgcc | tggcgaagat | caccggctac | 2100 |
| gccaaagttt | ccgtccagcc | gaacgcgggc | tcccagggcg | agttcgccgg | cctgctggcg | 2160 |
| atccaccgct | accaccagtc | ccgcggcgac | gatcagcgtg | acatcgttct | gatcccggcc | 2220 |
| tccgcgcacg | gcaccaacgc | tgctcttgca | gcgctggcgg | gcctgaaggt | cgtggctgtg | 2280 |
| aagaatgccg | aagacggctc | catcgacgtg | ccggacctgg | aggccaagct | ggagaagtac | 2340 |
| ggcgagcaga | ccgccgccat | catgctgacc | taccctcca | cccacggcgt | gttcgaggag | 2400 |
| caggtgcgcg | acgtctgcc | gaaggttcac | gacgctggcg | gccaggtgta | cgtcgacggc | 2460 |
| gctaacctga | acgccctggt | cggcctggcc | cagccgggcg | agttcgggcg | cgacgtatcc | 2520 |
| cacctgaacc | tgacaagac | cttcaccatc | ccgcacggtg | gtggcgggcc | ggcgcttggc | 2580 |
| ccggtgtgcg | tggcagagca | cctgatcccc | ttctgcca | ccgacccgaa | cgccgacgtt | 2640 |
| atcgagggcg | atgctgccct | gcagtccggc | cagccggtct | ccggcgcgca | gtacggctcc | 2700 |
| gctggcgctg | tgccgatcac | ctggctctac | atcgcacaga | tggcgacga | aggcctgact | 2760 |
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| taccgacgc | tgtacaaggg | cgacaccggc | ctggtcgccc | acgagtgc | cctggacctg | 2880 |
| cgtgaactca | cgaaggcctc | cggcatcacc | gccgaggacg | tatccaagcg | cctgatggac | 2940 |
| ttcggcttcc | acgccccgac | cttggccttc | ccggtcgccg | gcaccctgat | gatggagccc | 3000 |
| accgagtcgg | aggacaagga | agagctggac | cgcttcatcg | aagcgatgat | caccatccac | 3060 |
| ggggagatcc | aggaagttaa | cgacggcaag | gtcaccgccc | aacagtccgt | tctgcgccac | 3120 |
| gcgccgttta | ccgcctattc | tgttgtgcgg | gacgacttcg | aggaagctgt | atccggtggt | 3180 |
| cacttcagcc | gtgccaaagg | cgcatacccg | gtggctagcc | tgcgacacac | caagtacttc | 3240 |
| acccccgtgc | gtcgtatcga | caacgcctat | ggcgaccgca | atctcgtgtg | cacctgccc | 3300 |
| cccctggaag | acttcgcaat | taacgaggac | tagggctccg | tggagctaag | ggcgtcacia | 3360 |
| agagaagaag | gagaacaaga | catgaccgaa | cttaagaaga | ccgcgctgca | cctggtgcac | 3420 |
| gagaagtgtg | gcgcgcgatt | taccgacttc | ggcggctggg | acatgcctct | gaagtacagc | 3480 |
| agtgagctgg | acgagcacca | cgctgtacgc | aatgccgtgg | gcgtattcga | cctctcccac | 3540 |
| atgggtgagg | ttcgcgtgac | cggcccgcag | gcagcggagt | tcctggacca | cgcgctgatt | 3600 |
| tcgaagctgt | cggcagtgaa | ggtcggcaag | gcgaagtact | cgatgatctg | caccgaatcc | 3660 |

Sequence.txt

| | | | | | | |
|------------|-------------|-------------|------------|-------------|-------------|------|
| ggtggcatca | tcgacgacct | gatcacctac | cgcttggg | acaacgagtt | cctgatcgtg | 3720 |
| ccgaacgcgg | gcaacgtgga | caacgtgggtc | tccgcactgc | agggccgcac | cgagggtttt | 3780 |
| gacgtggagg | ttaacaacga | gtccgatgcg | acctccatga | tcgccgtaca | ggggcccaag | 3840 |
| gccgcgcagg | cgatgctgga | gatcgtggag | aacgtcgtgg | atgcacccga | ggcatccggc | 3900 |
| gcgggcgaga | ccgttgccga | ggctatcgag | gggctgggtt | actacgcggc | attcagcggt | 3960 |
| gttgccgcag | gtcagcccg | gctggtggcc | cgcacaggct | ataccggcga | ggacggtttc | 4020 |
| gagctgatcg | tggctaacga | tgggtcggag | accgtgtgga | ccaaggctat | ggaccaggct | 4080 |
| gcgcagctgg | gtggcctgcc | gtgtggcctg | gcctgccgcg | acaccctgcg | cctggaggct | 4140 |
| ggcatgccgc | tgtacggcaa | cgagctatcg | ctgaagctca | ccccggtcga | tgctgggctg | 4200 |
| ggcattcttg | cggcgacgaa | gtctaaggac | tctttcgttg | gtcgtgacgc | catcgtttcc | 4260 |
| gccaaggaaa | agggtaccca | gcaggtactt | atcgggctgg | cgggcgaggg | tcgccgcgct | 4320 |
| gcccgtgggg | gatacgaggt | gtttgccggt | gacggcgaga | agggcatcgg | tgccgtgacc | 4380 |
| tccggtgcac | tgtcgccgac | gctggggccac | ccggtggcat | tggcatacgt | cgcgaagtcc | 4440 |
| gcagtgtcct | ccggcgcgcc | cgctgagggg | gcgaccgtgg | aggtagacat | ccgcggcaag | 4500 |
| cgctttgaat | acaaggttgt | ggcgctgccg | ttctactccc | gcgagaagta | acgcaagaag | 4560 |
| taacgaaaag | ggttgtctgc | ccgctggtgt | aaggtttggg | cagacaacca | cagaagtaac | 4620 |
| cacacaaggt | ttcacaagag | aggcttaaaa | caatgactgc | actgccaaact | gacttcctgt | 4680 |
| actccgaaga | gcacgagtgg | gttaacacct | ccgctgttgt | tgagggcgag | accgtgcgcg | 4740 |
| tgggcattac | ccacatcgcc | gctgaggcgc | tgggtgacat | cgtgttcgtc | gagctgccgg | 4800 |
| aggttggctc | cgaggttgag | gccggcgagg | ctttcggcga | ggttgagtcc | accaagtccg | 4860 |
| tttccgacat | ctacgcaccg | gtttctggcg | aggttgtggc | tgtcaacgag | gcgctggaag | 4920 |
| acaacgctgg | cctgatcaac | gaagatccat | acggtgaggg | ctggctgtac | gagggtcaagg | 4980 |
| tgaccgaggc | cggcgagctg | atggaggctg | aggcttacca | ggcggctaac | gagtaaaaca | 5040 |
| agaccctatg | gtcggttcca | tgttcgcat | aatcctcggc | ttggccctgt | tgggccttgc | 5100 |
| cgtgtgtgta | ctcctgcgag | caaaagatag | caccggatcc | gccctcccgc | acgctttgcg | 5160 |
| ggagggtttt | tcttttccc | gtatttaa | cgctagcggg | ctgctaaagg | aagcggaaca | 5220 |
| cgtagaaagc | cagtccgcag | aaacgggtg | gaccccggt | gaatgtcagc | tactgggcta | 5280 |
| tctggacaag | ggaaaacgca | agcgcaaaga | gaaagcaggt | agcttgagct | gggcttacat | 5340 |
| ggcgatagct | agactggg | gttttatgga | cagcaagcga | accggaattg | ccagctgggg | 5400 |
| cgccctctgg | taagggttggg | aagccctgca | aagtaaactg | gatggctttc | ttgccgcaa | 5460 |
| ggatctgatg | gcgcagggga | tcaagatctg | atcaagagac | aggatgagga | tcgtttcgca | 5520 |
| tgattgaaca | agatggattg | cacgcagggt | ctccggccgc | ttgggtggag | aggctattcg | 5580 |
| gctatgactg | ggcacaacag | acaatcggct | gctctgatgc | cgccgtgttc | cggctgtcag | 5640 |
| cgcagggg | cccgttctt | tttgtcaaga | ccgacctgtc | cgggtgccctg | aatgaactgc | 5700 |

Sequence.txt

| | |
|--|------|
| aggacgaggc agcgcggtcta tcgtggctgg ccacgacggg cgttccttgc gcagctgtgc | 5760 |
| tcgacgttgt cactgaagcg ggaagggact ggctgctatt gggcgaagtg ccggggcagg | 5820 |
| atctcctgtc atctcacctt gtcctgccg agaaagtatc catcatggct gatgcaatgc | 5880 |
| ggcggctgca tacgcttgat ccggctacct gcccatcga ccaccaagcg aaacatcgca | 5940 |
| tcgagcgagc acgtactcgg atggaagccg gtcttgtcga tcaggatgat ctggacgaag | 6000 |
| agcatcaggg gctcgcgcc gccgaactgt tcgccaggct caaggcgcgc atgcccgcgc | 6060 |
| gcgaggatct cgtcgtgacc catggcgatg cctgcttgcc gaatatcatg gtggaaaatg | 6120 |
| gccgcttttc tggattcatc gactgtggcc ggctgggtgt ggcggaccgc tatcaggaca | 6180 |
| tagcgttggc taccctgtat attgtgaag agcttggcgg cgaatgggct gaccgcttcc | 6240 |
| tcgtgcttta cggtatcgcc gctcccgatt cgcagcgcat cgccttctat cgccttcttg | 6300 |
| acgagtcttt ctgagcggga ctctgggggt cgaaatgacc gaccaagcga cgcccaacct | 6360 |
| gccatcacga gatttcgatt ccaccgccgc cttctatgaa aggttgggct tcggaatcgt | 6420 |
| tttccgggac gccggctgga tgatcctcca gcgcggggat ctcatgctgg agttcttcgc | 6480 |
| ccacgctagt ttaaaactgc gatcagtgag ggtttgtaac tgcgggtcaa ggatctggat | 6540 |
| ttcgatcacg gcacgatcat cgtgcgggag ggcaagggct ccaaggatcg ggccttgatg | 6600 |
| ttacccgaga gcttggcacc cagcctgcgc gagcagggga attgatccgg tggatgacct | 6660 |
| tttgaatgac ctttaataga ttatattact aattaattgg ggaccctaga ggtccccttt | 6720 |
| tttattttta aaattttttc aaaaaacggc ttacaagcat aacgggtttt gctgcccgc | 6780 |
| aacgggctgt tctggtgttg ctagtttggt atcagaatcg cagatccggc ttcaggtttg | 6840 |
| ccggctgaaa gcgctatttc ttccagaatt gccatgattt tttccccacg ggaggcgtca | 6900 |
| ctggctcccg tgttgtcggc agctttgatt cgataagcag catcgctgtg ttcaggctgt | 6960 |
| ctatgtgtga ctgttgagct gtaacaagtt gtctcaggtg ttcaatttca tgttctagtt | 7020 |
| gctttgtttt actggtttca cctgttctat taggtgttac atgctgttca tctgttacat | 7080 |
| tgtcgatctg ttcattggtga acagctttta atgcacaaa aactcgtaaa agctctgatg | 7140 |
| tatctatctt ttttacaccg tttcatctg tgcataatgga cagttttccc tttgatattc | 7200 |
| aacggtgaac agttgttcta cttttgtttg ttagtcttga tgcttactg atagatacaa | 7260 |
| gagccataag aacctcagat cttccggtat ttagccagta tgttctctag tgtggttcgt | 7320 |
| tgtttttgcg tgagccatga gaacgaacca ttgagatcat gcttactttg catgtcactc | 7380 |
| aaaaattttg cctcaaaact ggtgagctga atttttgcag ttaaagcatc gtgtagtgtt | 7440 |
| tttcttagtc cgttacgtag gttagaatct gatgtaatgg ttgttggtat tttgtcacca | 7500 |
| ttcattttta tctggttggt ctcaagttcg gttacgagat ccatttgtct atctagttca | 7560 |
| acttggaata tcaacgtatc agtcgggcgg cctcgttat caaccaccaa tttcatattg | 7620 |
| ctgtaagtgt ttaaattctt acttattggg ttcaaaaccc attggttaag ctttttaaac | 7680 |
| tcatggtagt tattttcaag cattaacatg aacttaaat catcaaggct aatctctata | 7740 |

Sequence.txt

| | | | | | | |
|------------|-------------|-------------|------------|-------------|------------|------|
| tttgccttgt | gagttttctt | ttgtgttagt | tcttttaata | accactcata | aatcctcata | 7800 |
| gagtatttgt | tttcaaaaga | cttaacatgt | tccagattat | attttatgaa | tttttttaac | 7860 |
| tggaaaagat | aaggcaatat | ctcttcacta | aaaactaatt | ctaatttttc | gcttgagaac | 7920 |
| ttggcatagt | ttgtccactg | gaaaaatctca | aagcctttaa | ccaaaggatt | cctgatttcc | 7980 |
| acagttctcg | tcatcagctc | tctggttgct | ttagctaata | caccataagc | attttcccta | 8040 |
| ctgatgttca | tcatctgagc | gtattggtta | taagtgaacg | ataccgtccg | ttctttcctt | 8100 |
| gtagggtttt | caatcgtggg | gttgagtagt | gccacacagc | ataaaattag | cttggtttca | 8160 |
| tgctccgtta | agtcatagcg | actaatcgct | agttcatttg | ctttgaaaac | aactaattca | 8220 |
| gacatacatc | tcaattggtc | taggtgattt | taatcactat | accaattgag | atgggctagt | 8280 |
| caatgataat | tactagtcct | tttcctttga | gttgtgggta | tctgtaaatt | ctgctagacc | 8340 |
| tttgctggaa | aacttgtaaa | ttctgctaga | ccctctgtaa | attccgctag | acctttgtgt | 8400 |
| gttttttttg | tttatattca | agtggttata | atttatagaa | taaagaaaga | ataaaaaaag | 8460 |
| ataaaaagaa | tagatcccag | ccctgtgtat | aactcactac | tttagtcagt | tccgcagtat | 8520 |
| tacaaaagga | tgctgc aaac | gctgtttgct | cctctacaaa | acagacctta | aaaccctaaa | 8580 |
| ggcttaagta | gcaccctcgc | aagctcgggc | aaatcgctga | atattccttt | tgtctccgac | 8640 |
| catcaggcac | ctgagtcgct | gtctttttcg | tgacattcag | ttcgctgcgc | tcacggctct | 8700 |
| ggcagtgaat | gggggtaaat | ggcactacag | gcgcttttta | tggattcatg | caaggaaact | 8760 |
| acccataata | caagaaaagc | ccgtcacggg | cttctcaggg | cgttttatgg | cgggtctgct | 8820 |
| atgtggtgct | atctgacttt | ttgctgttca | gcagttcctg | ccctctgatt | ttccagtctg | 8880 |
| accacttcgg | attatcccgt | gacaggtcat | tcagactggc | taatgcaccc | agtaaggcag | 8940 |
| cggatcatc | aacaggctta | gtttaaacg | caaagtccc | cttcgtgaaa | attttcgtgc | 9000 |
| cgcgtgattt | tccgccaaaa | actttaacga | acgttcgtta | taatggtgtc | atgaccttca | 9060 |
| cgacgaagta | ctaaaattgg | cccgaatcat | cagctatgga | tctctctgat | gtcgcgctgg | 9120 |
| agtccgacgc | gctcgatgct | gccgtcgatt | taaaaacgg | gatcggattt | ttccgagctc | 9180 |
| tcgatacgac | ggacgcgcca | gcatcacgag | actgggccag | tgccgcgagc | gacctagaaa | 9240 |
| ctctcgtggc | ggatcttgag | gagctggctg | acgagctgcg | tgctcggcca | gcgccaggag | 9300 |
| gacgcacagt | agtggaggat | gcaatcagtt | gcgctactg | cgggtggcctg | attcctcccc | 9360 |
| ggcctgaccc | gcgaggacgg | gcgcgaaaa | attgctcaga | tgctgtctgt | gccgcagcca | 9420 |
| gccgcgagcg | cgccaacaaa | cgccacgccg | aggagctgga | ggcggctagg | tcgcaaatgg | 9480 |
| cgctggaagt | gcgtccccc | agcgaaattt | tggccatgg | cgtcacagag | ctggaagcgg | 9540 |
| cagcgagaat | tatcgcgatc | gtggcggtgc | ccgcaggcat | gacaaacatc | gtaaatgccg | 9600 |
| cgtttcgtgt | gccgtggccg | cccaggacgt | gtcagcgccg | ccaccacctg | caccgaatcg | 9660 |
| gcagcagcgt | cgcgcgctga | aaaagcgcac | aggcggcaag | aagcgataag | ctgcacgaat | 9720 |
| acctgaaaaa | tgttgaacgc | cccgtgagcg | gtaactcaca | gggcgtcggc | taacccccag | 9780 |

Sequence.txt

| | | | | | | |
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| tcctaacctg | ggagaaagcg | ctcaaaaatg | actctagcgg | attcacgaga | cattgacaca | 9840 |
| ccggcctgga | aattttccgc | tgatctgttc | gacacccatc | ccgagctcgc | gctgcgatca | 9900 |
| cgtggctgga | cgagcgaaga | ccgccgcgaa | ttcctcgtc | acctgggcag | agaaaatttc | 9960 |
| cagggcagca | agacccgcga | cttcgccagc | gcttggatca | aagacccgga | cacggagaaa | 10020 |
| cacagccgaa | gttataaccga | gttggttcaa | aatcgcttgc | ccggtgccag | tatgttgctc | 10080 |
| tgacgcacgc | gcagcacgca | gccgtgcttg | tcctggacat | tgatgtgccg | agccaccagg | 10140 |
| ccggcgggaa | aatcgagcac | gtaaaccctc | aggtctacgc | gattttggag | cgctgggcac | 10200 |
| gcctggaaaa | agcgccagct | tggatcggcg | tgaatccact | gagcgggaaa | tgccagctca | 10260 |
| tctggctcat | tgatccggtg | tatgccgcag | caggcatgag | cagcccgaat | atgcgcctgc | 10320 |
| tggtctgaac | gaccgaggaa | atgacccgcg | ttttcggcgc | tgaccaggct | ttttcacata | 10380 |
| ggctgagccg | tggtccactgc | actctccgac | gatcccagcc | gtaccgctgg | catgcccagc | 10440 |
| acaatcgctg | ggatcgccct | gctgatctta | tggaggttgc | tcgatgatc | tcaggcacag | 10500 |
| aaaaaccta | aaaacgctat | gagcaggagt | tttctagcgg | acgggcacgt | atcgaagcgg | 10560 |
| caagaaaagc | cactgcggaa | gcaaaagcac | ttgccacgct | tgaagcaagc | ctgccgagcg | 10620 |
| ccgctgaagc | gtctggagag | ctgatcgacg | gcgtccgtgt | cctctggact | gctccagggc | 10680 |
| gtgccgccc | tgatgagacg | gcttttcgcc | acgctttgac | tgtgggatac | cagttaaaag | 10740 |
| cggctggtga | gcgcctaaaa | gacaccaagg | gtcatcgagc | ctacgagcgt | gcctacaccg | 10800 |
| tcgctcaggc | ggtcggagga | ggccgtgagc | ctgatctgcc | gccggactgt | gaccgccaga | 10860 |
| cggattggcc | gcgacgtgtg | cgcggttacg | tcgctaaagg | ccagccagtc | gtccctgctc | 10920 |
| gtcagacaga | gacgcagagc | cagccgaggc | gaaaagctct | ggccactatg | ggaagacgtg | 10980 |
| gcggtaaaaa | ggccgcagaa | cgctggaaag | acccaaacag | tgagtacgcc | cgagcacagc | 11040 |
| gagaaaaact | agctaagtcc | agtcaacgac | aagctaggaa | agctaaagga | aatcgcttga | 11100 |
| ccattgcagg | ttggtttatg | actgttgagg | gagagactgg | ctcgtggccg | acaatcaatg | 11160 |
| aagctatgtc | tgaatttagc | gtgtcacgtc | agaccgtgaa | tagagcactt | aaggtctgcg | 11220 |
| ggcattgaac | ttccacgagg | acgccgaaag | cttcccagta | aatgtgccat | ctcgtaggca | 11280 |
| gaaaacggtt | ccccgtagg | gtctctctct | tggcctcctt | tctaggtcgg | gctgattgct | 11340 |
| cttgaagctc | tctagggggg | ctcacaccat | aggcagataa | cgttccccac | cggtctgcct | 11400 |
| cgtaagcgca | caaggactgc | tcccaaagat | cttcaaagcc | actgccgcga | ctgccttcgc | 11460 |
| gaagccttgc | cccgcggaaa | tttctccac | cgagtctgtg | cacacccta | tgccaagctt | 11520 |
| ctttcacctt | aaattcgaga | gattggattc | ttaccgtgga | aattcttcgc | aaaaatcgtc | 11580 |
| ccctgatcgc | ccttgcgacg | ttggcgctcg | tgccgctggt | tgcgcttggc | ttgaccgac | 11639 |

<210> 36
 <211> 13915
 <212> DNA
 <213> artificial

Sequence.txt

<220>

<223> Plasmid pOM620AF

<400> 36

| | |
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| ttaaagtttg gctgccatgt gaatttttag caccctcaac agttgagtgc tggcactctc | 120 |
| gggggtagag tgccaaatag gttgtttgac acacagttgt tcacccgcga cgacggctgt | 180 |
| gctggaaacc cacaaccggc acacacaaaa tttttctaga aggaggatgat agtatgtctt | 240 |
| ctgcagctac ccgccgtaat tcagccccct tcgttcagcg ccacatcggc ccaaaccagg | 300 |
| ccgataccca ggagatcctc gattacctgg gctatgaatc ttccgccgcg ctggccgacg | 360 |
| atgccctccc gaagtcgata cgccaggcag gcccgatcgg cctgccggag gcactggatg | 420 |
| agacggacac cctggccgcc ctgcgtgctt acgctgacaa gaacgtgcag aagcagcagc | 480 |
| tgatcggaac cggttacttc gacacgatca ctccggccgt gattcgccgc aacgtggtgg | 540 |
| agaacccggg ctggtacacc gcctacacc cctaccagcc ggaaatctcc caggggcgcc | 600 |
| tcgaggccct gctgaacttc cagacgatgg tgcaggacct gaccggcctg ccagtggccg | 660 |
| gtgcttcgct gttagacgaa gccaccgcag tggccgaggc cgtgcagctg atggctcgcg | 720 |
| gcaatgcgaa ggctgccaa gaggcgccgc tgggtgctgct ggattcctcc ctgcaccagc | 780 |
| agtccatcac cgtaaccctg gcgcgcgctg aggtgcggg tatcccggtg gaggtcgtgg | 840 |
| acctggacgg cgaagatgct accgccgcgt ttgagggccg cgagaacctc gtcggcgtgg | 900 |
| tgctttccaa ccccggtcc accggccgcg tccgcgacct gtccggtctg atctctgcgg | 960 |
| cgaaggagac cggcgctctg gtgacggctg cttgtgacct gctggctcag gttctggtga | 1020 |
| cctccccggg ctcccaaggt gccgacattg ctgtcggctc cggccagcgc ttcggcgtgc | 1080 |
| cgctattctt cgggtggccc cagcgggct tcattctctg caccgaggct ctgcagcgta | 1140 |
| agctgccggg ccgcatactg ggcgtgtccg tggatgccga gggcaccctg gcctaccgct | 1200 |
| tggctctgca gacctgtgag cagcacattc gccgcgacaa ggccaccagt aacatctgta | 1260 |
| ccgctcaggc tctgctggcc gtcgttgccg gtttctacgc ggtctggcac ggcccagccg | 1320 |
| gcctgcgcgc catcgccgag ggggtgcacg ccgcgcgac cgccctggcc gttgccctgt | 1380 |
| ccgaggctgg cctgacgctg gcgcacgata cttctctcga caccgtcacc gttgacgtgt | 1440 |
| ctggttcttc tcttggtgac gccccacgg ctctgcgcgc cgagccgag gcaggctaca | 1500 |
| acctgcgcca ggttaacgat tccttcgtcg gcatctctgt cggcgagtcc accacggacg | 1560 |
| aggacattgc caagctgata gaggtgctgg gctccgcac cggcgaggtc aactccgcga | 1620 |
| gcttcgacgt caccgccggc ccgctgggcg aggcggcgt gctgcgcgcg gaggacgagg | 1680 |
| agattctgac ccacccgata ttcaccgcca tcacttccga gaccagatg atgcgctaca | 1740 |
| tgcgcaagct ggccgaccgc gacctggcg tggatcgatc gatgatccg ctgggctcct | 1800 |
| gcacatgaa gctgaacgcg gccgtctcca tggagccgat cacctggcct ggcttcgcag | 1860 |
| gcatccacc gcacgtccc gccgagcagg cgagggctg gctggagctc atcaggacc | 1920 |

Sequence.txt

| | | | | | | |
|-------------|------------|-------------|-------------|-------------|------------|------|
| tggaggagcg | cctggcgaag | atcaccggct | acgccaaggt | ttccgtccag | ccgaacgcgg | 1980 |
| gctcccaggg | cgagttcgcc | ggcctgctgg | cgatccaccg | ctaccaccag | ttccgcggcg | 2040 |
| acgatcagcg | tgacatcggt | ctgatcccgg | cctccgcgca | cggcaccaac | gctgcctctg | 2100 |
| cagcgctggc | gggcctgaag | gtcgtggctg | tgaagaatgc | cgaagacggc | tccatcgacg | 2160 |
| tgccggacct | ggaggccaag | ctggagaagt | acggcgagca | gaccgccggc | atcatgctga | 2220 |
| cctaccctc | caccacggc | gtgttcgagg | agcaggtgcg | cgacgtctgc | cagaaggttc | 2280 |
| acgacgctgg | cggccaggtg | tacgtcgacg | gcgctaacct | gaacgccctg | gtcggcctgg | 2340 |
| cccagccggg | cgagttcggc | ggcgacgtat | cccacctgaa | cctgcacaag | accttcacca | 2400 |
| ttccgcacgg | tggtggcggc | ccgggcgttg | gcccgggtgtg | cgtggcagag | cacctgatcc | 2460 |
| cgttcctgcc | caccgacctg | aacgccgacg | ttatcgaggg | cgatgctgcc | ctgcagtccg | 2520 |
| gccagccggt | ctccggcgcg | cagtacggct | ccgctggcgt | gctgccgatc | acctggtcct | 2580 |
| acatcgacac | gatgggcgac | gaaggcctga | ctgaggcctc | ccgatggcc | ctggtgaacg | 2640 |
| ccaactacgt | ttcccgaag | ctggaggact | actaccgac | gctgtacaag | ggcgacaccg | 2700 |
| gcctggctgc | ccacgagtgc | atcctggacc | tgcgtgaact | cacgaaggcc | tccggcatca | 2760 |
| ccgccgagga | cgtatccaag | cgctgatgg | acttcggctt | ccacgccccg | accttggcct | 2820 |
| ttccggctgc | cggcaccctg | atgatggagc | ccaccgagtc | ggaggacaag | gaagagctgg | 2880 |
| accgcttcat | cgaagcgatg | atcaccatcc | acggggagat | ccaggaagtt | atcgacggca | 2940 |
| aggtcaccgc | cgaacagtcc | gttctgcgcc | acgcgccgtt | taccgcctat | tctgttgtgc | 3000 |
| gggacgactt | cgaggaagct | gtatccgggtg | gtcacttcag | ccgtgccaaag | gccgcatacc | 3060 |
| cgggtggctag | cctgcgacac | accaaagtact | tcacccccgt | gcgtcgatatc | gacaacgcct | 3120 |
| atggcgaccg | caatctcgtg | tgcacctgcc | cggccctgga | agacttcgca | attaacgagg | 3180 |
| actaggttcc | gctggagcta | agggcgctac | aaagagaaga | aggagaacaa | gacatgaccg | 3240 |
| aacttaagaa | gaccgcgctg | cacctggtgc | acgagaagtt | gggcgcgcga | tttaccgact | 3300 |
| tcggcggctg | ggacatgcct | ctgaagtaca | gcagtgagct | ggacgagcac | cacgctgtac | 3360 |
| gcaatgccgt | gggcgtattc | gacctctccc | acatgggtga | ggttcgcgtg | accggccccg | 3420 |
| aggcagcgga | gttcctggac | cacgcgctga | tttcgaagct | gtcggcagtg | aaggctcgga | 3480 |
| aggcgaagta | ctcgatgatc | tgcaccgaat | ccggtggcat | catcgacgac | ctgatcacct | 3540 |
| accgcctggg | cgacaacgag | ttcctgatcg | tgccgaacgc | gggcaacgtg | gacaacgtgg | 3600 |
| tctccgact | gcagggccgc | accgagggct | ttgacgtgga | ggttaacaac | gagtccgatg | 3660 |
| cgacctccat | gatcgccgta | caggggcccc | aggccgcgca | ggcgatgctg | gagatcgtgg | 3720 |
| agaacgtcgt | ggatgcaccc | gaggcatccg | gcgcgggcga | gaccgttgcc | gaggctatcg | 3780 |
| aggggctggg | ttactacgcg | gcattcagcg | gtgttgccgc | aggtcagccc | gtgctggtgg | 3840 |
| cccgcacagg | ctataccggc | gaggacgggt | tcgagctgat | cgtggctaac | gatggtgcgg | 3900 |
| agaccgtgtg | gaccaaggct | atggaccagg | ctgcgcagct | gggtggcctg | ccgtgtggcc | 3960 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| tggcctgccg | cgacaccctg | cgcttgagg | ctggcatgcc | gctgtacggc | aacgagctat | 4020 |
| cgctgaagct | caccccggtc | gatgctgggc | tgggcattct | tgcggcgacg | aagtctaagg | 4080 |
| actctttcgt | tggtcgtgac | gccatcgttt | ccgccaagga | aaagggtagc | cagcaggtac | 4140 |
| ttatcgggct | ggcgggagag | ggtcgccgag | ctgcccgtgg | gggatacgag | gtgtttgccg | 4200 |
| gtgacggcga | gaaggccatc | ggtgccgtga | cctccgggtg | actgtcgccg | acgctggggc | 4260 |
| acccggtggc | attggcatac | gtcgcaagt | ccgcagtgtc | ctccggcgag | gccgctgagg | 4320 |
| gtgcgaccgt | ggaggtagac | atccgcggca | agcgctttga | atacaagggt | gtggcgctgc | 4380 |
| cgttctactc | ccgcgagaag | taacgcaaga | agtaacgaaa | agggttgtct | gcccgtgggt | 4440 |
| gtaaggtttg | ggcagacaac | cacagaagta | accacacaag | gtttcacaag | agaggcttaa | 4500 |
| aacaatgact | gcactgcaa | ctgacttcct | gtactccgaa | gagcacgagt | gggttaacac | 4560 |
| ctccgctgtt | gttgagggcg | agaccgtgag | cgtgggcatt | acccacatcg | ccgctgaggc | 4620 |
| gctgggtgac | atcgtgttcg | tcgagctgcc | ggaggttggc | tccgaggttg | aggccggcga | 4680 |
| ggctttcggc | gaggttgagt | ccaccaagtc | cgtttccgac | atctacgcac | cggtttctgg | 4740 |
| cgaggttggt | gctgtcaacg | aggcgctgga | agacaacgct | ggcctgatca | acgaagatcc | 4800 |
| atacggtag | ggctggctgt | acgaggtcaa | ggtgaccgag | gccggcgagc | tgatggaggc | 4860 |
| tgaggcttac | caggcggtta | acgagtaaaa | caagacccta | tggtcggttc | catgttcgca | 4920 |
| ttaatcctcg | gcttggccct | gttgggcctt | gccgtgtggg | tactcctgag | agcaaaagat | 4980 |
| agcaccggat | ccgccctccc | gcacgctttg | cgggagggct | tttcttttcc | cggtatttca | 5040 |
| gtagctcggg | ggcgtctcat | tcagcaaacc | tagctccata | tccgcctctg | ggctctccca | 5100 |
| ccccgcacca | aaatctctcg | cgagaggcct | tcagggccct | taaatgtcgg | aaaagttgca | 5160 |
| atttgtaaat | gctactgggt | ttcaaatatg | caaatgcgca | ggtcaagggg | cttttgggaa | 5220 |
| agtggaaacc | aatcccgatt | tgaagaattg | caacttttcc | gacattaagc | ggccttcagg | 5280 |
| aagtgccaaa | caccggaggc | accagcatca | acgtcaccac | ctggcatatc | tagcaccatc | 5340 |
| agaagcttca | gcctcactac | aggcggaacc | tgacgccagc | gggacctcac | ccagcgggac | 5400 |
| agaaccagc | ggaacttggt | gccagcgga | ccgcagccac | cagctccac | cagcaccag | 5460 |
| cagcgccaag | gcaccactgg | agtatcatcg | ccaccatggg | attccagcaa | ggcagcatcc | 5520 |
| gcaaagcaaa | catgggcaca | accggcacta | acgacggggc | aaccaccca | ccagccaaca | 5580 |
| ccagcaccac | agccgtagac | atcgacgtcc | gcgacctggg | caccgtggac | tacgaggaca | 5640 |
| cttggcacct | ccaggcaaat | ctcgccgccc | agcgcgccga | agaaaaatc | ccagacacca | 5700 |
| tcctcctact | ccagcatccg | ccgacgtaca | ccgccggcaa | gcgcaccag | gattccgacc | 5760 |
| gccctacca | cggcctgcca | gtagtgcag | tcgaccggg | aggccgcac | acctggcatg | 5820 |
| gacccggcca | gttggtcgca | tatcccatca | tcaagctggc | cgacccgggt | gacgtggctg | 5880 |
| attatgtccg | ccgcctggag | caggcgctaa | tccagacttg | tgaagatctt | ggcctgcacg | 5940 |
| gcaccggccg | cgtagagggg | cgttcggggc | tgtggctgcc | tgcgggcgtc | attaatggcg | 6000 |

Sequence.txt

| | | | | | | |
|-------------|------------|------------|------------|------------|------------|------|
| agctcaagcc | cgcacgtaag | atagccgcga | tcggcatccg | cgtgacgcgc | ggcgtgacca | 6060 |
| tgcacggagt | ggccctcaac | tgcgataaca | ccatggagta | ttacgaccac | attgtgcctt | 6120 |
| gtgggctggc | ggatgcgggt | gtcacgacgc | tcaccgagga | gctggggcgc | gatgttagtg | 6180 |
| tttctgacgc | ctactcatcc | ctcgcccaca | acctcgttga | tgctttgaac | ggcgacttgc | 6240 |
| cggatgcattc | ctaggggaaa | acccgaggtg | gattcctata | cggcaccag | cgtaggctag | 6300 |
| tcggcatgag | tgtgaccgca | gatggacgcc | ggatgctacg | catcgaggcg | aagaatgccg | 6360 |
| aaaccccat | cgagtcgaag | cctcggtgga | tccgcacgac | cggaagggtc | ggcccgaggt | 6420 |
| atcgggatat | taagaatcgc | gtgaaggcg | ctggcctgca | caccgtgtgc | caagaggctg | 6480 |
| gctgccgaa | tatcaacgag | tgctgggagg | accgcgaggc | gacgttcctc | atcggcggtg | 6540 |
| atacgtgttc | ccgccgttgc | gacttctgcc | agattaagtc | cggccgccc | tccccgctgg | 6600 |
| atatggacga | gccacgccgc | gtggcggaga | atgtccgcga | gatgggtctg | cgctacgcca | 6660 |
| ccatcaccgg | cgtgacgcgc | gatgacctgg | atgatgaggg | cgctgggtg | tatgccgagg | 6720 |
| ttgtgaagaa | gattcacgag | ctgaacccga | acacgggtgt | ggagaatctg | acgccagatt | 6780 |
| tttccaaccg | ccgggagctg | ctgaaggctg | tcttcgattc | ccagccggag | gtgtttgccc | 6840 |
| acaacctgga | gacagttccg | cgcatcttta | agcgcatccg | cccggccttt | aagtacgacc | 6900 |
| gttccttga | ggtcattcag | gcagctcacg | attacggcct | ggtgacgaag | tccaacctga | 6960 |
| tcctgggcat | gggtgagaag | aaggaagagg | tccgcgcggc | tatcaaggac | ctggcagacg | 7020 |
| ccggcaccga | cattctgacg | attacccagt | acctgcgcc | gtcttccatg | caccaccga | 7080 |
| ttgagcgttg | ggtgaagccg | gaggagtcca | tggagcactc | cgacgcagcc | tacgagctgg | 7140 |
| gcatcaaggc | tgttatgtcc | ggcccgttgg | tgcgttcctc | ttaccgcgcc | ggccgcctgt | 7200 |
| acgcgcaggc | caagcaggcg | cgcgcgagg | ctattccgga | gaacctgaag | cacttgagg | 7260 |
| agactctcga | ttccaccacg | tcgcaggagg | cctctacact | gctggagcgc | tacggcgctt | 7320 |
| cggaggacac | gccggtcact | gcgtcgcgcc | gctagctcgg | cggggcactt | tcgccccgcc | 7380 |
| tttattcatg | ccttattgtt | gaatccatgg | cgaaggataa | aaaggacgta | agggtaagg | 7440 |
| aagagaagaa | ggcagctaag | gcaaatcgct | agcgggctgc | taaaggaagc | ggaacacgta | 7500 |
| gaaagccagt | ccgcagaaac | ggtgctgacc | ccgatgaat | gtcagctact | gggctatctg | 7560 |
| gacaagggaa | aacgcaagcg | caaagagaaa | gcaggtagct | tgagtgggc | ttacatggcg | 7620 |
| atagctagac | tgggcggttt | tatggacagc | aagcgaaccg | gaattgccag | ctggggcgcc | 7680 |
| ctctggttaag | gttgggaagc | cctgcaaagt | aaactggatg | gctttcttgc | cgccaaggat | 7740 |
| ctgatggcgc | aggggatcaa | gatctgatca | agagacagga | tgaggatcgt | ttcgcatgat | 7800 |
| tgaacaagat | ggattgcacg | caggttctcc | ggccgcttgg | gtggagaggc | tattcggtta | 7860 |
| tgactgggca | caacagacaa | tcggctgctc | tgatgccgcc | gtgttcggc | tgctagcgca | 7920 |
| ggggcgccc | gttctttttg | tcaagaccga | cctgtccggt | gccctgaatg | aactgcagga | 7980 |
| cgaggcagcg | cggctatcgt | ggctggccac | gacgggcgtt | ccttgccgag | ctgtgctcga | 8040 |

Sequence.txt

| | | | | | | |
|------------|-------------|------------|-------------|------------|-------------|-------|
| cgttgtcact | gaagcgggaa | gggactggct | gctattgggc | gaagtgccgg | ggcaggatct | 8100 |
| cctgtcatct | caccttgctc | ctgccgagaa | agtatccatc | atggctgatg | caatgcggcg | 8160 |
| gctgcatacg | cttgatccgg | ctacctgccc | attcgaccac | caagcgaaac | atcgcatcga | 8220 |
| gcgagcacgt | actcggatgg | aagccggtct | tgtcgatcag | gatgatctgg | acgaagagca | 8280 |
| tcaggggctc | gcgccagccg | aactgttcgc | caggctcaag | gcgcgcatgc | ccgacggcga | 8340 |
| ggatctcgtc | gtgacccatg | gcgatgcctg | cttgccgaat | atcatgggtg | aaaatggccg | 8400 |
| cttttctgga | ttcatcgact | gtggccggct | gggtgtggcg | gaccgctatc | aggacatagc | 8460 |
| gttggctacc | cgtgatattg | ctgaagagct | tggcggcgaa | tgggctgacc | gcttcctcgt | 8520 |
| gctttacggt | atcgccgctc | ccgattcgca | gcgcatcgcc | ttctatcgcc | ttcttgacga | 8580 |
| gttcttctga | gcgggactct | ggggttcgaa | atgaccgacc | aagcgacgcc | caacctgcca | 8640 |
| tcacgagatt | tcgattccac | cgccgccttc | tatgaaaggt | tgggcttcgg | aatcgttttc | 8700 |
| cgggacgcg | gctggatgat | cctccagcgc | ggggatctca | tgctggagtt | cttcgcccac | 8760 |
| gctagtttaa | actgcggatc | agtgagggtt | tgtaactgcg | ggtcaaggat | ctggatttcg | 8820 |
| atcacggcac | gatcatcgtg | cgggagggca | agggctccaa | ggatcggggc | ttgatgttac | 8880 |
| ccgagagctt | ggcaccacgc | ctgcgcgagc | aggggaattg | atccggtgga | tgaccttttg | 8940 |
| aatgaccttt | aatagattat | attactaatt | aattggggac | cctagaggtc | ccctttttta | 9000 |
| ttttaaaaat | tttttcacaa | aacggtttac | aagcataacg | ggttttgctg | cccgaaaacg | 9060 |
| ggctgttctg | gtgttgctag | tttgttatca | gaatcgcaga | tccggcttca | ggtttgccgg | 9120 |
| ctgaaagcgc | tatttcttcc | agaattgcca | tgattttttc | cccacgggag | gcgtcactgg | 9180 |
| ctcccgtgtt | gtcggcagct | ttgattcgat | aagcagcatc | gcctgtttca | ggctgtctat | 9240 |
| gtgtgactgt | tgagctgtaa | caagtgtgtc | cagggtgttca | atttcatgtt | ctagttgctt | 9300 |
| tgttttactg | gtttcacctg | ttctattagg | tgttacatgc | tgttcatctg | ttacattgtc | 9360 |
| gatctgttca | tgggtgaacag | ctttaaatgc | acaaaaaact | cgtaaaagct | ctgatgtatc | 9420 |
| tatctttttt | acaccgtttt | catctgtgca | tatggacagt | tttccctttg | atatctaacg | 9480 |
| gtgaacagtt | gttctacttt | tgtttgtag | tcttgatgct | tactgatag | atacaagagc | 9540 |
| cataagaacc | tcagatcctt | ccgtatttag | ccagtatgtt | ctctagtgtg | gttcgttggt | 9600 |
| tttgctgtag | ccatgagaac | gaaccattga | gatcatgctt | actttgcatg | tcactcaaaa | 9660 |
| attttgcctc | aaaactgggtg | agctgaattt | ttgcagttaa | agcatcgtgt | agtgtttttc | 9720 |
| ttagtccgtt | acgtaggtag | gaatctgatg | taatggttgt | tggatatttg | tcaccattca | 9780 |
| tttttatctg | gttgttctca | agttcggtta | cgagatccat | ttgtctatct | agttcaactt | 9840 |
| ggaaaatcaa | cgtatcagtc | gggcggcctc | gcttatcaac | caccaatttc | atattgctgt | 9900 |
| aagtgtttaa | atctttactt | attggtttca | aaaccatttg | gttaagcctt | ttaaactcat | 9960 |
| ggtagttatt | ttcaagcatt | aacatgaact | taaattcatc | aaggctaata | tctatatattg | 10020 |
| ccttgtagt | tttcttttgt | gttagttcct | ttaataacca | ctcataaatc | ctcatagagt | 10080 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|-------------|------------|------------|-------|
| atttgttttc | aaaagactta | acatgttcca | gattatatatt | tatgaatttt | tttaactgga | 10140 |
| aaagataaag | caatatctct | tcactaaaaa | ctaattctaa | tttttcgctt | gagaacttgg | 10200 |
| catagtttgt | ccactggaaa | atctcaaagc | ctttaaccaa | aggattcctg | atttcacag | 10260 |
| ttctcgtcat | cagctctctg | gttgctttag | ctaatacacc | ataagcattt | tccctactga | 10320 |
| tgttcacat | ctgagcgtat | tgggtataag | tgaacgatac | cgccggttct | ttcctttag | 10380 |
| ggttttcaat | cgtaggggtg | agtagtgcca | cacagcataa | aattagcttg | gtttcatgct | 10440 |
| ccgttaagtc | atagcgacta | atcgctagtt | catttgcttt | gaaaacaact | aattcagaca | 10500 |
| tacatctcaa | ttggtctagg | tgattttaat | cactatacca | attgagatgg | gctagtcaat | 10560 |
| gataattact | agtccttttc | ctttgagttg | tgggtatctg | taaattctgc | tagacctttg | 10620 |
| ctggaaaact | tgtaaattct | gctagaccct | ctgtaaattc | cgctagacct | ttgtgtgttt | 10680 |
| tttttgttta | tattcaagtg | gttataattt | atagaataaa | gaaagaataa | aaaaagataa | 10740 |
| aaagaataga | ttccagccct | gtgtataact | cactacttta | gtcagttccg | cagtattaca | 10800 |
| aaaggatgtc | gcaaacgctg | tttgctcctc | tacaaaacag | accttaaaac | cctaaaggct | 10860 |
| taagtagcac | cctcgcaagc | tcgggcaaat | cgctgaatat | tccttttgtc | tccgaccatc | 10920 |
| aggcacctga | gtcgtgtctt | tttctgtgac | attcagttcg | ctgcgctcac | ggctctggca | 10980 |
| gtgaatgggg | gtaaatggca | ctacaggcgc | cttttatgga | ttcatgcaag | gaaactaccc | 11040 |
| ataatacaag | aaaagcccg | cacgggcttc | tcagggcgtt | ttatggcggg | tctgctatgt | 11100 |
| gggtctatct | gactttttgc | tgttcagcag | ttcctgccct | ctgattttcc | agtctgacca | 11160 |
| cttcggatta | ttccgtgaca | ggtcattcag | actggctaata | gcaccagta | aggcagcgg | 11220 |
| atcatcaaca | ggcttagttt | aaaccgcaaa | gtcccgcctc | gtgaaaattt | tcgtgccgcg | 11280 |
| tgattttccg | ccaaaaactt | taacgaacgt | tcgttataat | gggtgcatga | ccttcacgac | 11340 |
| gaagtactaa | aattggcccc | aatcatcagc | tatggatctc | tctgatgtcg | cgctggagtc | 11400 |
| cgacgcgctc | gatgctgccg | tcgatttaaa | aacgggtgatc | ggatttttcc | gagctctcga | 11460 |
| tacgacggac | gcgccagcat | cacgagactg | ggccagtgcc | gcgagcgacc | tagaaactct | 11520 |
| cgtggcggat | cttgaggagc | tggctgacga | gctgcgtgct | cggccagcgc | caggaggacg | 11580 |
| cacagtagtg | gaggatgcaa | tcagttgcgc | ctactgcggt | ggcctgattc | ctccccggcc | 11640 |
| tgaccgcga | ggacggcgcg | caaaatattg | ctcagatgcg | tgctgtgccg | cagccagccg | 11700 |
| cgagcgcgcc | aacaaacgcc | acgccgagga | gctggaggcg | gctaggtcgc | aatggcgct | 11760 |
| ggaagtgcgt | cccccgagcg | aaattttggc | catggctgct | acagagctgg | aagcggcagc | 11820 |
| gagaattatc | gcgatcgtgg | cgggtcccg | aggcatgaca | aacatcgtaa | atgccgcgtt | 11880 |
| tcgtgtgccg | tggccgcca | ggacgtgtca | gcgccgccac | cacctgcacc | gaatcggcag | 11940 |
| cagcgtcgcg | cgtcgaaaaa | gcgcacaggc | ggcaagaagc | gataagctgc | acgaatacct | 12000 |
| gaaaaatgtt | gaacgccccg | tgagcggtaa | ctcacagggc | gtcggctaac | ccccagtcca | 12060 |
| aacctgggag | aaagcgctca | aaaatgactc | tagcggattc | acgagacatt | gacacaccgg | 12120 |

Sequence.txt

```

cctggaaatt ttccgctgat ctgttcgaca cccatcccga gctcgcgctg cgatcacgtg 12180
gctggacgag cgaagaccgc cgcgaattcc tcgctcacct gggcagagaa aatttccagg 12240
gcagcaagac ccgcgacttc gccagcgctt ggatcaaaga cccggacacg gagaaacaca 12300
gccgaagtta taccgagttg gttcaaaatc gcttgcccgg tgccagtatg ttgctctgac 12360
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 <212> DNA
 <213> artificial

<220>

Sequence.txt

<223> Plasmid pOM621AR

<400> 37

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| tgtccggttt ttgcaaaagt ggctgtgact gtaaaaagaa atcgaaaaag accgttttgt | 120 |
| gtgaaaacgg tctttttgtt tccttttaac caactgccat aactcgaggc tattgacgac | 180 |
| agctatggtt cactgtccac caaccaaacc tgtgctcagt accgccaata tttctccctt | 240 |
| gaggggtaca aagaggtgtc cctagaagag atccacgctg tgtaaaaatt ttacaaaag | 300 |
| gtattgactt tccctacagg gtgtgtaata atttaattac aggcgggggc aacccgcct | 360 |
| gttctagaag gaggtgatag tatgtcttct gcagctaccc gccgtaattc agcccccttc | 420 |
| gttcagcgcc acatcgggcc aaaccaggcc gataccagg agatcctcga ttacctgggc | 480 |
| tatgaatctt ccgccgcgct ggccgacgat gccctcccga agtcgatccg ccaggcaggc | 540 |
| ccgatcggcc tgccggaggc actggatgag acggacaccc tggccgccct gcgtgcttac | 600 |
| gctgacaaga acgtgcagaa gcagcagctg atcggaacg gttacttcga cacgatcact | 660 |
| ccggccgtga ttcgccgcaa cgtggtggag aacccgggct ggtacaccgc ctacaccccc | 720 |
| taccagccgg aaatctccca ggggcgcctc gagggcctgc tgaacttcca gacgatggtg | 780 |
| caggacctga ccggcctgcc agtggccggt gcttcgctgt tagacgaagc caccgcagtg | 840 |
| gccgaggccg tgcagctgat ggctcgcgcc aatgcgaagg ctgccaagaa gggcggcgtg | 900 |
| gtgctgctgg attcctccct gcaccagcag tccatcaccg taaccctggc gcgcgctgag | 960 |
| gctgcgggta tcccgggtga ggtcgtggac ctggacggcg aagatgctac cgccgcgttt | 1020 |
| gagggccgcg agaacctcgt cggcgtggtg ctttccaacc ccggctccac cggccgcgtc | 1080 |
| cgcgacctgt ccggtctgat ctctcgcgcg aaggagaccg gcgctctggt gacggtcgtc | 1140 |
| tgtgacctgc tggctcaggt tctggtgacc tccccgggct cccaagggtc cgacattgct | 1200 |
| gtcggctccg ccagcgctt cggcgtgccg ctattcttcg gtggcccgca cgcgggcttc | 1260 |
| atctcctgca ccgaggtctt gcagcgtaag ctgccgggcc gcatcggtgg cgtgtccgtg | 1320 |
| gatgccgagg gcaccccgcc ctaccgcttg gctctgcaga cccgtgagca gcacattcgc | 1380 |
| cgcgacaagg ccaccagtaa catctgtacc gctcaggctc tgctggccgt cgttgccggt | 1440 |
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| ttcttcgaca ccgtcaccgt tgacgtgtct ggttcttctc ttggtgacgc cccacggct | 1620 |
| ctgcgcgccg cagccgaggc aggtacaac ctgcgccagg ttaacgattc cttcgtcggc | 1680 |
| atctctgtcg gcgagtccac cacggacgag gacattgcca agctgatcga ggtgctgggc | 1740 |
| tcccgacccg gcgaggtcaa ctccgcgagc ttcgacgtca ccgccggccc gctgggcgag | 1800 |
| gccggcgctg tgcgcgcgga ggacgaggag attctgacct acccgatctt caccgccatc | 1860 |
| acttccgaga ccagatgat gcgctacatg cgcaagctgg ccgaccgcca cctggcgctg | 1920 |
| gatcgtacga tgatcccgtt gggctcctgc accatgaagc tgaacgcggc cgtctccatg | 1980 |

Sequence.txt

| | | | | | | |
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| cagggctggc | tggagctcat | cgaggacctg | gaggagcgcc | tggcgaagat | caccggctac | 2100 |
| gccaaggttt | ccgtccagcc | gaacgcgggc | tcccagggcg | agttcgccgg | cctgctggcg | 2160 |
| atccaccgct | accaccagtc | ccgcggcgac | gatcagcgtg | acatcgttct | gatccccggc | 2220 |
| tccgcgcacg | gcaccaacgc | tgcctctgca | gcgctggcgg | gcctgaaggt | cgtggctgtg | 2280 |
| aagaatgccg | aagacggctc | catcgacgtg | ccggacctgg | aggccaagct | ggagaagtac | 2340 |
| ggcgagcaga | ccgccgccat | catgtgacc | taccctcca | cccacggcgt | gttcgaggag | 2400 |
| caggtgcgcg | acgtctgcc | gaaggttcac | gacgctggcg | gccaggtgta | cgtcgacggc | 2460 |
| gctaacctga | acgccctggt | cggcctggcc | cagccggggcg | agttcggcgg | cgacgtatcc | 2520 |
| cacctgaacc | tgcacaagac | cttcaccatc | ccgcacggtg | gtggcgggcc | gggcgttggc | 2580 |
| ccggtgtgcy | tggcagagca | cctgatcccg | ttcctgcca | ccgaccgaa | cgccgacgtt | 2640 |
| atcgagggcg | atgctgccct | gcagtccggc | cagccggtct | ccggcgcgca | gtacggctcc | 2700 |
| gctggcgtgc | tgccgatcac | ctggtcctac | atcgcacaga | tgggcgacga | aggcctgact | 2760 |
| gaggcctccc | gcatggccct | ggtgaacgcc | aactacgttt | cccgaagct | ggaggactac | 2820 |
| taccgacgc | tgtacaaggg | cgacaccggc | ctggtcgccc | acgagtgc | cctggacctg | 2880 |
| cgtgaactca | cgaaggcctc | cggcatcacc | gccgaggacg | tatccaagcg | cctgatggac | 2940 |
| ttcggcttcc | acgccccgac | cttggccttc | ccggtcgccg | gcaccctgat | gatggagccc | 3000 |
| accgagtcgg | aggacaagga | agagctggac | cgcttcacg | aagcgatgat | caccatccac | 3060 |
| ggggagatcc | aggaagtatt | cgacggcaag | gtcaccgccc | aacagtccgt | tctgcgccac | 3120 |
| gcgccgttta | ccgcctattc | tgttgtgcyg | gacgacttcg | aggaagctgt | atccggtggt | 3180 |
| cacttcagcc | gtgccaaggc | cgcatacccg | gtggctagcc | tgcgacacac | caagtacttc | 3240 |
| acccccgtgc | gtcgtatcga | caacgcctat | ggcgaccgca | atctcgtgtg | cacctgcccg | 3300 |
| cccctggaag | acttcgcaat | taacgaggac | tagggctccg | tggagctaag | ggcgtcacia | 3360 |
| agagaagaag | gagaacaaga | catgaccgaa | cttaagaaga | ccgcgctgca | cctggtgcac | 3420 |
| gagaagtgtg | gcgcgcgatt | taccgacttc | ggcggctggg | acatgcctct | gaagtacagc | 3480 |
| agtgagctgg | acgagcacca | cgctgtacgc | aatgccgtgg | gcgtattcga | cctctccac | 3540 |
| atgggtgagg | ttcgcgtgac | cggcccgacg | gcagcggagt | tcctggacca | cgcgctgatt | 3600 |
| tcgaagctgt | cggcagtgaa | ggtcggcaag | gcgaagtact | cgatgatctg | caccgaatcc | 3660 |
| ggtggcatca | tcgacgacct | gatcacctac | cgctggggcg | acaacgagtt | cctgatcgtg | 3720 |
| ccgaacgcgg | gcaacgtgga | caacgtggtc | tccgactgc | agggccgcac | cgagggcttt | 3780 |
| gacgtggagg | ttaacaacga | gtccgatgcy | acctccatga | tcgccgtaca | ggggcccaag | 3840 |
| gccgcgcagg | cgatgctgga | gatcgtggag | aacgtcgtgg | atgcaccgga | ggcatccggc | 3900 |
| gcgggcgaga | ccgttgccga | ggctatcgag | gggctgggtt | actacgcggc | attcagcggc | 3960 |
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Sequence.txt

| | | | | | | |
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| gcgcagctgg | gtggcctgcc | gtgtggcctg | gcctgccgcg | acaccctgcg | cctggaggct | 4140 |
| ggcatgccgc | tgtacggcaa | cgagctatcg | ctgaagctca | ccccggtcga | tgctgggctg | 4200 |
| ggcattcttg | ggcgacgaa | gtctaaggac | tctttcgttg | gtcgtgacgc | catcgtttcc | 4260 |
| gccaaagaaa | aggggtaccca | gcaggctactt | atcgggctgg | cgggcgaggg | tcgccgcgct | 4320 |
| gcccgtgggg | gatacgaggt | gtttgccggg | gacggcgaga | agggcatcgg | tgccgtgacc | 4380 |
| tccggtgcac | tgctgccgac | gctgggccac | ccggtggcat | tggcatacgt | cgcgaaagtcc | 4440 |
| gcagtgtcct | ccggcgcggc | cgctgagggt | gcgaccgtgg | aggtagacat | ccgcggcaag | 4500 |
| cgctttgaat | acaaggttgt | ggcgtgccg | ttctactccc | gcgagaagta | acgcaagaag | 4560 |
| taacgaaaag | ggttgtctgc | ccgctggtgt | aaggtttggg | cagacaacca | cagaagtaac | 4620 |
| cacacaaggt | ttcacaagag | aggcttaaaa | caatgactgc | actgccaaact | gacttcctgt | 4680 |
| actccgaaga | gcacgagtgg | gttaaacctt | ccgctgttgt | tgagggcgag | accgtgcgcg | 4740 |
| tgggcattac | ccacatcgcc | gctgaggcgc | tgggtgacat | cgtgttcgtc | gagctgccgg | 4800 |
| aggttggctc | cgaggttgag | gccggcgagg | ctttcggcga | ggttgagtcc | accaagtccg | 4860 |
| tttccgacat | ctacgcaccg | gtttctggcg | aggttgtggc | tgtcaacgag | gcgctggaag | 4920 |
| acaacgctgg | cctgatcaac | gaagatccat | acggtgaggg | ctggctgtac | gaggtcaagg | 4980 |
| tgaccgaggc | cggcgagctg | atggaggctg | aggcttacca | ggcggctaac | gagtaaaaca | 5040 |
| agaccctatg | gtcggttcca | tgttcgcatt | aatcctcggc | ttggccctgt | tgggccttgc | 5100 |
| cgtgtggtta | ctcctgcgag | caaaagatag | caccggatcc | gccctcccgc | acgctttgcg | 5160 |
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| gtccatatc | cgctcttggg | ctctcccacc | ccgcacaaa | atctctcgcg | agaggccttc | 5280 |
| agggccctta | aatgtcggaa | aagttgcaat | ttgttaatgc | tactggtttt | caaatatgca | 5340 |
| aatgcgcagg | tcaaggggct | tttgggaaag | tggaaaccaa | tcccgatattg | aagaattgca | 5400 |
| acttttccga | cattaagcgg | ccttcaggaa | gtgccaaaca | ccggaggcac | cagcatcaac | 5460 |
| gtcaccacct | ggcatatcta | gcaccatcag | aagcttcagc | ctcactacag | gcggaacctg | 5520 |
| acgccagcgg | gacctcacc | agcgggacag | aaccagcgg | aacttggcgc | cagcggaacc | 5580 |
| gcagccacca | gtccccacca | gcaccagca | gcgccaaggc | accactggag | tatcatcgcc | 5640 |
| accatgggat | tccagcaagg | cagcatccgc | aaagcaaaca | tgggcacaac | cggcactaac | 5700 |
| gacggggcaa | ccaccccacc | agccaacacc | agcaccacag | ccgtagacat | cgacgtccgc | 5760 |
| gacctgggca | ccgtggacta | cgaggacact | tggcacctcc | aggcaaattct | cgccgcccag | 5820 |
| cgcgccgaag | aaaaaatccc | agacaccatc | ctctactccc | agcatccgcc | gacgtacacc | 5880 |
| gccggcaagc | gcaccagga | ttccgaccgc | cctaccaacg | gcctgccagt | agtcgacgtc | 5940 |
| gaccgcggag | gccgcatcac | ctggcatgga | cccggccagt | tggctgcata | tcccatcatc | 6000 |
| aagctggccg | accgggtgga | cgtggtcgat | tatgtccgcc | gcctggagca | ggcgctaatac | 6060 |

Sequence.txt

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| tggctgcctg | cgggcgatcat | taatggcgag | ctcaagcccc | cacgtaagat | agccgcgatc | 6180 |
| ggcatccgcg | tgacgcgcgg | cgtgaccatg | cacggagtgg | ccctcaactg | cgataacacc | 6240 |
| atggagtatt | acgaccacat | tgtgccttgt | gggctggcgg | atgcgggtgt | cacgacgctc | 6300 |
| accgaggagc | tggggcgcg | tgtagtggt | tctgacgcct | actcatccct | cgcccacaac | 6360 |
| ctcgttgatg | ctttgaacgg | cgacttgccg | gtgcattcct | aggggaaaac | ccgaggtgga | 6420 |
| ttcctatacg | gcacccagcg | taggctagtc | ggcatgagtg | tgaccgcaga | tggacgccgg | 6480 |
| atgctacgca | tcgaggcgaa | gaatgccgaa | acccccatcg | agtcgaagcc | tcggtggatc | 6540 |
| cgcacgaccg | cgaaggctcg | cccggagtat | cgggatatta | agaatcgctg | gaagggcgct | 6600 |
| ggcctgcaca | ccgtgtgcc | agaggctggc | tgcccgaata | tcaacgagt | ctgggaggac | 6660 |
| cgcgaggcga | cgttcctcat | cggcggtgat | acgtgttccc | gccgttgcca | cttctgccag | 6720 |
| attaagtccg | gccgcccgct | cccgtggat | atggacgagc | cacgcccgct | ggcggagaat | 6780 |
| gtccgcgaga | tgggtctg | ctacgccacc | atcaccggcg | tgacgcgcga | tgacctggat | 6840 |
| gatgagggcg | cgtggctgta | tgccgaggtt | gtgaagaaga | ttcacgagct | gaacccgaac | 6900 |
| acgggtgtgg | agaatctgac | gccagatttt | tccaaccgcc | cggagctgct | gaaggtcgct | 6960 |
| ttcgattccc | agccggaggt | gtttgccac | aacctggaga | cagttccgcg | catctttaag | 7020 |
| cgcacccgcc | cggccttta | gtacgaccgt | tccctggagg | tcattcaggc | agtcacgat | 7080 |
| tacggcctgg | tgacgaagtc | caacctgatc | ctgggcatgg | gtgagaagaa | ggaagaggtc | 7140 |
| cgcgcggcta | tcaaggacct | ggcagacgcc | ggcaccgaca | ttctgacgat | taccagtag | 7200 |
| ctgcgcccgt | cttccatgca | ccacccgatt | gagcgttggg | tgaagccgga | ggagttcatg | 7260 |
| gagcactccg | acgcagccta | cgagctgggc | atcaaggctg | ttatgtccgg | cccgttggtg | 7320 |
| cgttcctctt | accgcgccgg | ccgcctgtac | gcgcaggcca | agcaggcgcg | cggcgaggct | 7380 |
| attccggaga | acctgaagca | cttgaggag | actctcgatt | ccaccacgct | gcaggaggcc | 7440 |
| tctacactgc | tggagcgcta | cggcgcttcg | gaggacacgc | cggctactgc | gtcgcgccgc | 7500 |
| tagctcgcg | gggcactttc | gccccgcctt | tattcatgcc | ttattgttga | atccatggcg | 7560 |
| aaggataaaa | aggacgtaag | ggtcaaggaa | gagaagaagg | cagctaaggc | aatcgctag | 7620 |
| cgggctgcta | aaggaagcgg | aacacgtaga | aagccagtcc | gcagaaacgg | tgctgacccc | 7680 |
| ggatgaatgt | cagctactgg | gctatctgga | caagggaaaa | cgcaagcgca | aagagaaagc | 7740 |
| aggtagcttg | cagtgggctt | acatggcgat | agctagactg | ggcggtttta | tggacagcaa | 7800 |
| gcgaaccgga | attgccagct | ggggcgccct | ctggtaaggt | tgggaagccc | tgcaaagtaa | 7860 |
| actggatggc | tttcttgccg | ccaaggatct | gatggcgag | gggatcaaga | tctgatcaag | 7920 |
| agacaggatg | aggatcgttt | cgcatgattg | aacaagatgg | attgcacgca | ggttctccgg | 7980 |
| ccgcttgggt | ggagaggcta | ttcggtatg | actgggcaca | acagacaatc | ggctgctctg | 8040 |
| atgccgccgt | gttccggctg | tcagcgcagg | ggcgcccggt | tctttttgtc | aagaccgacc | 8100 |

Sequence.txt

| | | | | | | |
|-------------|-------------|------------|------------|-------------|-------------|-------|
| tgtccggtgc | cctgaatgaa | ctgcaggacg | aggcagcgcg | gctatcgtgg | ctggccacga | 8160 |
| cgggcgttcc | ttgcgcagct | gtgctcgacg | ttgtcactga | agcgggaagg | gactggctgc | 8220 |
| tattgggcga | agtgccgggg | caggatctcc | tgtcatctca | ccttgctcct | gccgagaaaag | 8280 |
| tatccatcat | ggctgatgca | atgcggcggc | tgcatacgct | tgatccggct | acctgcccac | 8340 |
| tcgaccacca | agcgaaacat | cgcacgcgag | gagcacgtac | tcggatggaa | gccgggtcttg | 8400 |
| tcgatcagga | tgatctggac | gaagagcatc | aggggctcgc | gccagccgaa | ctgttcgcca | 8460 |
| ggctcaaggc | gcgcatgccc | gacggcgagg | atctcgtcgt | gacccatggc | gatgcctgct | 8520 |
| tgccgaatat | catggtggaa | aatggccgct | tttctggatt | catcgactgt | ggccggctgg | 8580 |
| gtgtggcgga | ccgctatcag | gacatagcgt | tggctacccg | tgatattgct | gaagagcttg | 8640 |
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| gcatcgcctt | ctatcgcctt | cttgacgagt | tcttctgagc | gggactctgg | ggttcgaaat | 8760 |
| gaccgaccaa | gcgacgcccc | acctgccatc | acgagatttc | gattccaccg | ccgccttcta | 8820 |
| tgaaaggttg | ggcttcggaa | tcgttttccg | ggacgccggc | tggatgatcc | tccagcgcgg | 8880 |
| ggatctcatg | ctggagttct | tcgcccacgc | tagtttaaac | tgcggatcag | tgagggtttg | 8940 |
| taactgcggg | tcaaggatct | ggatttcgat | cacggcacga | tcatcgtgcg | ggagggcaag | 9000 |
| ggctccaagg | atcgggcctt | gatgttacc | gagagcttgg | caccagcct | gcgcgagcag | 9060 |
| gggaattgat | ccggtggatg | accttttgaa | tgacctttaa | tagattatat | tactaattaa | 9120 |
| ttggggaccc | tagagggtccc | cttttttatt | ttaaaaattt | tttcacaaaa | cggtttacaa | 9180 |
| gcataacggg | ttttgctgcc | cgcaaacggg | ctgttctggg | gttgctagtt | tgttatcaga | 9240 |
| atcgacagatc | cggcttcagg | tttgccggct | gaaagcgcta | tttcttcag | aattgccatg | 9300 |
| atTTTTTccc | cacgggaggc | gtcactggct | cccgtgttgt | cggcagcttt | gattcgataa | 9360 |
| gcagcatcgc | ctgtttcagg | ctgtctatgt | gtgactgttg | agctgtaaca | agttgtctca | 9420 |
| ggtgttcaat | ttcatgttct | agttgctttg | ttttactggg | ttcacctgtt | ctattaggtg | 9480 |
| ttacatgctg | ttcatctgtt | acattgtcga | tctgttcatg | gtgaacagct | ttaaattgcac | 9540 |
| caaaaactcg | taaaagctct | gatgtatcta | tcttttttac | accgttttca | tctgtgcata | 9600 |
| tggaacagttt | tccctttgat | atctaacggg | gaacagttgt | tctacttttg | tttgttagtc | 9660 |
| ttgatgcttc | actgatagat | acaagagcca | taagaacctc | agatccttcc | gtatttagcc | 9720 |
| agtatgttct | ctagtgtggg | tcgttgTTTT | tgcgtagagc | atgagaacga | accattgaga | 9780 |
| tcatgcttac | tttgcatgtc | actcaaaaat | tttgccTcaa | aactgggtgag | ctgaattttt | 9840 |
| gcagttaaag | catcgtgtag | tgTTTTtctt | agtccgttac | gtaggtagga | atctgatgta | 9900 |
| atggttggtg | gtattttgtc | accattcatt | tttatctggg | tgttctcaag | ttcggttacg | 9960 |
| agatccattt | gtctatctag | ttcaacttgg | aaaatcaacg | tatcagtcgg | gcggcctcgc | 10020 |
| ttatcaacca | ccaatttcat | attgctgtaa | gtgtttaaat | ctttacttat | tggtttcaaa | 10080 |
| accattgggt | taagcctttt | aaactcatgg | tagttatttt | caagcattaa | catgaactta | 10140 |

Sequence.txt

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|-------------|-------|
| aattcatcaa | ggctaattctc | tatatattgcc | ttgtgagttt | tcttttgtgt | tagttctttt | 10200 |
| aataaccact | cataaatcct | catagagtat | ttgttttcaa | aagacttaac | atgttccaga | 10260 |
| ttatatatta | tgaatTTTTT | taactggaaa | agataaggca | atatctcttc | actaaaaact | 10320 |
| aattctaatt | tttcgcttga | gaacttggca | tagtttgtcc | actggaaaat | ctcaaagcct | 10380 |
| ttaaccaaag | gattcctgat | ttccacagtt | ctcgtcatca | gctctctggt | tgcttttagct | 10440 |
| aatacaccat | aagcattttc | cctactgatg | ttcatcatct | gagcgtattg | gttataagtg | 10500 |
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| cagcataaaa | ttagcttggt | ttcatgctcc | gttaagtcac | agcgactaat | cgctagtcca | 10620 |
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| ggtatctgta | aattctgcta | gacctttgct | ggaaaacttg | taaattctgc | tagaccctct | 10800 |
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| agaataaaga | aagaataaaa | aaagataaaa | agaatagatc | ccagccctgt | gtataactca | 10920 |
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| ctgaatattc | cttttgtctc | cgaccatcag | gcacctgagt | cgctgtcttt | ttcgtgacat | 11100 |
| tcagttcgct | gcgctcacgg | ctctggcagt | gaatgggggt | aaatggcact | acaggcgcct | 11160 |
| tttatggatt | catgcaagga | aactacccat | aatacaagaa | aagcccgtca | cgggcttctc | 11220 |
| agggcgtttt | atggcggggt | tgctatgtgg | tgctatctga | ctttttgctg | ttcagcagtt | 11280 |
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| tggtcgtcac | agagctggaa | gcggcagcga | gaattatcgc | gatcgtggcg | gtgcccgcag | 12000 |
| gcatgacaaa | catcgtaaat | gccgcgtttc | gtgtgccgtg | gccgcccagg | acgtgtcagc | 12060 |
| gccgccacca | cctgcaccga | atcggcagca | gcgtcgcgcg | tcgaaaaagc | gcacaggcgg | 12120 |
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Sequence.txt

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| gcggattcac | gagacattga | cacaccggcc | tggaattttt | ccgctgatct | gttcgacacc | 12300 |
| catcccagc | tcgcgctg | atcacgtggc | tggaagagcg | aagaccgccg | cgaattcctc | 12360 |
| gctcacctgg | gcagagaaaa | tttccagggc | agcaagacct | gcgacttcgc | cagcgcttgg | 12420 |
| atcaaagacc | cggacacgga | gaaacacagc | cgaagttata | ccgagttggt | tcaaaatcgc | 12480 |
| ttgcccgggtg | ccagtatgtt | gctctgacgc | acgcgcagca | cgagccgtg | cttgtcctgg | 12540 |
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| gtgtcctctg | gactgctcca | gggcgtgccg | cccgtgatga | gacggctttt | cgccacgctt | 13140 |
| tgactgtggg | ataccagtta | aaagcggtg | gtgagcgctt | aaaagacacc | aagggtcatc | 13200 |
| gagcctacga | gcgtgcctac | accgtcgctc | aggcggtcgg | aggaggccgt | gagcctgatc | 13260 |
| tgccgccgga | ctgtgaccgc | cagacggatt | ggccgcgacg | tgtgcgcggc | tacgtcgcta | 13320 |
| aaggccagcc | agtcgtccct | gctcgtcaga | cagagacgca | gagccagccg | aggcgaaaag | 13380 |
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| ggaaagctaa | aggaaatcgc | ttgaccattg | cagggttggtt | tatgactggt | gagggagaga | 13560 |
| ctggctcgtg | gccgacaatc | aatgaagcta | tgtctgaatt | tagcgtgtca | cgtagaccgc | 13620 |
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| agtaaagtgt | ccatctcgta | ggcagaaaac | ggttcccccg | tagggtctct | ctcttggcct | 13740 |
| cctttctagg | tcgggctgat | tgctcttgaa | gctctctagg | ggggctcaca | ccataggcag | 13800 |
| ataacgttcc | ccaccggctc | gcctcgtaag | cgcaacaagg | ctgctcccaa | agatcttcaa | 13860 |
| agccactgcc | gcgactgcct | tcgcgaagcc | ttgccccgcg | gaaatttcct | ccaccgagtt | 13920 |
| cgtgcacacc | cctatgcaa | gcttctttca | ccctaaattc | gagagattgg | attcttaccg | 13980 |
| tggaatttct | tcgcaaaaat | cgtcccctga | tcgcccttgc | gacgttggcg | tcggtgccgc | 14040 |
| tggttgcgct | tggttgacc | gac | | | | 14063 |

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Sequence.txt

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<213> artificial

<220>
<223> Plasmid pOM627

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cttgccctgaa gagcaaatcc cagacttgat ggaattagcc caccagggtt ggttgaagtg      180
gtgtgggggaa gaaatcgagg tcgagggcat tttttccctc aaaactggcg gttgccctga      240
agattgtcat ttctgctcac agtctgggtt gtttgaatcg ccggtgcgtt cgggtgtggct      300
ggatattccg aatctggttg aagccgctaa acagaccgca aaaactggcg ctaccgaatt      360
ctgtatcgtc gccgcagtca aggggcctga tgagaggctc atgaccagc tggaggaagc      420
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Sequence.txt

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| tctgtaccgc | tcaggctctg | ctggccgctc | ttgccggttt | ctacgcggtc | tggcacggcc | 1980 |
| cagccggcct | gcgcgccatc | gccgaggggg | tgcacgccc | cgcgaccgcc | ctggccgttg | 2040 |
| ccctgtccga | ggctggcctg | acgctggcgc | acgatacctt | cttcgacacc | gtcaccgttg | 2100 |
| acgtgtcttg | tttttctctt | ggtgacgccc | ccacggctct | gcgcgccgca | gccgaggcag | 2160 |
| gctacaacct | gcgccagggt | aacgattcct | tcgtcggcat | ctctgtcggc | gagtccacca | 2220 |
| cggacgagga | cattgccaa | ctgatcgagg | tgctgggctc | ccgcaccggc | gaggtcaact | 2280 |
| ccgcgagctt | cgacgtcacc | gccggcccg | tgggcgaggc | cggcgtgctg | cgcgcgagg | 2340 |
| acgaggagat | tctgaccac | ccgatcttca | ccgccatcac | ttccgagacc | cagatgatgc | 2400 |
| gctacatgcg | caagctggcc | gaccgcgacc | tggcgctgga | tcgtacgatg | atcccgtgg | 2460 |
| gctcctgcac | catgaagctg | aacgcggccg | tctccatgga | gccgatcacc | tggcctggct | 2520 |
| tcgcaggcat | ccaccgcac | gtcccgccg | agcaggcgca | gggctggctg | gagctcatcg | 2580 |
| aggacctgga | ggagcgcctg | gcgaagatca | ccggctacgc | caaggtttcc | gtccagccga | 2640 |
| acgcgggctc | ccagggcgag | ttcgccggcc | tgctggcgat | ccaccgctac | caccagtccc | 2700 |
| gcggcgacga | tcagcgtgac | atcgttctga | tcccggcctc | cgcgcacggc | accaacgtg | 2760 |
| cctctgcagc | gctggcgggc | ctgaaggctg | tggctgtgaa | gaatgccgaa | gacggctcca | 2820 |
| tcgacgtgcc | ggacctggag | gccaagctgg | agaagtacgg | cgagcagacc | gccgccatca | 2880 |
| tgctgaccta | cccctccacc | cacggcgtgt | tcgaggagca | ggtgcgcgac | gtctgccaga | 2940 |
| aggttcacga | cgctggcggc | cagggtgtacg | tcgacggcgc | taacctgaac | gccctggtcg | 3000 |
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| tgaacgcaa | ctacgtttcc | cgaaagctgg | aggactacta | cccgcgctg | tacaaggcg | 3360 |
| acaccggcct | ggtcgccac | gagtgcaccc | tggacctgcg | tgaactcacg | aaggcctccg | 3420 |
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Sequence.txt

| | |
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| ctgtacgcaa tgccgtgggc gtattcgacc tctcccacat gggtgagggt cgcgtagaccg | 4080 |
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| acgtggtctc cgcactgcag ggccgcaccg agggctttga cgtggagggt aacaacgagt | 4320 |
| ccgatgcgac ctccatgatc gccgtacagg ggcccaaggc gcgcgaggcg atgctggaga | 4380 |
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Sequence.txt

| | | | | | | |
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| attgctgaag | agcttggcgg | cgaatgggct | gaccgcttcc | tcgtgcttta | cggtatcgcc | 7260 |
| gctcccgatt | cgcagcgcat | cgccttctat | cgccttcttg | acgagttctt | ctgagcggga | 7320 |
| ctctgggggt | cgaaatgacc | gaccaagcga | cgcccaacct | gccatcacga | gatttcgatt | 7380 |
| ccaccgccgc | cttctatgaa | aggttgggct | tcggaatcgt | tttccgggac | gccggctgga | 7440 |
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| gatcagtga | ggtttgtaac | tgcgggtcaa | ggatctggat | ttcgatcacg | gcacgatcat | 7560 |
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| cagcctgcgc | gagcagggga | attgatccgg | tgatgacct | tttgaatgac | ctttaataga | 7680 |
| ttatattact | aattaattgg | ggaccctaga | ggtccccctt | tttattttta | aaattttttc | 7740 |
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| ctagtttggt | atcagaatcg | cagatccggc | ttcagggttg | ccggctgaaa | gcgctatttc | 7860 |
| ttccagaatt | gccatgattt | tttccccacg | ggaggcgtca | ctggctcccg | tggtgtcggc | 7920 |
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Sequence.txt

| | |
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| acagctttaa atgcaccaaa aactcgtaaa agctctgatg tatctatctt ttttacaccg | 8160 |
| ttttcatctg tgcataatgga cagttttccc tttgatatct aacgggtgaac agttgttcta | 8220 |
| cttttgtttg ttagtcttga tgcttcaactg atagatacaa gagccataag aacctcagat | 8280 |
| ccttccgtat ttagccagta tgttctctag tgtgggttcgt tgtttttgcg tgagccatga | 8340 |
| gaacgaacca ttgagatcat gcttactttg catgtcactc aaaaattttg cctcaaaact | 8400 |
| ggtagagctga atttttgcag ttaaagcatc gtgtagtggt tttcttagtc cgttacgtag | 8460 |
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| ctcaagttcg gttacgagat ccatttgtct atctagttca acttggaata tcaacgtatc | 8580 |
| agtcgggcgg cctcgcttat caaccaccaa tttcatattg ctgtaagtgt ttaaactctt | 8640 |
| acttattggt ttcaaaaccc attggttaag ccttttaaac tcatggtagt tattttcaag | 8700 |
| cattaacatg aacttaaatt catcaaggct aatctctata tttgccttgt gagttttctt | 8760 |
| ttgtgttagt tcttttaata accactcata aatcctcata gagtatttgt tttcaaaaga | 8820 |
| cttaacatgt tccagattat attttatgaa tttttttaac tggaaaagat aaggcaatat | 8880 |
| ctcttcaacta aaaactaatt ctaatttttc gcttgagaac ttggcatagt ttgtccactg | 8940 |
| gaaaatctca aagcctttaa ccaaaggatt cctgatttcc acagttctcg tcatcagctc | 9000 |
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| ccctgtgtat aactcactac tttagtcagt tccgcagtat tacaaaagga tgtcgcaaac | 9540 |
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| aagctcgggc aaatcgctga atattccttt tgtctccgac catcaggcac ctgagtcgct | 9660 |
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| ttgctgttca gcagttcctg ccctctgatt ttccagtcct accacttcgg attatcccgt | 9900 |
| gacaggtcat tcagactggc taatgcaccc agtaaggcag cggtatcatc aacaggctta | 9960 |
| gtttaaaccc atcggcattt tcttttgcgt ttttatttgt taactgttaa ttgtccttgt | 10020 |

Sequence.txt

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| acgacattgt | ttcctttcgc | ttgaggtaca | gcgaagtgtg | agtaagtaaa | ggttacatcg | 10200 |
| ttaggatcaa | gatccatttt | taacacaagg | ccagttttgt | tcagcggctt | gtatgggcca | 10260 |
| gttaaagaat | tagaaacata | accaagcatg | taaatatcgt | tagacgtaat | gccgtcaatc | 10320 |
| gtcatttttg | atccgcggga | gtcagtgaac | aggtaccatt | tgccgttcat | tttaaagacg | 10380 |
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| ttgccatagt | atgctttggt | aaataaagat | tcttcgcctt | ggtagccatc | ttcagttcca | 10620 |
| gtgtttgctt | caaatactaa | gtatttgtgg | cctttatctt | ctacgtagtg | aggatctctc | 10680 |
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| tacgtttttc | cgtcaccgtc | aaagattgat | ttataatcct | ctacaccgtt | gatgttcaaa | 10800 |
| gagctgtctg | atgctgatac | gttaacttgt | gcagttgtca | gtgtttgttt | gccgtaatgt | 10860 |
| ttaccggaga | aatcagtgtg | gaataaacgg | atctttccgt | cagatgtaaa | tgtggctgaa | 10920 |
| cctgaccatt | cttgtgtttg | gtcttttagg | atagaatcat | ttgcatcgaa | tttgtcgctg | 10980 |
| tctttaaaga | cgcgccagc | gtttttccag | ctgtcaatag | aagtttcgcc | gactttttga | 11040 |
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| atgtggtagc | cgtgatagtt | tgcgacagtg | ccgtcagcgt | tttgtaatgg | ccagctgtcc | 11160 |
| caaacgtcca | ggccttttgc | agaagagata | tttttaattg | tggacgaatc | aaattcagaa | 11220 |
| acttgatatt | tttcattttt | ttgctgttca | gggatttgca | gcataatcatg | gcgtgtaata | 11280 |
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| gttgcgcttc | ctgccagcag | tgcggtagta | aagggttaata | ctgttgcttg | ttttgcaaac | 11400 |
| tttttgatgt | tcatcgttca | tgtctccttt | tttatgtact | gtgttagcgg | tctgcttctt | 11460 |
| ccagccctcc | tgtttggaaga | tggcaagtta | gttacgcaca | ataaaaaaag | acctaaaata | 11520 |
| tgtaaggggt | gacgcaaag | tatacacttt | gccctttaca | catttttaggt | cttgctgct | 11580 |
| ttatcagtaa | caaaccgcg | cgatttactt | ttcgacctca | ttctattaga | ctctcgtttg | 11640 |
| gattgcaact | ggctctat | cctcttttgt | ttgatagaaa | atcataaaaag | gatttgcaga | 11700 |
| ctacgggcct | aaagaactaa | aaaatctatc | tgtttctttt | cattctctgt | atcttttata | 11760 |
| gtttctgttg | catgggcata | aagttgcctt | tttaatcaca | attcagaaaa | tatcataata | 11820 |
| tctcatttca | ctaaataata | gtgaacggca | ggtatatgtg | atgggttaaa | aa | 11872 |

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 <213> artificial

Sequence.txt

<220>

<223> Plasmid pOM180

<400> 39

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ggtcggcaat tcatggacac ggacaccccc gactgaaagc tgccgcccaa aaacaaatcg      180
acaccatgag tcacgtcatg tttggcggac taaccacga gcccgccatt aagctcacc      240
acaaactcct caatctcact ggaaattcct ttgaccacgt cttttattcc gattcgggct      300
cggctctcagt ggaggtcgcc atcaaaatgg cactgcaggc ctccaaagga caaggccacc      360
cggaacgaac aaaactcctc acctggcggg cgggctacca cggaacacac ttcaccgcga      420
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```

Sequence.txt

| | |
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| tgccagatta agtccggccg cccgtccccg ctggatatgg acgagccacg ccgctgtggcg | 1980 |
| gagaatgtcc gcgagatggg tctgcgctac gccaccatca ccggcggtgac gcgcgatgac | 2040 |
| ctggatgatg agggcgcggtg gctgtatgcc gaggttgtga agaagattca cgagctgaac | 2100 |
| ccgaacacgg gtgtggagaa tctgacgcc aattttttcca accgcccggg gctgctgaag | 2160 |
| gtcgtcttcg attcccagcc ggagggtgtt gccacaaacc tggagacagt tccgcgcac | 2220 |
| tttaagcgca tccgcccggc cttaagtac gaccgttccc tggagggtcat tcaggcagct | 2280 |
| cacgattacg gcctgggtgac gaagtccaac ctgatcctgg gcatgggtga gaagaaggaa | 2340 |
| gagggtccgc cggtatcaa ggacctggc gacgccggc ccgacattct gacgattacc | 2400 |
| cagtacctgc gcccgcttc catgcaccac ccgattgagc gttgggtgaa gccggaggag | 2460 |
| ttcatggagc actccgacgc agcctacgag ctgggcatca aggctgttat gtccggccc | 2520 |
| ttggtgcgtt cctcttaccg cgccggccgc ctgtacgcgc aggccaagca ggcgcgggc | 2580 |
| gaggctattc cggagaacct gaagcacttg gaggagactc tcgattccac cacgtcgag | 2640 |
| gaggcctcta cactgctgga gcgctacggc gcttcggagg acacgccggg cactgcgtcg | 2700 |
| cgccgctagc tcggcggggc actttcgccc cgccctttatt catgccttat tgttgaatcc | 2760 |
| atggcgaagg ataaaaagga cgtaagggtc aaggaagaga agtgatccgc cctccgcac | 2820 |
| gctttgcggg agggcttttc tttaccggt accggaactg gggttgggaa aaccttctcc | 2880 |
| acagccgttt tggttcgata cttagccgat caaggacacg atgttctgcc cgtaaagcta | 2940 |
| gtccaaaccg gtgaacttcc aggcgaggga gacatcttta acattgaacg cttgactgga | 3000 |
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| cagctactgg gctatctgga caaggga aaa cgcaagcgca aagagaaagc aggtagcttg | 3660 |
| cagtgggctt acatggcgat agctagactg ggcggtttta tggacagcaa gcgaaccgga | 3720 |
| attgccagct ggggcgccct ctggttaagg tgggaagccc tgcaaagtaa actggatggc | 3780 |
| tttcttgccg ccaaggatct gatggcgag gggatcaaga tctgatcaag agacaggatg | 3840 |
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Sequence.txt

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| ttgcgcagct | gtgctcgacg | ttgtcactga | agcgggaagg | gactggctgc | tattgggcga | 4140 |
| agtgccgggg | caggatctcc | tgtcatctca | ccttgctcct | gccgagaaag | tatccatcat | 4200 |
| ggctgatgca | atgcggcggc | tgcatacgct | tgatccggct | acctgcccac | tcgaccacca | 4260 |
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Sequence.txt

| | |
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| atggcgggtc tgctatgtgg tgctatctga ctttttgcgt ttcagcagtt cctgccctct | 7200 |
| gattttccag tctgaccact tcggattatc ccgtgacagg tcattcagac tggctaattgc | 7260 |
| accagtaag gcagcgggat catcaacagg cttagtttaa acccatcggc attttctttt | 7320 |
| gcgtttttat ttgttaactg ttaattgtcc ttgttcaagg atgctgtctt tgacaacaga | 7380 |
| tgttttcttg cctttgatgt tcagcaggaa gctcggcgca aacgttgatt gtttgtctgc | 7440 |
| gtagaatcct ctgtttgtca tatagcttgt aatcacgaca ttgtttcctt tcgcttgagg | 7500 |
| tacagcgaag tgtgagtaag taaaggttac atcgttagga tcaagatcca tttttaacac | 7560 |
| aaggccagtt ttgttcagcg gcttgatatg gccagttaaa gaattagaaa cataaccaag | 7620 |
| catgtaaata tcgttagacg taatgccgtc aatcgtcatt tttgatccgc gggagtcagt | 7680 |
| gaacaggtag catttgccgt tcatTTtaaa gacgttcgcg cgttcaattt catctgttac | 7740 |
| tgtgttagat gcaatcagcg gtttcatcac ttttttcagt gtgtaatcat cgtttagctc | 7800 |
| aatcataaccg agagcgccgt ttgctaactc agccgtgcgt tttttatcgc tttgcagaag | 7860 |
| tttttgactt tcttgacgga agaattgatgt gcttttgcca tagtatgctt tgTTaaataa | 7920 |
| agattcttcg ccttggttagc catcttcagt tccagtgttt gcttcaaata ctaagtattt | 7980 |
| gtggccttta tcttctacgt agtgaggatc tctcagcgta tggttgtcgc ctgagctgta | 8040 |

Sequence.txt

| | | | | | | |
|-------------|------------|------------|------------|-------------|-------------|------|
| gttgcccttca | tcgatgaact | gctgtacatt | ttgatacggt | tttccgtcac | cgtcaaagat | 8100 |
| tgatttataa | tcctctacac | cgttgatgtt | caaagagctg | tctgatgctg | atacgttaac | 8160 |
| ttgtgcagtt | gtcagtgttt | gtttgccgta | atgtttaccg | gagaaatcag | tgtagaataa | 8220 |
| acggattttt | ccgtcagatg | taaatgtggc | tgaacctgac | cattcttggtg | tttgggtcttt | 8280 |
| taggatagaa | tcatttgcac | cgaatttgtc | gctgtcttta | aagacgcggc | cagcgttttt | 8340 |
| ccagctgtca | atagaagttt | cgccgacttt | ttgatagaac | atgtaaatcg | atgtgtcatc | 8400 |
| cgcattttta | ggatctccgg | ctaatacaaa | gacgatgtgg | tagccgtgat | agtttgcgac | 8460 |
| agtgccgtca | gcgttttgta | atggccagct | gtcccaaacg | tccaggcctt | ttgcagaaga | 8520 |
| gatattttta | attgtggacg | aatcaaatc | agaaacttga | tatttttcat | ttttttgctg | 8580 |
| ttcagggatt | tgcagcatat | catggcgtgt | aatatgggaa | atgccgtatg | tttccttata | 8640 |
| tggcttttgg | ttcgtttctt | tcgcaaacgc | ttgagttgcg | cctcctgcca | gcagtgcggt | 8700 |
| agtaaagggt | aatactgttg | cttgttttgc | aaactttttg | atgttcatcg | ttcatgtctc | 8760 |
| cttttttatg | tactgtgtta | gcggctctgt | tcttccagcc | ctcctgtttg | aagatggcaa | 8820 |
| gttagttacg | cacaataaaa | aaagacctaa | aatatgtaag | gggtgacgcc | aaagtataca | 8880 |
| ctttgccctt | tacacatttt | aggtcttgcc | tgctttatca | gtaacaaacc | cgcgcgattt | 8940 |
| acttttcgac | ctcattctat | tagactctcg | tttgattgac | aactgggtcta | ttttcctctt | 9000 |
| ttgtttgata | gaaatcata | aaaggatttg | cagactacgg | gcctaaagaa | ctaaaaaatc | 9060 |
| tatctgtttc | ttttcattct | ctgtattttt | tatagtttct | gttgcattgg | cataaagttg | 9120 |
| cctttttaat | cacaattcag | aaaatatcat | aatatctcat | ttcactaaat | aatagtgaac | 9180 |
| ggcagggtata | tgtgatgggt | taaaaa | | | | 9206 |

<210> 40
 <211> 10003
 <212> DNA
 <213> artificial

<220>
 <223> Plasmid pOM331

| | | | | | | |
|-------------|------------|------------|------------|-------------|------------|-----|
| <400> 40 | | | | | | |
| ggatcggcgg | ccagggccct | catgagatga | gtctttgatc | aaggggtggcg | cttttgactc | 60 |
| ccttggacac | gcacgaaaag | gcctcatgct | ggctttcgaa | gatgccgttg | attccgtcat | 120 |
| cgctacaaaa | aaagctgctg | acaagggaca | atttgatctc | tttgcagctt | tcgactcgga | 180 |
| taacaacgac | gatgtggcaa | gtttcttcca | gatcaccgtt | cctgatgacg | aatgggaccg | 240 |
| taagcatgag | ctcgcactcg | agcgagaaat | gctgggtctg | tatgtttctg | gacaccact | 300 |
| cgatggctat | gaagatgcc | ttgctgcccc | ggttgataca | gcactgacca | ccattgttgc | 360 |
| cgggtgaactc | aagcacggcg | cagaagtgac | cgtgggtggc | attatctctg | gtgtggatcg | 420 |
| acggtttctc | aagaaggacg | gttccccctt | ggcgattgtc | accattgaag | atcacaacgg | 480 |
| cgcgctccgtt | gaattgttgg | tcttcaacaa | ggtgtattcc | atcgttggat | ccatgattgt | 540 |

Sequence.txt

| | |
|--|------|
| ggaagacaac atcatcttgg ccaaggcaca catctccatt cgagatgatc gtatgagcct | 600 |
| tttctgtgat gatctccgcg ttccagagct tgggccagga aacgggcaag gacttccgct | 660 |
| tcgtttgtcc atgcgtactg atcagtgcac catgtccaac attgccaagc tcaagcaggt | 720 |
| gctggtggac aacaaggggtg aatctgatgt gtacctcaat ttgatcgatg gggataactc | 780 |
| cacggtcatg attttgggtg atcacttaag agtcaaccga tccgcaagtt tgatgggcga | 840 |
| cctcaaggca acgatggggc caggcatcct cggttaatca catcacactg ggattacccc | 900 |
| gtgtaggggt gaaaacccga atgatgaata aaattccggg tgcagtgacc gtaggtgagg | 960 |
| taaacgcggt tagagtcgaa tgagagtttg atactttctt tcgactttta gattggattt | 1020 |
| tcaatgagcc agaaccgcat caggaccact cacgttgggt ccttgccccg taccacagag | 1080 |
| ctacttgatg caaacatcaa gcgttctaac ggtgagattg gggaggagga attcttccag | 1140 |
| attctgcagt cttctgtaga tgacctgcgg ccgcacagcg atcccagagg aaatatcctc | 1200 |
| tggggtcgct gtgtcgacct taaagtttgg ctgccatgtg aatttttagc accctcaaca | 1260 |
| gttgagtgct ggcactctcg ggggtagagt gccaaatagg ttgtttgaca cacagtgtgt | 1320 |
| caccgcgac gacggctgtg ctggaaaacc acaaccggca cacacaaaat ttttctagaa | 1380 |
| ggaggagaaa acatgtccac tgaatcaaaa actcaggtcg tggacttgg ggcaggcccc | 1440 |
| gcaggttact ccgctgcctt ccgttgcgct gatttaggtc tggaaaccgt aatcgtagaa | 1500 |
| cgttacaaca cccttggcgg tgtttgcctg aacgtcggct gtatcccttc taaagcactg | 1560 |
| ctgcacgtag caaaagttat cgaagaagcc aaagcgctgg ctgaacacgg tatcgtcttc | 1620 |
| ggcgaaccga aaaccgatat cgacaagatt cgtacctgga aagagaaagt gatcaatcag | 1680 |
| ctgaccggtg gtctggctgg tatggcgaaa ggccgcaaag tcaaagtggg caacggctcg | 1740 |
| ggtaaattca ccggggctaa caccctggaa gttgaagggt agaacggcaa aaccgtgatc | 1800 |
| aacttcgaca acgcgatcat tgcagcgggt tctcggccga tccaactgcc gtttattccg | 1860 |
| catgaagatc cgcgtatctg ggactccact gacgcgctgg aactgaaaga agtaccagaa | 1920 |
| cgcctgctgg taatgggtgg cggtatcatc ggtctggaaa tgggcaccgt ttaccacgcg | 1980 |
| ctgggttcac agattgacgt ggttgaaatg ttcgaccagg ttatcccggc agctgacaaa | 2040 |
| gacatcgta aagtcttcac caagcgtatc agcaagaaat tcaacctgat gctggaaacc | 2100 |
| aaagttaccg ccgttgaagc gaaagaagac ggcatttatg tgacgatgga aggcaaaaaa | 2160 |
| gcacccgctg aaccgcagcg ttacgacgcc gtgctggtag cgattggctg tgtgccgaac | 2220 |
| ggtaaaaacc tcgacgcagg caaagcaggc gtggaagttg acgaccgtgg tttcatccgc | 2280 |
| gttgacaaac agctgcgtac caacgtaccg cacatctttg ctatcggcga tatcgtcggt | 2340 |
| caaccgatgc tggcacacaa aggtgttcac gaaggtcacg ttgccgctga agttatcgcc | 2400 |
| ggtaagaaac actacttcga tccgaaagtt atcccgtcca tcgcctatac cgaaccagaa | 2460 |
| gttgcatggg tgggtctgac tgagaaagaa gcgaaagaga aaggcatcag ctatgaaacc | 2520 |
| gccaccttcc cgtgggctgc ttctggctgt gctatcgctt ccgactgcgc agacggtatg | 2580 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| accaagctga | ttttcgacaa | agaatctcac | cgtgtgatcg | gtggtgcat | tgctggtact | 2640 |
| aacggcggcg | agctgctggg | tgaaatcggc | ctggcaatcg | aaatgggttg | tgatgctgaa | 2700 |
| gacatcgcac | tgaccatcca | cgcgaccccg | actctgcacg | agtctgtggg | cctggcggca | 2760 |
| gaagtgttcg | aaggtagcat | taccgacctg | ccgaacccga | aagcgaagaa | gaagtaattt | 2820 |
| ttcgtttgcc | ggaacatccg | gcaattaaaa | aagcggctaa | ccacgccgct | ttttttacgt | 2880 |
| ctgcaattta | cctttccagt | cttcttgctc | cacggatccg | ccctcccga | cgctttgcgg | 2940 |
| gagggcggta | ccaggtcact | gacatcccat | tcggtgacat | cattggtgag | atcctgcgcg | 3000 |
| cagaggtcgg | tggcttctcc | ttcgaaggcg | catctcctcg | tcacgcacac | gagtggcgtg | 3060 |
| tatgggaaga | aaacaagctt | cctgaaggct | ctgttatcta | ccctggtgtt | gtgtctcact | 3120 |
| ccatcaacgc | tgtggagcac | ccacgcctgg | ttgctgatcg | tatcgttcag | ttcgccaagc | 3180 |
| ttgttggccc | tgagaacgtc | attgctcca | ctgactgtgg | tctgggcgga | cgtctgcatt | 3240 |
| cccagatcgc | atgggcaaag | ctggagtccc | tagtagaggg | cgctcgcat | gcatcaaagg | 3300 |
| aactgttcta | agctagacaa | cgagggttgc | tagtctaagc | agcaaatga | gcggctgttg | 3360 |
| ttccttcagg | aaaattatct | gaaggaacaa | tagccgctca | ttttatgtca | gtgtgctttt | 3420 |
| aagcgtcgac | gttgatgcca | aactgggtga | gcatgtcacg | cagagtctgc | ttgaacgatg | 3480 |
| ggtcgacggt | caccatgaag | gatgctgcgg | tggaagcaag | agtggtgatt | gagagcaatc | 3540 |
| cctgcagtac | cgcaaaagga | atggcaagcc | attctggtgg | ggagacaatg | gaaccaatca | 3600 |
| ctggcatttc | ggacaaccga | tcgatcagtg | cttgctgctc | ttcgctgatt | tcacgtcat | 3660 |
| catcgctggt | gtctttgccg | gaggagctca | agcttggggc | cgaggaatg | tcgccattgc | 3720 |
| tgagcattga | gctgccttca | gagctgcctg | gccagggttc | gtttccatcg | actggatttc | 3780 |
| catcatcatc | aaggatctgt | gatgaggtga | tgttgtctga | gagctgtgtc | agtgcgtcag | 3840 |
| aggactgagc | ctgggcaact | ggagtgaaca | cggacaatgc | cacagcgctt | gctgtaacaa | 3900 |
| gggtcaaagt | acttcgacgc | aaagacaaaa | cttttctcct | ggcaataaat | atgcggattt | 3960 |
| actatggaaa | caagatagaa | gattggatag | cgaaagctat | cctcaactcg | tggaaagtgt | 4020 |
| agtgcacaa | ccacagtatt | ggctagaaaa | caatctatag | cattgttcta | caaagagctt | 4080 |
| gttggaata | aaacctatgc | caaagtaggt | gcaattctag | gagaagatta | cactagtcaa | 4140 |
| ccatgagtga | aacatacgtg | tctgagaaaa | gtccaggagt | gatggctagc | ggagcggagc | 4200 |
| tgattcgtgc | cgccgacatt | caaacggcgc | aggcacgaat | ttcctccgtc | attgcaccaa | 4260 |
| ctccattgca | gtattgccct | cgtctttctg | agatcgagct | cacgcgtccc | gggatttaaa | 4320 |
| tcgctagcgg | gctgctaaag | gaagcggaac | acgtagaaag | ccagtccgca | gaaacggtgc | 4380 |
| tgaccccgga | tgaatgtcag | ctactgggct | atctggacaa | gggaaaacgc | aagcgcaaag | 4440 |
| agaaagcagg | tagcttgcat | tgggcttaca | tggcगतagc | tagactgggc | ggttttatgg | 4500 |
| acagcaagcg | aaccggaatt | gccagctggg | gcgccctctg | gtaagggttg | gaagccctgc | 4560 |
| aaagtaaact | ggatggcttt | cttgccgcca | aggatctgat | ggcgcagggg | atcaagatct | 4620 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| gatcaagaga | caggatgagg | atcgtttcgc | atgattgaac | aagatggatt | gcacgcaggt | 4680 |
| tctccggccg | cttggggtga | gaggctattc | ggctatgact | gggcacaaca | gacaatcggc | 4740 |
| tgctctgatg | ccgccgtgtt | ccggctgtca | gcgcaggggc | gcccggttct | ttttgtcaag | 4800 |
| accgacctgt | ccggtgccct | gaatgaactg | caggacgagg | cagcgcggt | atcgtggctg | 4860 |
| gccacgacgg | gcgttccttg | cgagctgtg | ctcgacgttg | tcactgaagc | gggaagggac | 4920 |
| tggtctgtat | tgggcgaagt | gccggggcag | gatctcctgt | catctcacct | tgctcctgcc | 4980 |
| gagaaagtat | ccatcatggc | tgatgcaatg | cggcggtgc | atacgcttga | tccggctacc | 5040 |
| tgcccattcg | accaccaagc | gaaacatcgc | atcgagcgag | cacgtactcg | gatggaagcc | 5100 |
| ggtcttgctg | atcaggatga | tctggacgaa | gagcatcagg | ggctcgcgcc | agccgaactg | 5160 |
| ttcgccaggc | tcaaggcgcg | catgcccgc | ggcgaggatc | tcgtcgtgac | ccatggcgat | 5220 |
| gcctgcttgc | cgaatatcat | ggtggaaaat | ggccgctttt | ctggattcat | cgactgtggc | 5280 |
| cggctgggtg | tgccggaccg | ctatcaggac | atagcgttgg | ctacccgtga | tattgtgtaa | 5340 |
| gagcttggtg | gcgaatgggc | tgaccgcttc | ctcgtgcttt | acggtatcgc | cgctcccgat | 5400 |
| tcgcagcgca | tcgccttcta | tcgccttctt | gacgagttct | tctgagcggg | actctggggt | 5460 |
| tcgaaatgac | cgaccaagcg | acgccaacc | tgccatcacg | agatttcgat | tccaccgccg | 5520 |
| ccttctatga | aagggtgggc | ttcggaatcg | ttttccggga | cgccggctgg | atgatcctcc | 5580 |
| agcgcgggga | tctcatgctg | gagttcttcg | cccacgctag | tttaactgc | ggatcagtga | 5640 |
| gggtttgtaa | ctgcgggtca | aggatctgga | tttcgatcac | ggcacgatca | tcgtgcggga | 5700 |
| gggcaagggc | tccaaggatc | gggccttgat | gttaccgag | agcttggcac | ccagcctgcg | 5760 |
| cgagcagggg | aattgatccg | gtggatgacc | ttttgaatga | cctttaatag | attatattac | 5820 |
| taattaattg | gggaccctag | aggtcccctt | ttttatttta | aaaatttttt | cacaaaacgg | 5880 |
| tttacaagca | taacgggttt | tgctgccgc | aaacgggctg | ttctggtgtt | gctagtttgt | 5940 |
| tatcagaatc | gcagatccgg | cttcagggtt | gccggctgaa | agcgctatct | cttcagaat | 6000 |
| tgccatgatt | ttttccccac | gggaggcgtc | actggctccc | gtgttgctcg | cagctttgat | 6060 |
| tcgataagca | gcacgcctg | tttcaggctg | tctatgtgtg | actgttgagc | tgtaacaagt | 6120 |
| tgtctcaggt | gttcaatttc | atgttctagt | tgctttgttt | tactggtttc | acctgttcta | 6180 |
| ttagggtgta | catgctgttc | atctgttaca | ttgtcgatct | gttcatggtg | aacagcttta | 6240 |
| aatgcaccaa | aaactcgtaa | aagctctgat | gtatctatct | tttttacacc | gttttcatct | 6300 |
| gtgcatatgg | acagttttcc | ctttgatatc | taacggtgaa | cagttgttct | acttttgttt | 6360 |
| gttagtcttg | atgcttcact | gatagataca | agagccataa | gaacctcaga | tccttccgta | 6420 |
| tttagccagt | atgttctcta | gtgtggttcg | ttgtttttgc | gtgagccatg | agaacgaacc | 6480 |
| attgagatca | tgcttacttt | gcacgtcact | caaaaatttt | gcctcaaaac | tggtgagctg | 6540 |
| aatttttgca | gttaaagcat | cgtgtagtgt | ttttcttagt | ccgttacgta | ggtaggaatc | 6600 |
| tgatgtaatg | gttggttgga | ttttgtcacc | attcattttt | atctggttgt | tctcaagttc | 6660 |

Sequence.txt

| | | | | | | |
|------------|-------------|------------|------------|------------|-------------|------|
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| gcctcgctta | tcaaccacca | atttcatatt | gctgtaagt | tttaaatctt | tacttattgg | 6780 |
| tttcaaaacc | cattggttaa | gccttttaaa | ctcatggtag | ttattttcaa | gcattaacat | 6840 |
| gaacttaaat | tcatcaaggc | taatctctat | atttgccttg | tgagttttct | tttgtgttag | 6900 |
| ttctttta | aaccactcat | aatcctcat | agagtatttg | ttttcaaaag | acttaacatg | 6960 |
| ttccagatta | tattttatga | atttttttaa | ctggaaaaga | taaggcaata | tctcttcact | 7020 |
| aaaaactaat | tctaattttt | cgcttgagaa | cttggcatag | tttgtccact | ggaaaatctc | 7080 |
| aaagccttta | accaaaggat | tcctgatttc | cacagttctc | gtcatcagct | ctctggttgc | 7140 |
| tttagcta | acaccataag | cattttccct | actgatgttc | atcatctgag | cgtattgggt | 7200 |
| ataagtgaac | gataccgtcc | gttctttcct | tgtagggttt | tcaatcgtgg | ggttgagtag | 7260 |
| tgccacacag | cataaaatta | gcttggtttc | atgctccgtt | aagtcatagc | gactaatcgc | 7320 |
| tagttcat | gctttgaaaa | caactaattc | agacatacat | ctcaattgg | ctaggtgatt | 7380 |
| ttaatcacta | taccaattga | gatgggctag | tcaatgataa | ttactagtcc | ttttcctttg | 7440 |
| agttgtgggt | atctgtaaat | tctgctagac | ctttgctgga | aaacttgtaa | attctgctag | 7500 |
| accctctgta | aattccgcta | gacctttgtg | tgtttttttt | gtttatat | aagtggttat | 7560 |
| aatttataga | ataaagaaag | aataaaaaaa | gataaaaaga | atagatccca | gccctgtgta | 7620 |
| taactcacta | ctttagtcag | ttccgcagta | ttacaaaagg | atgtcgcaaa | cgctgtttgc | 7680 |
| tcctctacaa | aacagacctt | aaaaccctaa | aggcttaagt | agcaccctcg | caagctcggg | 7740 |
| caaatcgctg | aatatttcct | ttgtctccga | ccatcaggca | cctgagtcgc | tgtctttttc | 7800 |
| gtgacattca | gttcgctg | ctcacggctc | tggcagtgaa | tgggggtaaa | tggcactaca | 7860 |
| ggcgctttt | atggattcat | gcaaggaaac | tacccataat | acaagaaaag | cccgtcacgg | 7920 |
| gcttctcagg | gcgttttatg | gcgggtctgc | tatgtggtgc | tatctgactt | tttgctgttc | 7980 |
| agcagttcct | gccctctgat | ttccagttct | gaccacttcg | gattatcccg | tgacagggtca | 8040 |
| ttcagactgg | ctaatgcacc | cagtaaggca | gcggtatcat | caacaggctt | agtttaaacc | 8100 |
| catcggcatt | ttcttttg | ttttattttg | ttaactgtta | attgtccttg | ttcaaggatg | 8160 |
| ctgtctttga | caacagatgt | tttcttgctt | ttgatgttca | gcaggaagct | cggcgcaa | 8220 |
| gttgattgtt | tgtctgcgta | gaatcctctg | tttgtcatat | agcttgtaat | cacgacattg | 8280 |
| tttcctttcg | cttgagggtac | agcgaagtgt | gagtaagtaa | aggttacatc | gttaggatca | 8340 |
| agatccattt | ttaacacaag | gccagttttg | ttcagcggct | tgtatgggcc | agttaaagaa | 8400 |
| ttagaacat | aaccaagcat | gtaaaatc | ttagacgtaa | tgccgtcaat | cgtcattttt | 8460 |
| gatccgcggg | agtcagtgaa | caggtaccat | ttgccgttca | ttttaagac | gttcgcgcgt | 8520 |
| tcaatttcat | ctgttactgt | gttagatgca | atcagcgggt | tcatcacttt | tttcagtgtg | 8580 |
| taatcatcgt | ttagctcaat | cataccgaga | gcgccgtttg | ctaactcagc | cgtgcgtttt | 8640 |
| ttatcgcttt | gcagaagttt | ttgactttct | tgacggaaga | atgatgtgct | tttgccatag | 8700 |

Sequence.txt

| | | | | | | |
|------------|-------------|-------------|-------------|------------|-------------|-------|
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| tcaaatacta | agtattttgtg | gccttttatct | tctacgtagt | gaggatctct | cagcgtatgg | 8820 |
| ttgtcgcctg | agctgtagtt | gccttcacg | atgaactgct | gtacattttg | atacgttttt | 8880 |
| ccgtcaccgt | caaagattga | tttataatcc | tctacaccgt | tgatgttcaa | agagctgtct | 8940 |
| gatgctgata | cgtaacttg | tgcaagtgtc | agtgtttgtt | tgccgtaatg | tttaccggag | 9000 |
| aaatcagtgt | agaataaacg | gatttttccg | tcagatgtaa | atgtggctga | acctgaccat | 9060 |
| tcttgtgttt | ggcttttttag | gatagaatca | tttgcacga | atttgtcgct | gtcttttaaag | 9120 |
| acgcggccag | cgttttttcca | gctgtcaata | gaagtttcgc | cgactttttg | atagaacatg | 9180 |
| taaatcgatg | tgtcatccgc | atttttagga | tctccggcta | atgcaaagac | gatgtggtag | 9240 |
| ccgtgatagt | ttgcgacagt | gccgtcagcg | ttttgtaatg | gccagctgtc | ccaaacgtcc | 9300 |
| aggccttttg | cagaagagat | atttttaatt | gtggacgaat | caaattcaga | aacttgatat | 9360 |
| ttttcatttt | tttgcgttgc | agggatttgc | agcatatcat | ggcgtgtaat | atgggaaatg | 9420 |
| ccgtatgttt | ccttatatgg | cttttggttc | gtttctttcg | caaacgcttg | agttgcgctt | 9480 |
| cctgccagca | gtgcggtagt | aaaggttaat | actgttgctt | gttttgcaaa | ctttttgatg | 9540 |
| ttcatcgttc | atgtctcctt | ttttatgtac | tgtgttagcg | gtctgcttct | tccagccctc | 9600 |
| ctgtttgaag | atggcaagtt | agttacgcac | aataaaaaaa | gacctaaaat | atgtaagggg | 9660 |
| tgacgccaaa | gtatacactt | tgccctttac | acatttttagg | tcttgcttgc | tttatcagta | 9720 |
| acaaacccgc | gcgattttact | tttcgacctc | attctatttag | actctcgttt | ggattgcaac | 9780 |
| tggtctattt | tcctcttttg | tttgatagaa | aatcataaaa | ggatttgag | actacgggcc | 9840 |
| taaagaacta | aaaaatctat | ctgtttcttt | tcattctctg | tattttttat | agtttctgtt | 9900 |
| gcatgggcat | aaagttgcct | ttttaatcac | aattcagaaa | atatcataat | atctcatttc | 9960 |
| actaaataat | agtgaacggc | aggtatatgt | gatgggttaa | aaa | | 10003 |

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 <211> 11325
 <212> DNA
 <213> artificial

<220>
 <223> Plasmid pOM344

| | | |
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| ttaaagtttg | gctgccatgt | gaatttttag caccctcaac agttgagtgc tggcactctc 120 |
| gggggtagag | tgccaaatag | gttgtttgac acacagttgt tcacccgcga cgacggctgt 180 |
| gctggaacc | cacaaccggc | acacacaaaa tttttctaga ggaggtgaaa gtatggcaca 240 |
| gcagaccctt | ttgtacgaac | aacacacgct ttgcggcgct cgcatgggtg atttccacgg 300 |
| ctggatgatg | ccgctgcatt | acggttcgca aatcgacgaa catcatgcgg tacgtaccga 360 |
| tgccggaatg | tttgatgtgt | cacatatgac catcgtcgat cttcgcgga gccgcacccg 420 |

Sequence.txt

| | |
|---|------|
| ggagtttctg cgttatctgc tggcgaacga tgtggcgaag ctcacaaaaa gcggcaaagc | 480 |
| cctttactcg gggatgttga atgcctctcg cggtgtgata gatgacctca tcgtctacta | 540 |
| ctttactgaa gatttcttcc gcctcgttgt taactccgcc acccgcgaaa aagacctctc | 600 |
| ctggattacc caacacgctg aacctttcgg catcgaaatt accgttcgtg atgacctttc | 660 |
| catgattgcc gtgcaagggc cgaatgcgca ggcaaaagct gccacactgt ttaatgacgc | 720 |
| ccagcgtcag gcggtggaag ggatgaaacc gttctttggc gtgcaggcgg gcgatctgtt | 780 |
| tattgccacc actggttata ccggtgaagc gggctatgaa attgcgctgc ccaatgaaaa | 840 |
| agcggccgat ttctggcgtg cgctggtgga agcgggtgtt aagccatgtg gcttgggcgc | 900 |
| gcgtgacacg ctgctcttgg aagcgggcat gaatctttat ggtcaggaga tggacgaaac | 960 |
| catctctcct ttagccgcca acatgggctg gaccatcgcc tgggaaccgg cagatcgtga | 1020 |
| ctttatcggc cgtgaagccc tggaaagtga gcgtgagcat ggtacagaaa aactggttgg | 1080 |
| tctggtgatg accgaaaaag gcgtgctgcg taatgaactg ccggtacgct ttaccgatgc | 1140 |
| gcagggcaac cagcatgaag gcattatcac cagcgggtact ttctccccga cgctgggtta | 1200 |
| cagcattgcg ctggcgcgcg tgccggaagg tattggcgaa acggcgattg tgcaaattcg | 1260 |
| caaccgtgaa atgccgggta aagtgacaaa acctgttttt gtgcgtaacg gcaaagccgt | 1320 |
| cgcgtgattt acttttttgg agattgattg atgagcaacg taccagcaga actgaaatac | 1380 |
| agcaaagaac acgaatggct gcgtaaagaa gccgacggca cttacaccgt tggattacc | 1440 |
| gaacatgctc aggagctgtt aggcgatatg gtgtttgttg acctgccgga agtgggcgca | 1500 |
| acggttagcg cgggcgatga ctgcgcggtt gccgaatcgg taaaagcggc gtcagacatt | 1560 |
| tatgcgccag taagcgggtg aatcgtggcg gtaaacgacg cactgagcga ttccccggaa | 1620 |
| ctggtgaaca gcgaaccgta tgcaaggcggc tggatcttta aaatcaaagc cagcgatgaa | 1680 |
| agcgaactgg aatcactgct ggatgcgacc gcatacgaag cattgttaga agacgagtaa | 1740 |
| cggctttatt cctcttctgc gggagaggat caggggtgagg aaaatttatg cctcacctc | 1800 |
| actctcttcg taaggagaga gggtcacaaat tcaactgcacg tttcaggaac catcgctcat | 1860 |
| gacacagacg ttaagccagc ttgaaaacag cggcgctttt attgaacgcc atatcggacc | 1920 |
| ggacgcccg ccaacagcaag aaatgctgaa tgccgttggt gcacaatcgt taaacgcgct | 1980 |
| gaccggccag attgtgccga aagatattca acttgcgaca ccaccgcagg ttggcgaccc | 2040 |
| ggcgaccgaa tacgccgcac tggcagaact caaggctatt gccagtcgca ataaacgctt | 2100 |
| cacgtcttac atcggcatgg gttacaccgc cgtgcagcta ccgccgggta tcctgcgtaa | 2160 |
| catgctggaa aatccgggct ggtataaccgc gtacactccg tatcaacctg aagtctccca | 2220 |
| gggccgcctt gaagcactgc tcaacttcca gcaggtaacg ctggatttga ctggactgga | 2280 |
| tatggcctct gcttctcttc tggacgaggc caccgctgcc gccgaagcaa tggcgatggc | 2340 |
| gaaacgcgtc agcaaactga aaaatgccaa ccgcttcttc gtggcttccg atgtgcatcc | 2400 |
| gcaaacgctg gatgtggtcc gtactcgtgc cgaaaccttt ggttttgaag tgattgtcga | 2460 |

Sequence.txt

| | |
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| cactaccggt gaaattcacg actacactgc gcttatttagc gaactgaaat cacgcaaaat | 2580 |
| tgtggtcagc gttgccgccg atattatggc gctgggtgctg ttaactgcgc cgggtaaaca | 2640 |
| gggcgcggat attgtttttg gttcggcgca acgcttcggc gtgccgatgg gctacggtgg | 2700 |
| cccacacgcg gcattctttg cggcgaaaga tgaatacaaa cgctcaatgc cgggccgtat | 2760 |
| tatcgggtga tcgaaagatg cagctggcaa taccgcgctg cgcattggcg tgcagactcg | 2820 |
| cgagcaacat atccgccgtg agaaagcgaa ctccaacatt tgtacttccc aggtactgct | 2880 |
| ggcaaacatc gccagcctgt atgccgttta tcacggcccc gttggcctga aacgtatcgc | 2940 |
| taaccgcatt caccgtctga ccgatatcct ggcggcgggc ctgcaacaaa aaggctctgaa | 3000 |
| actgcgccat gcgcactatt tcgacacctt gtgtgtggaa gtggccgaca aagcgggcgt | 3060 |
| actgacgcgt gccgaagcgg ctgaaatcaa cctgcgtagc gatattctga acgcggttg | 3120 |
| gatcacctt gatgaaacaa ccacgcgtga aaacgtaatg cagcttttca acgtgctgct | 3180 |
| gggcgataac cacggcctgg acatcgacac gctggacaaa gacgtggctc acgacagccg | 3240 |
| ctctatccag cctgcgatgc tgcgcgacga cgaaatctc acccatccg tgtttaatcg | 3300 |
| ctaccacagc gaaaccgaaa tgatgcgcta tatgactcg ctggagcgta aagatctggc | 3360 |
| gctgaatcag gcgatgatcc cgctgggttc ctgcaccatg aaactgaacg ccgccgccga | 3420 |
| gatgatccca atcacctggc cggaatttgc cgaactgcac ccgttctgcc cgccggagca | 3480 |
| ggccgaaggt tatcagcaga tgattgcgca gctggctgac tggctggtga aactgaccgg | 3540 |
| ttacgacgcc gtttgtatgc agccgaactc tggcgcacag ggcgaatacg cgggcctgct | 3600 |
| ggcgattcgt cattatcatg aaagccgcaa cgaaggcat cgcgatatct gcctgatccc | 3660 |
| ggcttctgcg cacggaacta accccgcttc tgcacatatg gcaggaatgc aggtggtggt | 3720 |
| tgtggcgtgt gataaaaacg gcaacatcga tctgactgat ctgcgcgcga aagcgaaca | 3780 |
| ggcgggcgat aacctctcct gtatcatggt gacttatacct tctaccacg gcgtgtatga | 3840 |
| agaaacgatc cgtgaagtgt gtgaagtcgt gcatcagttc ggcggtcagg ttacattga | 3900 |
| tggcgcgaac atgaacgccc aggttggcat cacctcgccg ggctttattg gtgcggacgt | 3960 |
| ttcacacctt aacctacata aaactttctg cattccgcac ggcggtggtg gtccgggtat | 4020 |
| gggaccgatc ggcgtgaaag cgcatthggc accgtttgta ccgggtcata gcgtggtgca | 4080 |
| aatcgaaggc atgttaaccc gtcagggcgc ggtttctgcg gcaccgttcg gtagcgcctc | 4140 |
| tatcctgcc aatcagctgga tgtacatccg catgatgggc gcagaagggc tgaaaaaagc | 4200 |
| aagccagtg gcaatcctca acgccaacta tattgccagc cgcttcagg atgccttccc | 4260 |
| ggtgctgtat accggtcgcg acggtcgcgt ggcgcacgaa tgtattctcg atattcgccc | 4320 |
| gctgaaagaa gaaaccggca tcagcgagct ggatattgcc aagcgcctga tcgactacgg | 4380 |
| ttccacgcg ccgacgatgt cgttcccggg ggcgggtacg ctgatggttg aaccgactga | 4440 |
| atctgaaagc aaagtggaac tggatcgctt tatcgcgcg atgctggcta tccgcgcaga | 4500 |

Sequence.txt

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| gcacattcag | agcgaactgg | tcgccgagtg | ggcgcacccg | tacagccgtg | aagttgcggt | 4620 |
| attcccggca | ggtgtggcag | acaaatactg | gccgacagtg | aaacgtcttg | atgatgttta | 4680 |
| cggcgaccgt | aacctgttct | gctcctgcgt | accgattagc | gaataccagt | aattcactga | 4740 |
| ttcgactatt | ttctaaaggc | gcttcggcgc | cttttttagtc | agatgacaaa | gtacaaaagt | 4800 |
| gctcagacag | tcccctcgcc | ggatccgccc | tcccgcacgc | tttgcgaggag | ggcttttctt | 4860 |
| ttcccggtat | ttaaatacgt | agcgggctgc | taaaggaagc | ggaacacgta | gaaagccagt | 4920 |
| ccgcagaaac | ggtgctgacc | ccggatgaat | gtcagctact | gggctatctg | gacaagggaa | 4980 |
| aacgcaagcg | caaagagaaa | gcaggtagct | tgcagtgggc | ttacatggcg | atagctagac | 5040 |
| tgggcggttt | tatggacagc | aagcgaaccg | gaattgccag | ctggggcgcc | ctctggtaag | 5100 |
| gttgggaagc | cctgcaaagt | aaactggatg | gctttcttgc | cgccaaggat | ctgatggcgc | 5160 |
| aggggatcaa | gatctgatca | agagacagga | tgaggatcgt | ttcgcacgat | tgaacaagat | 5220 |
| ggattgcacg | caggttctcc | ggccgcttgg | gtggagaggc | tattcggtta | tgactgggca | 5280 |
| caacagacaa | tcggctgctc | tgatgccgcc | gtgttcgggc | tgtcagcgca | ggggcgcccg | 5340 |
| gttctttttg | tcaagaccga | cctgtccggt | gccctgaatg | aactgcagga | cgaggcagcg | 5400 |
| cggctatcgt | ggctggccac | gacgggcgtt | ccttgccgag | ctgtgctcga | cgttgtcact | 5460 |
| gaagcgggaa | gggactggct | gctattgggc | gaagtgccgg | ggcaggatct | cctgtcatct | 5520 |
| caccttgctc | ctgccgagaa | agtatccatc | atggctgatg | caatgcggcg | gctgcatacg | 5580 |
| cttgatccgg | ctacctgccc | attcgaccac | caagcgaaac | atcgcatcga | gcgagcacgt | 5640 |
| actcggatgg | aagccggtct | tgtcgatcag | gatgatctgg | acgaagagca | tcaggggctc | 5700 |
| gcgccagccg | aactgttcgc | caggctcaag | gcgcgcacgc | ccgacggcga | ggatctcgtc | 5760 |
| gtgacctatg | gcgatgcctg | cttgccgaat | atcatggtgg | aaaatggccg | cttttctgga | 5820 |
| ttcatcgact | gtggccggct | gggtgtggcg | gaccgctatc | aggacatagc | gttggctacc | 5880 |
| cgtgatattg | ctgaagagct | tggcggcgaa | tgggctgacc | gcttcctcgt | gctttacggt | 5940 |
| atcgccgctc | ccgattcgca | gcgcacgcgc | ttctatcgcc | ttcttgacga | gttcttctga | 6000 |
| gcgggactct | ggggttcgaa | atgaccgacc | aagcgacgcc | caacctgcca | tcacgagatt | 6060 |
| tcgattccac | cgccgccttc | tatgaaaggt | tgggccttcg | aatcggtttc | cgggacgccg | 6120 |
| gctggatgat | cctccagcgc | ggggatctca | tgctggagtt | cttcgcccac | gctagttaa | 6180 |
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| ggcaccagc | ctgcgcgagc | aggggaattg | atccggtgga | tgaccttttg | aatgaccttt | 6360 |
| aatagattat | attactaatt | aattggggac | cctagaggtc | ccctttttta | ttttaaaaaat | 6420 |
| tttttcacaa | aacggtttac | aagcataacg | ggttttgctg | cccgcaaacg | ggctgttctg | 6480 |
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Sequence.txt

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| gtcggcagct | ttgattcgat | aagcagcatc | gcctgtttca | ggctgtctat | gtgtgactgt | 6660 |
| tgagctgtaa | caagttgtct | caggtgttca | atttcatgtt | ctagttgctt | tgttttactg | 6720 |
| gtttcacctg | ttctattagg | tgttacatgc | tgttcatctg | ttacattgtc | gatctgttca | 6780 |
| tggtgaacag | ctttaaatgc | acaaaaaact | cgtaaaagct | ctgatgtatc | tatctttttt | 6840 |
| acaccgtttt | catctgtgca | tatggacagt | tttccctttg | atatctaacg | gtgaacagtt | 6900 |
| gttctacttt | tgtttggttag | tcttgatgct | tactgatag | atacaagagc | cataagaacc | 6960 |
| tcagatcctt | ccgtatttag | ccagtatgtt | ctctagtgtg | gttcgttggt | tttgcgtgag | 7020 |
| ccatgagaac | gaaccattga | gatcatgctt | actttgcatg | tactcaaaa | attttgcctc | 7080 |
| aaaactgggtg | agctgaattt | ttgcagttaa | agcatcgtgt | agtgtttttc | ttagtccgtt | 7140 |
| acgtaggtag | gaatctgatg | taatggttgt | tggtattttg | tcaccattca | tttttatctg | 7200 |
| gttgttctca | agttcggtta | cgagatccat | ttgtctatct | agttcaactt | ggaaaatcaa | 7260 |
| cgtatcagtc | gggcggcctc | gcttatcaac | caccaatttc | atattgctgt | aagtgtttaa | 7320 |
| atctttactt | attggtttca | aaaccattg | gttaagcctt | ttaaactcat | ggtagttatt | 7380 |
| ttcaagcatt | aacatgaact | taaattcatc | aaggctaata | tctatatattg | ccttgtagt | 7440 |
| tttcttttgt | gtagtttctt | ttaataacca | ctcataaatc | ctcatagagt | atgtgttttc | 7500 |
| aaaagactta | acatgttcca | gattatattt | tatgaatttt | tttaactgga | aaagataaagg | 7560 |
| caatatctct | tactaaaaa | ctaattctaa | tttttcgctt | gagaacttgg | catagtttgt | 7620 |
| ccactgga | atctcaaagc | ctttaacca | aggattcctg | atttccacag | ttctcgtcat | 7680 |
| cagctctctg | gttgcttttag | ctaatacacc | ataagcattt | tccctactga | tgttcatcat | 7740 |
| ctgagcgtat | tggttataag | tgaacgatac | cgtccgttct | ttcctttag | ggttttcaat | 7800 |
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| ttggtctagg | tgattttaat | cactatacca | attgagatgg | gctagtcaat | gataattact | 7980 |
| agtccttttc | ctttgagttg | tgggtatctg | taaattctgc | tagacctttg | ctggaaaact | 8040 |
| tgtaaattct | gctagaccct | ctgtaaattc | cgctagacct | ttgtgtgttt | tttttgttta | 8100 |
| tattcaagtg | gttataattt | atagaataaa | gaaagaataa | aaaaagataa | aaagaataga | 8160 |
| tcccagccct | gtgtataact | cactacttta | gtcagttccg | cagtattaca | aaaggatgtc | 8220 |
| gcaaacgctg | tttgctcctc | tacaaaacag | accttaaaac | cctaaaggct | taagtagcac | 8280 |
| cctcgcaagc | tcgggcaaat | cgctgaatat | tccttttgtc | tccgaccatc | aggcacctga | 8340 |
| gtcgtgtctt | ttttcgtgac | attcagttcg | ctgcgtcac | ggctctggca | gtgaatgggg | 8400 |
| gtaaatggca | ctacaggcgc | cttttatgga | ttcatgcaag | gaaactaccc | ataatacaag | 8460 |
| aaaagcccgt | cacgggcttc | tcagggcgtt | ttatggcggg | tctgctatgt | ggtgctatct | 8520 |
| gactttttgc | tgttcagcag | ttcctgccct | ctgattttcc | agtctgacca | cttcggatta | 8580 |

Sequence.txt

| | | | | | | |
|------------|-------------|-------------|------------|------------|------------|-------|
| tcccgtgaca | ggtcattcag | actggctaata | gcacccagta | aggcagcggt | atcatcaaca | 8640 |
| ggcttagttt | aaaccgcaaa | gtcccgttct | gtgaaaattt | tcgtgccgcg | tgattttccg | 8700 |
| ccaaaaactt | taacgaacgt | tcgttataat | gggtgcatga | ccttcacgac | gaagtactaa | 8760 |
| aattggcccc | aatcatcagc | tatggatctc | tctgatgtcg | cgctggagtc | cgacgcgctc | 8820 |
| gatgctgccg | tcgatttaaa | aacggtgata | ggatttttcc | gagctctcga | tacgacggac | 8880 |
| gcgccagcat | cacgagactg | ggccagtgcc | gcgagcgacc | tagaaactct | cgtggcggat | 8940 |
| cttgaggagc | tggctgacga | gctgcgtgct | cggccagcgc | caggaggacg | cacagtagtg | 9000 |
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| cgtcgaaaaa | gcgcacaggc | ggcaagaagc | gataagctgc | acgaatacct | gaaaaatgtt | 9420 |
| gaacgccccg | tgagcggtaa | ctcacagggc | gtcggctaac | ccccagtcca | aacctgggag | 9480 |
| aaagcgctca | aaaatgactc | tagcggattc | acgagacatt | gacacaccgg | cctggaaatt | 9540 |
| ttccgctgat | ctgttcgaca | cccatcccg | gctcgcgctg | cgatcacgtg | gctggacgag | 9600 |
| cgaagaccgc | cgcaatttcc | tcgctcacct | gggcagagaa | aatttccagg | gcagcaagac | 9660 |
| ccgcgacttc | gccagcgctt | ggatcaaaga | cccggacacg | gagaaacaca | gccgaagtta | 9720 |
| taccgagttg | gttcaaaatc | gcttgcccgg | tgccagtatg | ttgctctgac | gcacgcgcag | 9780 |
| cacgcagccg | tgcttgcctt | ggacattgat | gtgccgagcc | accaggccgg | cgggaaaatc | 9840 |
| gagcacgtaa | accccagagt | ctacgcgatt | ttggagcgct | gggcacgcct | ggaaaaagcg | 9900 |
| ccagcttgg | tcggcggtga | tccactgagc | gggaaatgcc | agctcatctg | gctcattgat | 9960 |
| ccggtgtatg | ccgcagcagg | catgagcagc | ccgaatatgc | gcctgctggc | tgcaacgacc | 10020 |
| gaggaaatga | cccgcgtttt | cggcgctgac | caggcttttt | cacataggct | gagccgtggc | 10080 |
| cactgcactc | tccgacgata | ccagccgtac | cgctggcatg | cccagcaca | tcgcgtggat | 10140 |
| cgcctagctg | atcttatgga | ggttgctcgc | atgatctcag | gcacagaaaa | acctaataaa | 10200 |
| cgctatgagc | aggagttttc | tagcggacgg | gcacgtatcg | aagcggcaag | aaaagccact | 10260 |
| gcggaagcaa | aagcacttgc | cacgcttgaa | gcaagcctgc | cgagcgccgc | tgaagcgtct | 10320 |
| ggagagctga | tcgacggcgt | ccgtgtcctc | tggactgtc | cagggcgctg | cgcccgtgat | 10380 |
| gagacggctt | ttcgccacgc | tttgactgtg | ggataccagt | taaaagcggc | tggtgagcgc | 10440 |
| ctaaaagaca | ccaaggggtca | tcgagcctac | gagcgtgcct | acaccgtcgc | tcaggcggtc | 10500 |
| ggaggaggcc | gtgagcctga | tctgccgccg | gactgtgacc | gccagacgga | ttggccgcga | 10560 |
| cgtgtgcgcg | gctacgtcgc | taaaggccag | ccagtcgtcc | ctgctcgtca | gacagagacg | 10620 |

Sequence.txt

| | | | | | | |
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| gcagaacgct | ggaaagaccc | aaacagttag | tacgcccag | cacagcgaga | aaaactagct | 10740 |
| aagtccagtc | aacgacaagc | taggaaagct | aaaggaaatc | gcttgaccat | tgaggttgg | 10800 |
| tttatgactg | ttgagggaga | gactggctcg | tggccgacaa | tcaatgaagc | tatgtctgaa | 10860 |
| tttagcgtgt | cacgtcagac | cgtgaataga | gcacttaagg | tctgcgggca | ttgaacttcc | 10920 |
| acgaggacgc | cgaaagcttc | ccagtaaata | tgccatctcg | taggcagaaa | acggttcccc | 10980 |
| cgtagggtct | ctctcttggc | ctcctttcta | ggtcgggctg | attgctcttg | aagctctcta | 11040 |
| ggggggctca | caccataggc | agataacgtt | ccccaccggc | tcgcctcgta | agcgacaaag | 11100 |
| gactgctccc | aaagatcttc | aaagccactg | ccgcgactgc | cttcgcgaag | ccttgccccg | 11160 |
| cggaaatttc | ctccaccgag | ttcgtgcaca | cccctatgcc | aagcttcttt | caccctaaat | 11220 |
| tcgagagatt | ggattcttac | cgtggaaatt | cttcgcaaaa | atcgcccctt | gatcgccctt | 11280 |
| gcgacgttgg | cgtcgggtgc | gctggttgcg | cttggttga | ccgac | | 11325 |

<210> 42
 <211> 200
 <212> DNA
 <213> artificial

<220>
 <223> P15 Promoter

| | |
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| gccaatat | ctcccttagg ggggtacaaag aggtgtccct agaagagatc cacgctgtgt 120 |
| aaaaatttta | caaaaaggta ttgactttcc ctacaggggtg tgtaataatt taattacagg 180 |
| cgggggcaac | ccgcctgtt 200 |

<210> 43
 <211> 5666
 <212> DNA
 <213> artificial

<220>
 <223> Plasmid pHF96

| | |
|------------|--|
| <400> 43 | |
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| gaatcctaga | aatgggatcc gtgggcattc gtgtctggtt taacggcctt gaaaccggac 120 |
| aggattgccc | aaagtagtcg aatttccagt tcgtgggcat gtgtgttttg tcaggtttag 180 |
| tcgggtcgaa | aatgaactc ggaatcggtg aaaagtacc tcacagaatc gcttctaagg 240 |
| gccgttcaaa | gtgttgccca tacaacacac tgttctgact gcccgcctc ttaaaatggc 300 |
| gttaaatggc | gcgaaatgga aaacgcctcg tggcctggat ggagcgttag tacgagacca 360 |
| gtacgagacc | agacacacgt gacaaaaaat cctgaaaagt ggaatcattg tcacgcctgt 420 |
| ctggttttag | tctggttcgg gacgggcgtg gaatggaggc agtgcaccga gaccttgacc 480 |

Sequence.txt

| | | | | | | |
|--------------|-------------|-------------|-------------|-------------|-------------|------|
| cgcgggcccgga | caagccaaaa | gtcccca | caaaccacc | ccgcccggaga | cgtgaataaaa | 540 |
| attcgagct | cattccatca | gcgtaaacgc | agctttttgc | atggtgagac | acctttgggg | 600 |
| gtaaatctca | cagcatgaat | ctctgggtta | gatgactttc | tgggtggggg | agggtttaga | 660 |
| atgtttctag | tcgcacgcc | aaacccggcg | tggacacgtc | tcgagccgac | gcggtcgtgc | 720 |
| ctgttgtaga | cggacattcc | tagtttttcc | aggagtaact | tgatatctta | gagatccatt | 780 |
| tgcttgaacc | gccttcccat | ctttgaattc | attcaagggtg | gtaaggcggg | tttcgctctt | 840 |
| ttaatacagt | tttaaaggta | gatttgggag | agaagatttc | ccttaagaaa | ggttcttaac | 900 |
| aaccatgccg | cctgcgacgc | tgttcaatgt | tttgacttca | gctggacttg | accctcacca | 960 |
| gtcaggtgat | gccattgttg | tcgagtctgc | ccatttcaca | ttgacgttca | cgtgggatga | 1020 |
| gtggctgcga | gctcaagcga | cgtgggtggg | ggagttgagt | gcgtcggatt | atgtgcgttc | 1080 |
| tatttgggcg | attaactctg | cccatgatgc | acgggcaacg | ccgaagatga | tggttgatgc | 1140 |
| cccgactggg | ctgacaacgg | tgcttaaggc | ggataagggt | cagttgcagg | cgtttgccgt | 1200 |
| ggaggcgctg | ccgattggcg | atggcctcag | cgaggctcag | ttggcggggg | ttgtggctgc | 1260 |
| cgcgtttgat | ggcgccatcg | acctcactcg | tgagtttcat | gcactttacc | cggagcgctc | 1320 |
| gccgcaggag | cgcgggcgaa | tgctcaacat | taagcttgtc | gacgcctccc | cctctcaaac | 1380 |
| agttacgccc | gtgcgagtag | ctaactgggt | catggatcag | ggggtggagg | aagttcctta | 1440 |
| tgatgcagct | tctagacccg | ggatttaaat | cgctagcggg | ctgctaaagg | aagcggaaca | 1500 |
| cgtagaaagc | cagtccgcag | aaacgggtgct | gaccccggtg | gaatgtcagc | tactgggcta | 1560 |
| tctggacaag | ggaaaacgca | agcgcaaaga | gaaagcagg | agcttgcagt | gggcttacat | 1620 |
| ggcgatagct | agactggggc | gttttatgga | cagcaagcga | accggaattg | ccagctgggg | 1680 |
| cgccctctgg | taaggttggg | aagccctgca | aagtaaactg | gatggctttc | ttgccgcaa | 1740 |
| ggatctgatg | gcgcagggga | tcaagatctg | atcaagagac | aggatgagga | tcgtttcgca | 1800 |
| tgattgaaca | agatggattg | cacgcagggt | ctccggccgc | ttgggtggag | aggctattcg | 1860 |
| gctatgactg | ggcacaacag | acaatcgggt | gctctgatgc | cgccgtgttc | cggctgtcag | 1920 |
| cgcagggcg | cccggttctt | tttgtcaaga | ccgacctgtc | cgggtgccctg | aatgaactgc | 1980 |
| aggacgaggc | agcgcggtta | tcgtggctgg | ccacgacggg | cgttccttgc | gcagctgtgc | 2040 |
| tcgacgttgt | cactgaagcg | ggaagggact | ggctgctatt | gggcgaagtg | ccggggcagg | 2100 |
| atctcctgtc | atctcacctt | gctcctgccg | agaaagtatc | catcatgggt | gatgcaatgc | 2160 |
| ggcggctgca | tacgcttgat | ccggctacct | gccattcga | ccaccaagcg | aaacatcgca | 2220 |
| tcgagcgagc | acgtactcgg | atggaagccg | gtcttgtcga | tcaggatgat | ctggacgaag | 2280 |
| agcatcaggg | gctcgcgcca | gccgaactgt | tcgccaggct | caaggcgcg | atgcccgcg | 2340 |
| gcgaggatct | cgctcgtgacc | catggcgatg | cctgcttgcc | gaatatcatg | gtggaaaatg | 2400 |
| gccgcttttc | tggattcatc | gactgtggcc | ggctgggtgt | ggcggaccgc | tatcaggaca | 2460 |
| tagcgttggc | taccggtgat | attgctgaag | agcttggcgg | cgaatgggct | gaccgcttcc | 2520 |

Sequence.txt

| | | | | | | |
|------------|------------|------------|-------------|------------|-------------|------|
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| acgagttctt | ctgagcggga | ctctgggggt | cgaaatgacc | gaccaagcga | cgcccaacct | 2640 |
| gccatcacga | gatttcgatt | ccaccgccgc | cttctatgaa | aggttgggct | tcggaatcgt | 2700 |
| tttccgggac | gccggctgga | tgatcctcca | gcgcggggat | ctcatgctgg | agttcttcgc | 2760 |
| ccacgctagc | ggcgcgccgg | ccggcccggg | gtgaaatacc | gcacagatgc | gtaaggagaa | 2820 |
| aataccgcat | caggcgctct | tccgcttcct | cgctcactga | ctcgctgcgc | tcggtcgttc | 2880 |
| ggctgcggcg | agcggtatca | gctcactcaa | aggcggtaat | acggttatcc | acagaatcag | 2940 |
| gggataacgc | aggaaagaac | atgtgagcaa | aaggccagca | aaaggccagg | aaccgtaaaa | 3000 |
| aggccgcgtt | gctggcgttt | ttccataggc | tccgcccccc | tgacgagcat | cacaaaaatc | 3060 |
| gacgctcaag | tcagaggtgg | cgaaacccga | caggactata | aagataccag | gcgtttcccc | 3120 |
| ctggaagctc | cctcgtgcgc | tctcctgttc | cgaccctgcc | gcttaccgga | tacctgtccg | 3180 |
| cctttctccc | ttcgggaagc | gtggcgcttt | ctcatagctc | acgctgtagg | tatctcagtt | 3240 |
| cggtgtaggt | cgttcgtctc | aagctgggct | gtgtgcacga | acccccggtt | cagccccgacc | 3300 |
| gctgcgcctt | atccggtaac | tatcgtcttg | agtccaaccc | ggtaagacac | gacttatcgc | 3360 |
| cactggcagc | agccactggg | aacaggatta | gcagagcgag | gtatgtaggc | ggtgctacag | 3420 |
| agttcttgaa | gtggtggcct | aactacggct | acactagaag | gacagtatct | ggtatctgcg | 3480 |
| ctctgctgaa | gccagttacc | ttcggaaaaa | gagttggtag | ctcttgatcc | ggcaaacaaa | 3540 |
| ccaccgctgg | tagcgggtgg | ttttttgttt | gcaagcagca | gattacgcgc | agaaaaaag | 3600 |
| gatctcaaga | agatcctttg | atcttttcta | cgggggtctga | cgctcagtgg | aacgaaaact | 3660 |
| cacgttaagg | gattttgggt | atgagattat | caaaaaggat | cttcacctag | atccttttaa | 3720 |
| aggccggccg | cggccgccat | cggcattttc | ttttgcgttt | ttatttggtt | actgttaatt | 3780 |
| gtccttgctt | aaggatgctg | tctttgacaa | cagatgtttt | cttgcccttg | atgttcagca | 3840 |
| ggaagctcgg | cgcaaacggt | gattgtttgt | ctgcgtagaa | tcctctgttt | gtcatatagc | 3900 |
| ttgtaatcac | gacattgttt | cctttcgctt | gaggtagcgc | gaagtgtgag | taagtaaagg | 3960 |
| ttacatcggt | aggatcaaga | tccattttta | acacaaggcc | agttttgttc | agcggcttgt | 4020 |
| atgggccagt | taaagaatta | gaaacataac | caagcatgta | aatatcggtt | gacgtaatgc | 4080 |
| cgtcaatcgt | catttttgat | ccgcggggag | cagtgaacag | gtaccatttg | ccgttcattt | 4140 |
| taaagacggt | cgcgcggttc | atttcatctg | ttactgtggt | agatgcaatc | agcgggttca | 4200 |
| tcactttttt | cagtgtgtaa | tcatcgttta | gctcaatcat | accgagagcg | ccgtttgcta | 4260 |
| actcagccgt | gcgtttttta | tcgctttgca | gaagtttttg | actttcttga | cggaagaatg | 4320 |
| atgtgctttt | gccatagtat | gctttgttaa | ataaagattc | ttcgcccttg | tagccatctt | 4380 |
| cagttccagt | gtttgcttca | aataactaag | atttgtggcc | tttatcttct | acgtagttag | 4440 |
| gatctctcag | cgtatgggtg | tcgcctgagc | tgtagtggcc | ttcatcgatg | aactgctgta | 4500 |
| cattttgata | cgtttttccg | tcaccgtcaa | agattgattt | ataatcctct | acaccgttga | 4560 |

Sequence.txt

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```

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<213> artificial

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<220>
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```

```

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<213> artificial

```

```

<220>
<223> HS1305

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<400> 45
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Sequence.txt

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<220>
<223> HS1303

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Sequence.txt

| | | | | | | | |
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| acgagatttc | gattccaccg | ccgccttcta | tgaaggttg | ggcttcggaa | tcgttttccg | 1320 | |
| ggacgccggc | tggatgatcc | tccagcgcg | ggatctcatg | ctggagttct | tcgcccacgc | 1380 | |
| tagcggcgcg | ccggccggcc | cgggtgtgaa | taccgcacag | atgcgtaagg | agaaaatacc | 1440 | |
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| acgcaggaaa | gaacatgtga | gcaaaaggcc | agcaaaaggc | caggaaccgt | aaaaaggccg | 1620 | |
| cgttgctggc | gtttttccat | aggctccgcc | cccctgacga | gcatcacaaa | aatcgacgct | 1680 | |
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| gctccctcgt | gcgctctcct | gttccgaccc | tgccgcttac | cggataacctg | tccgcctttc | 1800 | |
| tcccttcggg | aagcgtggcg | ctttctcata | gctcacgctg | taggtatctc | agttcggtgt | 1860 | |
| aggctgttcg | ctccaagctg | ggctgtgtgc | acgaaccccc | cgttcagccc | gaccgctgcg | 1920 | |
| ccttatccgg | taactatcgt | cttgagtcca | acccggtaag | acacgactta | tcgccactgg | 1980 | |
| cagcagccac | tggtaacagg | attagcagag | cgaggatgtg | aggcgggtgct | acagagttct | 2040 | |
| tgaagtgggtg | gcctaactac | ggctacacta | gaaggacagt | atgttggtatc | tgcgctctgc | 2100 | |
| tgaagccagt | taccttcgga | aaaagagttg | gtagctcttg | atccggcaaa | caaaccaccg | 2160 | |
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| gccgcggccg | cgcaaagtcc | cgcttcgtga | aaattttcgt | gccgcgtgat | tttccgcaa | 2400 | |
| aaactttaac | gaacgttcgt | tataatgggtg | tcatgacctt | cacgacgaag | tactaaaatt | 2460 | |
| ggcccgaatc | atcagctatg | gatctctctg | atgtcgcgct | ggagtccgac | gcgctcgatg | 2520 | |
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| tcgtggcggg | gcccgcaggc | atgacaaaca | tcgtaa | atgc | cgcgtttcgt | gtgccgtggc | 3000 |
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| gaaaaagcgc | acaggcggca | agaagcgata | agctgcacga | atacctgaaa | aatgttgaac | 3120 | |
| gccccgtgag | cggtaactca | cagggcgctc | gctaaccccc | agtccaaacc | tgggagaaaag | 3180 | |
| cgctcaaaaa | tgactctagc | ggattcacga | gacattgaca | caccggcctg | gaaattttcc | 3240 | |

Sequence.txt

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| gctgatctgt | tcgacaccca | tcccagagctc | gcgctgcgat | cacgtggctg | gacgagcgaa | 3300 |
| gaccgccgcg | aattcctcgc | tcacctgggc | agagaaaatt | tccagggcag | caagacccgc | 3360 |
| gacttcgcca | gcgcttgat | caaagacccg | gacacggaga | aacacagccg | aagttatacc | 3420 |
| gagttggttc | aaaatcgctt | gcccggtgcc | agtatgttgc | tctgacgcac | gcgcagcacg | 3480 |
| cagccgtgct | tgtcctggac | attgatgtgc | cgagccacca | ggccggcggg | aaaatcgagc | 3540 |
| acgtaaacc | cgaggtctac | gcgattttgg | agcgctgggc | acgcctggaa | aaagcgccag | 3600 |
| cttgatcgg | cgtgaatcca | ctgagcggga | aatgccagct | catctggctc | attgatccgg | 3660 |
| tgtatgccgc | agcaggcatg | agcagcccga | atatgcccct | gctggctgca | acgaccgagg | 3720 |
| aatgacccg | cgttttcggc | gctgaccagg | ctttttcaca | taggctgagc | cgtggccact | 3780 |
| gcactctccg | acgatcccag | ccgtaccgct | ggcatgccca | gcacaatcgc | gtggatcgcc | 3840 |
| tagctgatct | tatggagggt | gctcgcatga | tctcaggcac | agaaaaacct | aaaaaacgct | 3900 |
| atgagcagga | gttttctagc | ggacgggcac | gtatcgaagc | ggcaagaaaa | gccactgcgg | 3960 |
| aagcaaaagc | acttgccacg | cttgaagcaa | gcctgccgag | cgccgctgaa | gcgtctggag | 4020 |
| agctgatcga | cggcgctcgt | gtcctctgga | ctgctccagg | gcgtgccgcc | cgtgatgaga | 4080 |
| cggcttttcg | ccacgctttg | actgtgggat | accagttaa | agcggctggg | gagcgccata | 4140 |
| aagacaccaa | gggtcatcga | gcctacgagc | gtgcctacac | cgtcgctcag | gcggtcggag | 4200 |
| gaggccgtga | gcctgatctg | ccgccggact | gtgaccgcca | gacggattgg | ccgcgacgtg | 4260 |
| tgcgcggtta | cgtcgctaaa | ggccagccag | tcgtccctgc | tcgtcagaca | gagacgcaga | 4320 |
| gccagccgag | gcgaaaagct | ctggccacta | tgggaagacg | tggcggtaaa | aaggccgcag | 4380 |
| aacgctggaa | agacccaaac | agtgagtacg | cccagacaca | gcgagaaaaa | ctagctaagt | 4440 |
| ccagtcaacg | acaagctagg | aaagctaaag | gaaatcgctt | gaccattgca | ggttggttta | 4500 |
| tgactgttga | gggagagact | ggctcggtgc | cgacaatcaa | tgaagctatg | tctgaattta | 4560 |
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| ggacgccgaa | agcttcccag | taaatgtgcc | atctcgtagg | cagaaaacgg | ttccccgta | 4680 |
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| tttaaactct | gagaggcctg | acgtcgggcc | cgggtaccacg | cgtgagctgc | caattattcc | 5100 |
| gggcttgtga | cccgtaccc | gataaatagg | tcggctgaaa | aatttcggtg | caatatcaac | 5160 |
| aaaaaggcct | atcattggga | ggtgtcgcac | caagtacttt | tgcaagcgc | catctgacgg | 5220 |
| attttcaaaa | gatgtatatg | ctcggtgccg | aaacctacga | aaggattttt | tacccatgac | 5280 |

Sequence.txt

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| ctacggccgt | acaaaggcca | agatcgacgt | tcccgtcttg | cgggcggagc | gtgagggcgt | 5460 |
| caataaaaag | ggcaagctcg | tgctcgtgac | cgcaatgagc | ccgacccccg | cgggtgaagg | 5520 |
| caagtccacg | gtgctgatcg | gcttggcgga | cgcggtgcgc | acggcagggc | gccagacgat | 5580 |
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| cgcgatcaac | ccgaacctgg | tgagaccctt | gggcggcact | cccgccctgg | tgacggcgcg | 6120 |
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| catccgttcg | ctgaagcaca | acggcgattc | cgtgttgaag | gccggtcttg | ccaacctgga | 6360 |
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| tgcggtgctg | gaggtcgttg | atggtgtttc | tgataggagc | gcctccagct | ccagccacca | 6600 |
| gatctatcag | cccgtcgatg | gcgtggaagc | caccctgcac | acacttgcca | cggaaatcta | 6660 |
| cggcgcgggc | gatgtgcagt | tcggccccga | ggctctgaag | gacctggcgt | ttctgaagga | 6720 |
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| ctaat | | | | | | 6965 |

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 <212> DNA
 <213> artificial

 <220>
 <223> Plasmid pH657

Sequence.txt

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gaaaggattt tttaacctg actaactctt ctgcaaccag caatcccca cccagcgacg 240
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gtcagctact gggctatctg gacaaggga aacgcaagc caaagagaaa gcaggtagct 2040

```

Sequence.txt

| | | | | | | |
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| gaattgccag | ctggggcgcc | ctctggttaag | gttgggaagc | cctgcaaagt | aaactggatg | 2160 |
| gctttcttgc | cgccaaggat | ctgatggcgc | aggggatcaa | gatctgatca | agagacagga | 2220 |
| tgaggatcgt | ttcgcacatg | tgaacaagat | ggattgcacg | caggttctcc | ggccgcttgg | 2280 |
| gtggagaggc | tattcggcta | tgactgggca | caacagacaa | tcggctgctc | tgatgccgcc | 2340 |
| gtgttccggc | tgctagcgca | ggggcgcccc | gttctttttg | tcaagaccga | cctgtccggt | 2400 |
| gccctgaatg | aactgcagga | cgaggcagcg | cggctatcgt | ggctggccac | gacgggcggt | 2460 |
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| gaagtgccgg | ggcaggatct | cctgtcatct | caccttgctc | ctgccgagaa | agtatccatc | 2580 |
| atggctgatg | caatgcggcg | gctgcatacg | cttgatccgg | ctacctgccc | attcgaccac | 2640 |
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| gcgcgcatgc | ccgacggcga | ggatctcgtc | gtgacctatg | gcgatgcctg | cttgccgaat | 2820 |
| atcatggtgg | aaaatggccg | cttttctgga | ttcatcgact | gtggccggct | gggtgtggcg | 2880 |
| gaccgctatc | aggacatagc | gttggctacc | cgtgatattg | ctgaagagct | tggcggcgaa | 2940 |
| tgggctgacc | gcttcctcgt | gctttacggg | atcgccgctc | ccgattcgca | gcgcacgcgc | 3000 |
| ttctatcgcc | ttcttgacga | gttcttctga | gcgggactct | ggggttcgaa | atgaccgacc | 3060 |
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| agatgcgtaa | ggagaaaata | ccgcatcagg | cgctcttccg | cttcctcgct | cactgactcg | 3300 |
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Sequence.txt

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| acctagatcc | ttttaaaggc | cgccgcggc | cgccatcggc | atcttctttt | gcgtttttat | 4200 |
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Sequence.txt

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6132

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<213> artificial

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cagtgtagaa taaacggatt tttccgtcag atgtaaagt ggctgaacct gaccattctt 1380
gtgtttggtc ttttaggata gaatcatttg catcgaattt gtcgctgtct ttaaagacgc 1440
ggccagcgtt tttccagctg tcaatagaag tttcgccgac tttttgatag aacatgtaaa 1500
tcgatgtgtc atccgcattt ttaggatctc cggctaattg aaagacgatg tggtagccgt 1560
gatagtttgc gacagtgccg tcagcgtttt gtaatggcca gctgtcccaa acgtccaggc 1620
cttttgaga agagatattt ttaattgtgg acgaatcaaa ttcagaaact tgatattttt 1680

Sequence.txt

| | | | | | | |
|-------------|-------------|------------|-------------|-------------|-------------|------|
| catttttttg | ctgttcaggg | atttgcagca | tatcatggcg | tgtaatatgg | gaaatgccgt | 1740 |
| atgtttcctt | atatggcttt | tggttcgttt | ctttcgcaaa | cgcttgagtt | gcgcctcctg | 1800 |
| ccagcagtgc | ggtagtaaag | gttaatactg | ttgcttggtt | tgcaaacctt | ttgatgttca | 1860 |
| tcgttcatgt | ctcctttttt | atgtactgtg | ttagcggctc | gcttcttcca | gccctcctgt | 1920 |
| ttgaagatgg | caagttagtt | acgcacaata | aaaaaagacc | taaaatatgt | aaggggtgac | 1980 |
| gccaaagtat | acactttgcc | ctttacacat | tttaggtctt | gcctgcttta | tcagtaacaa | 2040 |
| acccgcgcga | tttacttttc | gacctcattc | tattagactc | tcgtttggat | tgcaactggt | 2100 |
| ctattttcct | cttttgtttg | atagaaaatc | ataaaaggat | ttgcagacta | cgggcctaaa | 2160 |
| gaactaaaaa | atctatctgt | ttcttttcat | tctctgtatt | ttttatagtt | tctgttgcac | 2220 |
| gggcataaag | ttgccttttt | aatcacaatt | cagaaaatat | cataatatct | catttcacta | 2280 |
| aataatagtg | aacggcaggt | atatgtgatg | ggttaaaaag | gatcggcggc | cgctcgattt | 2340 |
| aaatctcgag | aggcctgacg | tcgggcccgg | taccacgcgt | aacgcattca | ctgcagtcac | 2400 |
| aattgcttca | tactcaciaa | cagctgtttc | gaggatgaat | ttcagcacca | caggagatgg | 2460 |
| aacagcctcc | ctgattgccca | caatttcctg | cagcaacctc | ttggcatctc | cctctttcac | 2520 |
| taccgcaata | tccaaaacaa | catctacttc | ggaagctccg | gactgtacgg | caaggcgcgc | 2580 |
| ttcggcggct | ttcaccaacg | cgggggtttt | gccgtgcggg | aatcctgcga | cgggtggccac | 2640 |
| tcgaattcca | gcttcttggg | cttttgagct | taggttgacc | atgctgttgg | ggacacagat | 2700 |
| cgtgccgact | cccagctcaa | ttgcggaatc | tataaatgcg | gccagttcgg | agttggttac | 2760 |
| ttctgggtccg | aggaggggtg | agtcaaggat | ttggggccatg | gtggagcggg | aaatcgtcat | 2820 |
| atccataccc | tacttagacc | tgacttagtg | tgggaaaatt | tccagggtag | aatgcaacga | 2880 |
| ggctttttgc | ttttcgacgc | gaccctaaac | aaatgagacc | tacccgaggg | taggtctcat | 2940 |
| ttgtttttgtg | tttagtctgt | ggtgggtttc | cgtagttttt | cttgcttaat | aaacagcaag | 3000 |
| agaagcagcg | cgatgccgat | cagtggcatc | atcacgtaga | acactgggat | gagtgcgtcg | 3060 |
| ttgtaggaac | cggcgaacgc | atcgtggagc | gcggttggca | attgattgac | gattgccggc | 3120 |
| gtcaattcgt | tggagtccag | tccgccttgg | gctgccatgg | cggcttgttc | ttctggtgaa | 3180 |
| agttgtgcca | tggctgctgg | cattctttct | tccatgaggg | ttcccaagtt | gccaacgaac | 3240 |
| atgccaccga | ccagcgcgga | tccgagttag | gaaccgattt | gacggaagaa | gttgttcaca | 3300 |
| gcggttgccg | atccgaccac | cgcggttggc | aggggtgttct | gaacgatcag | gaccagaacc | 3360 |
| tgcatggcta | gaccgtcgac | atcgatgctc | ttctgcgtta | attaacaatt | gggatcctct | 3420 |
| agaccgggga | tttaaactcg | tagcgggctg | ctaaaggaag | cggaaacacgt | agaaagccag | 3480 |
| tccgcagaaa | cgggtgctgac | cccggatgaa | tgtcagctac | tgggctatct | ggacaaggga | 3540 |
| aaacgcaagc | gcaaagagaa | agcaggtagc | ttgcagtggg | cttacatggc | gatagctaga | 3600 |
| ctgggcgggt | ttatggacag | caagcgaacc | ggaattgccca | gctggggcgc | cctctggtaa | 3660 |
| ggttggaag | ccctgcaaag | taaactggat | ggctttcttg | ccgccaagga | tctgatggcg | 3720 |

Sequence.txt

| | |
|--|------|
| caggggatca agatctgatac aagagacagg atgaggatcg tttcgcatga ttgaacaaga | 3780 |
| tggattgcac gcaggttctc cggccgcttg ggtggagagg ctattcggct atgactgggc | 3840 |
| acaacagaca atcggctgct ctgatgccgc cgtgttccgg ctgtcagcgc aggggcgccc | 3900 |
| ggttcttttt gtcaagaccg acctgtccgg tgccctgaat gaactgcagg acgaggcagc | 3960 |
| gcggctatcg tggctggcca cgacgggctg tccttgcgca gctgtgctcg acgttgcac | 4020 |
| tgaagcggga agggactggc tgctattggg cgaagtgccg gggcaggatc tcctgtcatc | 4080 |
| tcacctgct cctgccgaga aagtatccat catggctgat gcaatgcggc ggctgcatac | 4140 |
| gcttgatccg gctacctgcc cattcgacca ccaagcgaac catcgcatcg agcgagcacg | 4200 |
| tactcggatg gaagccggctc ttgtcgatca ggatgatctg gacgaagagc atcaggggct | 4260 |
| cgcgccagcc gaactgttcg ccaggctcaa ggcgcgcatg cccgacggcg aggatctcgt | 4320 |
| cgtgacctat ggcgatgcct gcttgccgaa tatcatggtg gaaaatggcc gcttttctgg | 4380 |
| attcatcgac tgtggccggc tgggtgtggc ggaccgctat caggacatag cgttggctac | 4440 |
| ccgtgatatt gctgaagagc ttggcggcga atgggctgac cgcttcctcg tgctttacgg | 4500 |
| tatcgccgct cccgattcgc agcgcatcgc cttctatcgc cttcttgacg agttcttctg | 4560 |
| agcgggactc tggggttcga aatgaccgac caagcgacgc ccaacctgcc atcacgagat | 4620 |
| ttcgattcca ccgccgcctt ctatgaaagg ttgggcttcg gaatcgtttt ccgggacgcc | 4680 |
| ggctggatga tcctccagcg cggggatctc atgctggagt tcttcgcca cgctagcggc | 4740 |
| gcgccggccg gcccggtgtg aaataccgca cagatgcgta aggagaaaat accgcatcag | 4800 |
| gcgctcttcc gcttcctcgc tcaactgactc gctgcgctcg gtcgttcggc tgcggcgagc | 4860 |
| ggtatcagct cactcaaagg cgtaatacag gttatccaca gaatcagggg ataacgcagg | 4920 |
| aaagaacatg tgagcaaaag gccagcaaaa ggccaggaac cgtaaaaagg ccgcgttgct | 4980 |
| ggcgtttttc cataggctcc gccccctga cgagcatcac aaaaatcgac gctcaagtca | 5040 |
| gaggtggcga aaccgcacag gactataaag ataccaggcg tttccccctg gaagctccct | 5100 |
| cgtgcgctct cctgtttccga cctgcccgt taccggatac ctgtccgcct ttctcccttc | 5160 |
| gggaagcgtg gcgctttctc atagctcacg ctgtaggtat ctcagttcgg ttaggtcgt | 5220 |
| tcgctccaag ctgggctgtg tgcacgaacc cccggttcag cccgaccgct gcgccttatc | 5280 |
| cggttaact | 5288 |

<210> 51
 <211> 1689
 <212> DNA
 <213> Corynebacterium jeikeium

| | |
|---|-----|
| <400> 51 | |
| atgactaact cttctgcaac cagcaatccc caaccagcg acgtcgaaat cgcacaggcc | 60 |
| cactccctgg agcccatcac cacgatcgcg gagcgcgccg gcatccccga ggccgctttg | 120 |
| attccctacg gccgcacaaa ggccaagatc gacgttcccc ctctgcgggc ggagcgtgag | 180 |

Sequence.txt

| | |
|--|------|
| ggcgtcaata gaaagggcaa gctcgtgctc gtgaccgcaa tgagcccgac ccccgcggggt | 240 |
| gaaggcaagt ccacgggtgct gatcggcttg gcgacgcgg tgcgacggc agggcgccag | 300 |
| acgatggtgg cgatccgca gccgtcccag gggccgggtca tgggcatcaa gggcggcgct | 360 |
| gctggcggcg gttatgcgca gatcgtgccg atggaagaca ttaacctgca cttcacaggc | 420 |
| gacatgcacg ccatcaccgc cgcgacgaac actctggcgg cgatggtgga caaccacgtg | 480 |
| cagcacggca atgctctggg catcgacccg cggcgggtga cgtggcggcg ctgcctggac | 540 |
| gtcaacgacc gctcgtgcg ccattgtggtc acaggcctag gcggccctgg tcagggcacg | 600 |
| ccccgcgagg gcggattcga tatcacggcg gccagcgaga tcatggctat cctctgtctg | 660 |
| gccaccgacc tggaagatct aaagaagcgc atcgggcgca tcgtggtggg ccaaacttat | 720 |
| gatcgcaagc cagtcaccgc gggcgacctg aagtgcgcgg gcgctatcac cgccctgctg | 780 |
| cgcgatgcga tcaaccgaa cctagtgcag accctgggtg gcacccccgc actggtgcac | 840 |
| ggtgggcctt tcgccaacat cgcgcacgga tgcaactcgc tgatcgcaac caccacggcg | 900 |
| ctggacctgt cggaggttgt gctgaccgag gccggcttcg gcagcgacct gggtgcgag | 960 |
| aagttcttcg acatcaagtc ccgcgccgtt ggcctcgacg tcgccgcaac ggtcgtggtg | 1020 |
| gccaccatcc gctcgctaaa gcacaacggc gattccgtac taaaggccgg tttggccaac | 1080 |
| ctggagcgcc acgtcagcaa cattcgcaag ttcggcgtgg aaccctggtt cgcgctaaac | 1140 |
| ctgtttaact ctgacaccgc caccgagcgc gctcaggctc cgcactgggg cgagcagttc | 1200 |
| ggcgtcccg tggtggagtg caacgtgtgg gccgagggcg gtgccggcg gaccgatctg | 1260 |
| gcctctgcgg tgctggaggt cgttgatggt gtttctgatg aggacgcccc cagctccagc | 1320 |
| caccgatct atcagccgtt cgatggtgtg gaagccacct tgcgcacact tgccacggag | 1380 |
| atctacggcg cggcggacgt acagttcggc ccgcaggctc tgaaggacct ggcgtttctg | 1440 |
| aaggataacg gctgggacaa gctgccggtg tgctgtcga agacgcagta ctccttcagc | 1500 |
| gatgacccta gcgcgctggg cgcgccaagc ggccacacc tgacgtccg cgagctggtg | 1560 |
| ccacgtatcg gtgccggatt cgtggtggca ctaccggcg atgtgatgac tctgccgggc | 1620 |
| ctgccgaaga aaccgcggc cgagcgcat gatgtgaacg cgaggggggt tatctcgggg | 1680 |
| ctgttctaa | 1689 |

<210> 52
 <211> 562
 <212> PRT
 <213> Corynebacterium jeikeium

<400> 52

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Asn | Ser | Ser | Ala | Thr | Ser | Asn | Pro | Gln | Pro | Ser | Asp | Val | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Gln | Ala | His | Ser | Leu | Glu | Pro | Ile | Thr | Thr | Ile | Ala | Glu | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |

Sequence.txt

Ala Gly Ile Pro Glu Ala Ala Leu Ile Pro Tyr Gly Arg Thr Lys Ala
35 40 45

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

Lys Gly Lys Leu Val Leu Val Thr Ala Met Ser Pro Thr Pro Ala Gly
65 70 75 80

Glu Gly Lys Ser Thr Val Leu Ile Gly Leu Ala Asp Ala Val Arg Thr
85 90 95

Ala Gly Arg Gln Thr Met Val Ala Ile Arg Glu Pro Ser Gln Gly Pro
100 105 110

Val Met Gly Ile Lys Gly Gly Ala Ala Gly Gly Gly Tyr Ala Gln Ile
115 120 125

Val Pro Met Glu Asp Ile Asn Leu His Phe Thr Gly Asp Met His Ala
130 135 140

Ile Thr Ala Ala Thr Asn Thr Leu Ala Ala Met Val Asp Asn His Val
145 150 155 160

Gln His Gly Asn Ala Leu Gly Ile Asp Pro Arg Arg Val Thr Trp Arg
165 170 175

Arg Cys Leu Asp Val Asn Asp Arg Ser Leu Arg His Val Val Thr Gly
180 185 190

Leu Gly Gly Pro Gly Gln Gly Thr Pro Arg Glu Gly Gly Phe Asp Ile
195 200 205

Thr Ala Ala Ser Glu Ile Met Ala Ile Leu Cys Leu Ala Thr Asp Leu
210 215 220

Glu Asp Leu Lys Lys Arg Ile Gly Arg Ile Val Val Gly Gln Thr Tyr
225 230 235 240

Asp Arg Lys Pro Val Thr Ala Gly Asp Leu Lys Cys Ala Gly Ala Ile
245 250 255

Thr Ala Leu Leu Arg Asp Ala Ile Asn Pro Asn Leu Val Gln Thr Leu
260 265 270

Gly Gly Thr Pro Ala Leu Val His Gly Gly Pro Phe Ala Asn Ile Ala
275 280 285

His Gly Cys Asn Ser Leu Ile Ala Thr Thr Thr Ala Leu Asp Leu Ser
290 295 300

Sequence.txt

Glu Val Val Leu Thr Glu Ala Gly Phe Gly Ser Asp Leu Gly Ala Glu
 305 310 315 320
 Lys Phe Phe Asp Ile Lys Ser Arg Ala Gly Gly Leu Asp Val Ala Ala
 325 330 335
 Thr Val Val Val Ala Thr Ile Arg Ser Leu Lys His Asn Gly Asp Ser
 340 345 350
 Val Leu Lys Ala Gly Leu Ala Asn Leu Glu Arg His Val Ser Asn Ile
 355 360 365
 Arg Lys Phe Gly Val Glu Pro Val Val Ala Leu Asn Leu Phe Asn Ser
 370 375 380
 Asp Thr Ala Thr Glu Arg Ala Gln Val Ala Asp Trp Gly Glu Gln Phe
 385 390 395 400
 Gly Val Arg Val Val Glu Cys Asn Val Trp Ala Glu Gly Gly Ala Gly
 405 410 415
 Ala Thr Asp Leu Ala Ser Ala Val Leu Glu Val Val Asp Gly Val Ser
 420 425 430
 Asp Glu Asp Ala Pro Ser Ser Ser His Gln Ile Tyr Gln Pro Val Asp
 435 440 445
 Gly Val Glu Ala Thr Leu Arg Thr Leu Ala Thr Glu Ile Tyr Gly Ala
 450 455 460
 Ala Asp Val Gln Phe Gly Pro Gln Ala Leu Lys Asp Leu Ala Phe Leu
 465 470 475 480
 Lys Asp Asn Gly Trp Asp Lys Leu Pro Val Cys Val Ser Lys Thr Gln
 485 490 495
 Tyr Ser Phe Ser Asp Asp Pro Ser Ala Leu Gly Ala Pro Ser Gly His
 500 505 510
 Thr Leu His Val Arg Glu Leu Val Pro Arg Ile Gly Ala Gly Phe Val
 515 520 525
 Val Ala Leu Thr Gly Asp Val Met Thr Leu Pro Gly Leu Pro Lys Lys
 530 535 540
 Pro Ala Ala Glu Arg Ile Asp Val Asn Ala Gln Gly Val Ile Ser Gly
 545 550 555 560
 Leu Phe