



LOCUS Exported 12445 bp ds-DNA circular SYN 06-
 NOV-2020
 DEFINITION synthetic circular DNA.
 ACCESSION .
 VERSION .
 KEYWORDS pACT-All-EFS-Puromycin
 SOURCE synthetic DNA construct
 ORGANISM synthetic DNA construct
 REFERENCE 1 (bases 1 to 12445)
 AUTHORS Transomic
 TITLE Direct Submission
 JOURNAL Exported Friday, Nov 6, 2020 from SnapGene 5.2.1
<https://www.snapgene.com>
 FEATURES Location/Qualifiers
 source 1..12445
 /organism="synthetic DNA construct"
 /mol_type="other DNA"
 misc_feature 23..667
 /label=CMV-LTR

```

misc_feature      720..745
                  /label=psi
misc_feature      746..840
                  /label=HIV-1 Psi
                  /note="packaging signal of human immunodeficiency
virustype
                  1"
misc_feature      1333..1566
                  /label=RRE
                  /note="The Rev response element (RRE) of HIV-1
allows for
                  Rev-dependent mRNA export from the nucleus to the
                  cytoplasm."
misc_feature      2093..2210
                  /label=cPPT/CTS
                  /note="central polypurine tract and central
                  terminationsequence of HIV-1"
promoter          2261..2501
                  /label=U6 Promoter
                  /note="RNA polymerase III promoter for human U6
snRNA"
gap              2511..2530
                  /estimated_length=20
misc_RNA          2531..2606
                  /label=Original TracrRNA
                  /note="guide RNA scaffold for the CRISPR/Cas9
system"
misc_feature      2648..2880
                  /label=EFS promoter
misc_feature      2888..8683
                  /label=dCas9_VPR
CDS              2888..6991
                  /codon_start=1
                  /product="catalytically dead mutant of the
Cas9endonuclease
                  from the Streptococcus pyogenes Type II CRISPR/Cas
system"
                  /label=Cas9m4
                  /note="RNA-guided DNA-binding protein that
                  lacksendonuclease activity due to the mutations
D10A,
                  D839A, H840A, and N863A (Mali et al., 2013)"
/translation="MDKKYSIGLAIGTNSVGWAVITDEYKVPSKKFKVLGNTDRHSIKK
NLIGALLFDSGETAEATRLKRTARRRYTRRKNRICYLQEIFSNEMAKVDDSEFFHRLEES
FLVEEDKKHERHPIFGNIVDEVAYHEKYPTIYHLRKKLVDSTDKADLRLIYLALAHMIK
FRGHFLIEGDLNPDNSVDKLFIQLVQTYNQLFEEENPINASGVDAKAILSARLSKSRRL
ENLIAQLPGEKKNGLFGNLIASLGLTPNFKSNFDLAEDAKLQLSKDTYDDDLNLLAQ
IGDQYADLFLAAKNLSDAILLSDILRVNTEITKAPLSASMIKRYDEHHQDLTLLKALVR

```

```
QQLPKEYKEIFFDQSKNGYAGYIDGGASQEEFYKFIKPILEKMDGTEELLVKLNREDLL
RKQRTFDNGSIPHQIHLGELHAILRRQEDFYFPFLKDNREKIEKILTFRIPYYVGPLARG
NSRFAWMTRKSEETITPWNFEEVVDKGASAQSFIERMTNFDKNLPNEKVLPKHSLLY EY
FTVYNELTKVKYVTEGMRKPAFLSGEQKKAIVDLLFKTNRKVTVKQLKEDYFKKIECFD
SVEISGVEDRFNASLGTYHDLKIIKDKDFLDNEENEDILEDIVLTLTLFEDREMIEER
LKTYAHLFDDKVMKQLKRRRYTGWGRLSRKLINGIRDKQSGKTILDFLKSDGFANRNF M
QLIHDDSLTFKEDIQKAQVSGQGDSLHEHIANLAGSPAIKKGI LQTVKVVDELVKVMGR
HKPENIVIAMARENQTTQKGQKNSRERMKRIEEGIKELGSQILKEHPVENTQLQNEKLY
LYYLQNGRDMYVDQELDINRLSDYDVA AIVPQSFLKDDSIDNKVLTRSDKARGKSDNVP
SEEVVKMKMKNYWRQLLNAKLITQRKFDNLTKAERGGLSELDKAGFIKRQLVETRQITKH
VAQILDSRMNTKYDENDKLIREVKVITLKS KLVSDFRKDFQFYK VREINNYHHAHDAYL
NAVVG TALIKKYPKLESEFVYGDYKVYDVRKMI AKSEQEIGKATAKYFFYSNIMNFFKT
EITLANGEIRKRPLIETNGETGEIVWDKGRDFATVRKVL SMPQVNI VKKTEVQTGGFSK
ESILPKRNSDKLIARKKDWDPKKYGGFDSPTVAYSVLVVAKVEKGKSKKLKSVKELLGI
TIMERSSEKNPIDFLEAKGYKEVKKDLI IKLPKYSLFELENGRKRMLASAGELQKGNE
LALPSKYVNFLYLASHYEKLGSPEDNEQKQLFVEQH KHYLDEIIEQISEFSKR VILAD
ANLDKVL SAYNKHRDKPIREQAENI IHLFTLTNLGAPAAFKYFDTTIDRKRYTSTKEVL
          DATLIHQSI TGLYETRIDLSQLGGD"
CDS          7004..7024
          /codon_start=1
          /product="nuclear localization signal of SV40
(simian
          virus40) large T antigen"
          /label=SV40 NLS
          /translation="PKKKRKV"
CDS          7115..7264
          /codon_start=1
          /product="tetrameric repeat of the minimal
activationdomain
          of herpes simplex virus VP16 (Beerli et al., 1998)"
          /label=VP64
/transla tion="DALDDFDL DMLGSDALDDFDL DMLGSDALDDFDL DMLGSDALDDF
          DL DML"
CDS          7289..7309
          /codon_start=1
```

```

                /product="nuclear localization signal of SV40
(simian
                virus40) large T antigen"
                /label=SV40 NLS
                /translation="PKKKRKV"
                CDS
                7739..8095
                /codon_start=1
                /product="transcriptional activation domain of human
                RelA,also known as p65 (O'Shea and Perkins, 2008)"
                /label=RelA (p65) AD

/translation="PTQAGEGTLSEALLQLQFDEEDLGALLGNSTDPVFTDLASVDNS
EFQQLLNQGI PVAPHTTEPMLMEYPEAITRLVTGAQRPPDPAPAPLGAPGLPNGLLSD
                EDFSSIADMDFSALL"
                CDS
                8114..8683
                /codon_start=1
                /product="transcriptional activation domain from the
human
                herpesvirus 4 (Epstein-Barr virus) replication and
                transcription activator Rta/BRLF1 (Hardwick et al.,
1992;
                Chavez et al., 2015)"
                /label=Rta AD

/translation="RDSREGMFLPKPEAGSAISDVFE GREVCQPKRIRPFHPPGSPWAN
RPLPASLAPTPTGPVHEPVGSLTPAPVPQPLDPAPAVTPEASHLLEDPEETSQAVKAL
REMADTVIPQKEEAAICGQMDLSHPPRGLHDELTTTLESMTEDLNLDSP LPELNEIL
                DTFLNDECLLHAMHISTGLSIFDTSLF"
                CDS
                8693..8749
                /codon_start=1
                /product="2A peptide from porcine teschovirus-
1polyprotein"
                /label=P2A
                /note="Eukaryotic ribosomes fail to insert a peptide
bond
                between the Gly and Pro residues, yielding separate
                polypeptides."
                /translation="ATNFSLLKQAGDVEENPGP"
                CDS
                8750..9346
                /codon_start=1
                /gene="pac from Streptomyces alboniger"
                /product="puromycin N-acetyltransferase"
                /label=PuroR
                /note="confers resistance to puromycin"

/translation="TEYKPTVRLATRDDVPRAVRTLAAAFADYPATRHTVDPDRHIERV
TELQELFLTRVGLDIGKVVWADDGAAVAVWTTPE SVEAGAVFAEIGPRMAELSGSRLAA
QQQMEGLLAPHRPKEPAWFLATVGVSPDHQKGLGSAVVLP GVEAAERAGVPAFLE TSA
                PRNLPFYERLGFTVTADVEVPEGPRTWCMTRKPGA"

```

```

misc_feature      9362..9950
                  /label=WPRE
                  /note="woodchuck hepatitis virus
                  posttranscriptionalregulatory element"
LTR              10022..10255
                  /label=3' LTR (Delta-U3)
                  /note="self-inactivating 3' long terminal repeat
(LTR) from
                  HIV-1"
promoter         10276..10605
                  /label=SV40
                  /note="SV40 enhancer and early promoter"
rep_origin       complement(10694..11279)
                  /direction=LEFT
                  /label=ori
                  /note="high-copy-number Cole1/pMB1/pBR322/pUC origin
of
                  replication"
CDS              complement(11450..12310)
                  /codon_start=1
                  /gene="bla"
                  /product="beta-lactamase"
                  /label=AmpR
                  /note="confers resistance to ampicillin,
carbenicillin, and
                  related antibiotics"

/translation="MSIQHFRVALIPFFAAFLPVFQHPETLVKVKDAEDQLGARVGYI
ELDLSNGKILESFRPEERFPMMSSTFKVLLCGAVLSRIDAGQEQLGRRIHYSQNDLVEYS
PVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTIGGPKELTAFLHNMGDHSVTRLDRW
EPELNEAIPNDERDITMPVAMATTLRKLTLGELLTLASRQQLIDWMEADKVAGPLLRSA
LPAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIYTTGSQATMDERNRQIAEIGAS
LIKHW"
promoter         complement(12311..12415)
                  /gene="bla"
                  /label=AmpR promoter
ORIGIN
      1 gacggatcgg gagatcctcg cgcggtgaca ttgattattg actagttatt
aatagtaatc
      61 aattacgggg tcattagttc atagcccata tatggagttc cgcggtacat
aacttacggt
      121 aaatggcccg cctggctgac cgcccaacga cccccgcca ttgacgtcaa
taatgacgta
      181 tgttcccata gtaacgcaa tagggacttt ccattgacgt caatgggtgg
agtatttacg
      241 gtaaactgcc cacttggcag tacatcaagt gtatcatatg ccaagtacgc
cccctattga
      301 cgtcaatgac ggtaaattggc cgcctggca ttatgccag tacatgacct
tatgggactt

```

361 tctacttgg cagtacatct acgtattagt catcgctatt accagctagc
gaggcgtggc
421 ctgggcgga ctggggagtg gcgagccctc agatcctgca tataagcagc
tgctttttgc
481 ctgtactggg tctctctggg tagaccagat ctgagcctgg gagctctctg
gctaactagg
541 gaaccactg cttaacgctc aataaagctt gccttgagtg cttcaagtag
tgtgtgcccg
601 tctgttgtgt gactctggta actagagatc cctcagacc ttttagtcag
tgtggaaaat
661 ctctagcagt ggcgccgaa cagggacttg aaagcgaaag ggaaaccaga
ggagctctct
721 cgacgcagga ctcggttgc tgaagcgcgc acggcaagag gcgaggggcg
gcgactgggtg
781 agtacccaa aaattttgac tagcggaggc tagaaggaga gagatgggtg
cgagagcgtc
841 agtattaagc gggggagaat tagatcgca tgggaaaaaa ttcggttaag
gccaggggga
901 aagaaaaaat ataaattaa acatatagta tgggcaagca gggagctaga
acgattcgca
961 gttaatcctg gcctgttaga aacatcagaa ggctgtagac aaatactggg
acagctacaa
1021 ccatcccttc agacaggatc agaagaactt agatcattat ataatacagt
agcaaccctc
1081 tattgtgtgc atcaaaggat agagataaaa gacaccaagg aagctttaga
caagatagag
1141 gaagagcaaa acaaaagtaa gaccaccgca cagcaagcgg ccgctgatct
tcagacctgg
1201 aggaggagat atgagggaca attggagaag tgaattatat aaatataaag
tagtaaaaat
1261 tgaaccatta ggagtagcac ccaccaaggc aaagagaaga gtggtgcaga
gagaaaaaag
1321 agcagtggga ataggagctt tgttccttgg gttcttggga gcagcaggaa
gcactatggg
1381 cgcagcgtca atgacgctga cggtagcagg cagacaatta ttgtctggta
tagtgcagca
1441 gcagaacaat ttgctgaggg ctattgaggc gcaacagcat ctggtgcaac
tcacagtctg
1501 gggcatcaag cagctccagg caagaatcct ggctgtggaa agatacctaa
aggatcaaca
1561 gtccttggg atttggggtt gctctggaaa actcatttgc accactgctg
tgccttggaa
1621 tgctagttag agtaataaat ctctggaaca gatttggaa cacacgacct
ggatggagtg
1681 ggacagagaa attaacaatt acacaagctt aatacactcc ttaattgaag
aatcgcaaaa
1741 ccagcaagaa aagaatgaac aagaattatt ggaattagat aaatgggcaa
gtttgtggaa
1801 ttggtttaac ataacaatt ggctgtggta tataaaatta ttcataatga
tagtaggagg
1861 cttggtaggt ttaagaatag tttttgctgt actttctata gtgaatagag
ttaggcaggg
1921 atattcacca ttatcgtttc agaccacct cccaaccccg aggggacccg
acaggcccga

1981 aggaatagaa gaagaaggtg gagagagaga cagagacaga tccattcgat
tagtgaacgg
2041 atcggcactg cgtgcgccaa ttctgcagac aaatggcagt attcatccac
aattttaaaa
2101 gaaaaggggg gattgggggg tacagtgcag gggaaagaat agtagacata
atagcaacag
2161 acatacaaac taaagaatta caaaaacaaa ttacaaaaat tcaaaatfff
cgggtttatt
2221 acagggacag cagagatcca gtttggttaa ttaaggtacc gagggcctat
ttcccatgat
2281 tccttcatat ttgcatatac gatacaaggc tgtagagagag ataattagaa
ttaattgac
2341 tgtaaacaca aagatattag tacaaaatac gtgacgtaga aagtaataat
ttcttgggta
2401 gtttgcagtt ttaaaattat gttttaaaat ggactatcat atgcttaccg
taacttgaaa
2461 gtatttcgat ttcttggctt tatatatctt gtggaaagga cgaaacaccg
nnnnnnnnnn
2521 nnnnnnnnnn gttttagagc tagaaatagc aagttaaaat aaggctagtc
cgttatcaac
2581 ttgaaaaagt ggcaccgagt cgggtgctttt ttgaattcgc tagctaggtc
ttgaaaggag
2641 tgggaattgg ctccggtgcc cgtcagtggg cagagcgcac atcgcccaca
gtccccgaga
2701 agttgggggg aggggtcggc aattgatccg gtgcctagag aagggtggcg
ggggtaaact
2761 gggaaagtga tgtcgtgtac tggctccgcc tttttcccga ggggtggggga
gaaccgtata
2821 taagtgcagt agtcgccgtg aacgttcttt ttcgcaacgg gtttgccgc
agaacacagg
2881 accggttatg gacaaaaaat acagcatcgg actggctatc ggaactaaca
gcgtgggggtg
2941 ggccgtgatt acagacgaat acaaagtgcc ttcaaagaag ttcaaggtgc
tgggcaacac
3001 cgacagacac tctatcaaga agaattctgat cggcgccctg ctgtttgata
gcggcgagac
3061 agcagaggca accaggctga agaggacagc ccggagaagg tatacccgcc
ggaagaatag
3121 gatctgctac ctgcaggaga tcttcagcaa cgagatggcc aagggtggacg
atagcttctt
3181 tcaccgcctg gaggagtctt tcctggtgga ggaggacaag aagcacgagc
ggcaccat
3241 ctttggcaac atcgtggatg aggtggccta tcacgagaag taccctacca
tctatcacct
3301 gaggaagaag ctggtggatt ccacagacaa ggccgatctg cgcctgatct
atctggccct
3361 ggcccacatg atcaagttcc gggggcactt tctgatcgag ggcgacctga
accctgataa
3421 tagcgatgtg gacaagctgt tcatccagct ggtgcagacc tacaatcagc
tgtttgagga
3481 gaaccaatc aatgcatccg gagtggacgc aaaggcaatc ctgtctgccc
gcctgtccaa
3541 atctagaagg ctggagaacc tgatcgccca gctgctggc gagaagaaga
acggcctggt

3601 cggcaatctg atcgccctga gcctgggcct gaccccaaac ttcaagtcca
atdddgacct
3661 ggccgaggat gccaaactgc agctgagcaa ggatacatat gacgatgacc
tggacaacct
3721 gctggcccag atcggcgacc agtacgccga tctgtttctg gccgccaaga
atctgtccga
3781 tgccatcctg ctgtctgaca tcctgagagt gaacacagag atcaccaagg
ccccactgag
3841 cgcctccatg atcaagagat atgatgagca ccaccaggac ctgacctgac
tgaaggccct
3901 ggtgaggcag cagctgcccg agaagtacaa ggagatcttc tttgaccagt
ccaagaatgg
3961 ctacgccggc tatatcgatg gcggcgctc tcaggaggag ttctacaagt
ttatcaagcc
4021 catcctggag aagatggacg gcaccgagga gctgctggtg aagctgaata
gggaggatct
4081 gctgcggaag cagagaacat tcgacaacgg cagcatcccc caccagatcc
acctgggaga
4141 gctgcacgca atcctgcgcc ggcaggagga tttctaccct tttctgaagg
acaaccggga
4201 gaagatcgag aagatcctga cctttagaat cccttactat gtgggcccac
tggccagggg
4261 caattctcgc ttcgcctgga tgacaagaaa gagcgaggag acaatcacc
cttgaactt
4321 tgaggagggtg gtggacaagg gagcaagcgc ccagtccttc atcgagagga
tgaccaattd
4381 tgataagaac ctgcctaatt agaaggtgct gccaaagcac tccctgctgt
acgagtattd
4441 cacagtgtat aacgagctga ccaaggtgaa gtacgtgaca gagggaatga
ggaagccagc
4501 cttcctgagc ggagagcaga agaaggccat cgtggacctg ctgtttaaga
caaatcgga
4561 ggtgaccgtg aagcagctga aggaggatta tttcaagaag atcgagtgtt
ttgacagcgt
4621 ggagatctcc ggcgtggagg atagattcaa cgcctccctg ggcacctacc
acgacctgct
4681 gaagatcatc aaggataagg actttctgga taacgaggag aatgaggaca
tcctggagga
4741 tategtgctg aactgacctc tgttcgagga ccgggagatg atcgaggaga
gactgaagac
4801 ctatgcccac ctgtttgatg acaaagtgat gaagcagctg aagagaaggc
gctacacagg
4861 atggggcagc ctgagccgca agctgatcaa tggcatccgc gataagcaga
gcggcaagac
4921 catcctggat ttctgaagt ccgacggctt cgccaaccgg aacttcatgc
agctgatcca
4981 cgatgactcc ctgaccttca aggaggacat ccagaaggca caggtgagcg
gacagggcga
5041 ttccctgcac gagcacatcg caaacctggc aggcagcccc gccatcaaga
agggcatcct
5101 gcagaccgtg aaggtggtgg acgagctggt gaaagtgatg ggcaggcaca
agcctgagaa
5161 catcgtgatc gagatggccc gcgagaatca gaccacacag aagggccaga
agaacagccg

5221 ggagagaatg aagcgcatcg aggagggcat caaggagctg ggctcccaga
tcctgaagga
5281 gcaccccggtg gagaacaccc agctgcagaa tgagaagctg tatctgtact
atctgcagaa
5341 tggccgggac atgtacgtgg atcaggagct ggacatcaac agactgagcg
attatgacgt
5401 ggccgccatc gtgcctcaga gcttcctgaa ggatgactcc atcgacaata
aggtgctgac
5461 ccggtccgat aaggccaggg gcaagtctga caacgtgcca agcgaggagg
tggatgaagaa
5521 gatgaagaac tactggcggc agctgctgaa tgccaagctg atcaccaga
ggaagtctga
5581 caatctgaca aaggcagaga ggggaggcct gtctgagctg gataaggccg
gctttatcaa
5641 gaggcagctg gtggagacac gccagatcac caagcacgtg gccagatcc
tggacagcag
5701 aatgaacacc aagtacgacg agaatgataa gctgatcagg gaggtgaaag
tgcaccct
5761 gaagtctaag ctggtgagcg atttccggaa ggacttccag tttataag
tgagagagat
5821 caacaactac caccacgccc acgacgcata cctgaacgca gtggtgggaa
ccgcctgat
5881 caagaagtac ccaagctgg agagcgagtt cgtgtacggc gattataag
tgtacgacgt
5941 gcggaagatg atcgccaagt ccgagcagga gatcggcaag gccacagcca
agtatttctt
6001 ttactctaac atcatgaatt tctttaagac agagatcacc ctggccaatg
gcgagatcag
6061 gaagcgcccc ctgatcgaga caaacggcga gacaggcgag atcgtgtggg
ataagggccg
6121 ggacttcgcc accgtgagaa aggtgctgtc catgccacaa gtgaatatcg
tgaagaagac
6181 agaggtgcag accggcggct tttctaagga gagcatcctg cccaagagga
actctgacaa
6241 gctgatcgcc cgcaagaagg attgggacct caagaagtat ggcggcttcg
attctcctac
6301 cgtggcctac agcgtgctgg tgggtggcaa ggtggagaag ggcaagtcca
agaagctgaa
6361 gtctgtgaag gagctgctgg gcatcacaat catggagaga agctccttcg
agaagaatcc
6421 catcgacttt ctggaggcca agggctataa ggaggtgaag aaggatctga
tcatcaagct
6481 gcctaagtac tctctgttcg agctggagaa cggaaggaag agaatgctgg
caagcgccgg
6541 agagctgcag aagggcaatg agctggccct gccatccaag tacgtgaact
ttctgtatct
6601 ggccctctcac tacgagaagc tgaagggcag ccccaggac aacgagcaga
agcagctggt
6661 cgtggagcag cacaagcact atctggatga gatcatcgag cagatctccg
agttttctaa
6721 gagagtgatc ctggccgatg ccaatctgga caaggtgctg tccgcctaca
acaagcacag
6781 ggacaagcct atccgcgagc aggccgagaa tatcatccac ctgttcacac
tgaccaacct

6841 gggagcacca gcagccttca agtatTTTTga taccacaatc gacaggaagc
ggtacacaag
6901 caccaaggag gtgctggacg ccacctgat ccaccagtcc atcacaggcc
tgtacgagac
6961 acgcatcgat ctgtcccagc tgggaggcga ttctagggca gacccaaga
agaagcggaa
7021 ggtgagccca ggcattccgga gactggacgc cctgatctct acaagcctgt
acaagaaggc
7081 cggctacaag gaggcatccg gatctggaag ggcagacgca ctggatgact
tcgatctgga
7141 catgctgggc tctgatgccc tggatgactt tgatctggat atgctgggaa
gcgacgcct
7201 ggacgatttt gatctggaca tgctgggatc cgacgctctg gacgatttgc
atctggatat
7261 gctgatcaat agcaggtcta gcggcagccc caagaagaag cggaaagtgg
gctcccagta
7321 tctgccagac accgatgacc ggcacagaat cgaggagaag aggaagcgc
catacagac
7381 attcaagtct atcatgaaga agagcccatt ttccggacca acagatcctc
ggccccctcc
7441 aaggcgcac gcagtgcct ctagatcctc tgccagcgtg cctaagccag
caccacagcc
7501 ttatccattc acaagctccc tgtctacat caactacgac gagttccca
ccatggtggt
7561 tcctagcga cagatctctc aggcaagcgc cctggcccca gccccctc
aggtgctgcc
7621 acaggcacca gcacctgcac cagcaccgc catggtgtcc gccctggcc
aggcccctgc
7681 cccagtgcc gtgctggccc ccggcccacc ccaggcagtg gcacctccag
cacctaagcc
7741 aaccaggca ggagaggga cactgtctga ggccctgctg cagctgcagt
ttgatgacga
7801 ggacctgggc gccctgctgg gaaatagcac cgatcctgcc gtgttcacag
atctggcctc
7861 cgtggacaac tctgagtttc agcagctgct gaatcagggc atcccagtgg
cccccacac
7921 cacagagccc atgctgatgg agtaccctga ggccatcaca cggctggtga
ccggagcaca
7981 gcggccccct gaccagcac ctgccccact gggcgcccct ggccctgcca
acggcctgct
8041 gagcggcgat gaggacttct ctagcatcgc cgatatggac tttagcgc
tgctgggaag
8101 cggatccggc tctcgggact ccagagagg catgttctc ccaaagcctg
aggcaggatc
8161 cgccatctct gacgtgttcg agggcagaga ggtgtgccag ccaaagcgg
tcagaccatt
8221 ccaccacca ggctctccct gggcaaacag gccactgcca gccagcctgg
cacctacacc
8281 aaccggacca gtgcacgagc cagtgggctc cctgaccca gcacctgtgc
cacagcccct
8341 ggaccctgca ccagcagtga caccagagg ctcccacctg ctggaggatc
ccgacgagga
8401 gacaagccag gcagtgaagg ccctgaggga gatggccgat acagtgatcc
cccagaagga

8461 ggaggccgcc atctgtggcc agatggacct gagccaccct ccaccaaggg
gacacctgga
8521 tgagctgacc acaaccctgg agtccatgac cgaggatctg aacctggact
ctcccctgac
8581 ccctgagctg aacgagatcc tggatacatt cctgaatgac gagtgcctgc
tgcacgctat
8641 gcacatttcc actgggctga gtatctttga cacttccctg ttcggatccg
gcgcaacaaa
8701 cttctctctg ctgaaacaag cgggagatgt cgaagagaat cctggaccga
ccgagtacaa
8761 gcccacgggtg cgcctcgcca cccgcgacga cgtccccagg gccgtacgca
ccctcgccgc
8821 cgcgttcgcc gactaccccg ccacgcgcca caccgtcgat ccggaccgcc
acatcgagcg
8881 ggtcaccgag ctgcaagaac tcttcctcac gcgcgtcggg ctcgacatcg
gcaaggtgtg
8941 ggtcgcggac gacggcgccg cgggtggcgg ctggaccacg ccggagagcg
tcgaagcggg
9001 ggcggtgttc gccgagatcg gcccgcgcat ggccgagttg agcggttccc
ggctggccgc
9061 gcagcaacag atggaaggcc tcctggcgcc gcaccggccc aaggagcccg
cgtggttctt
9121 ggccaccgtc ggagtctcgc ccgaccacca gggcaagggt ctgggcagcg
ccgtcgtgct
9181 ccccggagtg gaggcggccg agcgcgcccg ggtgcccgc ttcttgaga
ctccgcgcc
9241 ccgcaacctc cccttctacg agcggctcgg cttcaccgtc accgccgacg
tcgaggtgcc
9301 cgaaggaccg cgcacctggt gcatgaccgg caagcccggg gcctgaacgc
gttaagtcca
9361 caatcaacct ctggattaca aaatttgtga aagattgact ggtattctta
actatgttgc
9421 tccttttacg ctatgtggat acgctgcttt aatgcctttg tatcatgcta
ttgcttcccg
9481 tatggctttc attttctct ccttgtataa atcctggttg ctgtctcttt
atgaggagtt
9541 gtggcccgtt gtcaggcaac gtggcgtggt gtgcactgtg tttgctgacg
caacccccac
9601 tggttggggc attgccacca cctgtcagct cctttccggg actttcgctt
tcccctccc
9661 tattgccacg gcggaactca tcgccgctg ccttgcccgc tgctggacag
gggctcggct
9721 gttgggcact gacaattccg tgggtgtgtc ggggaaatca tcgtcctttc
cttggctgct
9781 cgccctgtgt gccacctgga ttctgcgcgg gacgtccttc tgctacgtcc
cttcggccct
9841 caatccagcg gaccttctt cccgcggcct gctgccggct ctgcggcctc
ttccgcgtct
9901 tcgccttcgc cctcagacga gtcggatctc cctttgggccc gcctccccgc
gtcgacttta
9961 agaccaatga cttacaaggc agctgtagat cttagccact ttttaaaga
aaagggggga
10021 ctggaagggc taattcactc ccaacgaaga caagatctgc tttttgcttg
tactgggtct

10081 ctctggttag accagatctg agcctgggag ctctctggct aactagggaa
cccactgctt
10141 aagcctcaat aaagcttgcc ttgagtgtt caagtagtgt gtgcccgtct
gttgtgtgac
10201 tctggtaact agagatccct cagacccttt tagtcagtgt ggaaaatctc
tagcagggcc
10261 cgtttaaact ggaatgtgtg tcagttaggg tgtggaaagt cccagggctc
cccagcaggc
10321 agaagtatgc aaagcatgca tctcaattag tcagcaacca ggtgtggaaa
gtccccaggc
10381 tccccagcag gcagaagtat gcaaagcatg catctcaatt agtcagcaac
catagtcccg
10441 cccctaactc cgcccatccc gccctaact ccgcccagtt ccgcccattc
tccgccccat
10501 ggctgactaa tttttttat ttatgcagag gccgaggccg cctctgcctc
tgagctattc
10561 cagaagtagt gaggaggctt ttttgaggc ctaggctttt gcaaaaagct
cccgggagct
10621 tgtatatcca ttacatgtga gcaaaaggcc agcaaaaggc caggaaccgt
aaaaggccg
10681 cgttgctggc gtttttccat aggctccgcc cccctgacga gcatcacaaa
aatcgacgct
10741 caagtcagag gtggcgaaac ccgacaggac tataaagata ccaggcgttt
cccctggaa
10801 gtcacctcgt gcgctctcct gttccgacct tgccgcttac cggatacctg
tccgcctttc
10861 tcccttcggg aagcgtggcg ctttctcata gctcacgctg taggtatctc
agttcgggtg
10921 aggtcgttcg ctccaagctg ggctgtgtgc acgaaccccc cgttcagccc
gaccgctgcg
10981 ctttatccgg taactatcgt cttgagtcca acccggttaag acacgactta
tcgccactgg
11041 cagcagccac tggtaacagg attagcagag cgaggatgt aggcggtgct
acagagttct
11101 tgaagtgggt gcctaactac ggctacacta gaagaacagt atttggtatc
tgcgctctgc
11161 tgaagccagt taccttcgga aaaagagttg gtagctcttg atccggcaaa
caaaccaccg
11221 ctggtagcgg tttttttggt tgcaagcagc agattacgcg cagaaaaaaaa
ggatctcaag
11281 aagatccttt gatcttttct acgggggtctg acgctcagtg gaacgaaaac
tcacgttaag
11341 ggattttggc catgagatta tcaaaaagga tcttcaccta gatcctttta
aattaaaaat
11401 gaagttttta atcaatctaa agtatatatg agtaaacttg gtctgacagt
taccatgct
11461 taatcagtga ggcacctatc tcagcgatct gtctatttgc ttcattccata
gttgectgac
11521 tccccgtcgt gtagataact acgatacggg agggcttacc atctggcccc
agtgctgcaa
11581 tgataccgcg agaccacgc tcaccggctc cagatttata agcaataaac
cagccagccg
11641 gaagggccga gcgcagaagt ggtcctgcaa ctttatccgc ctccatccag
tctattaatt

```
11701 gttgccggga agctagagta agtagttcgc cagttaatag tttgcgcaac
gttgttgcca
11761 ttgctacagg catcgtggtg tcacgctcgt cgtttggtat ggcttcattc
agctccggtt
11821 cccaacgatc aaggcgagtt acatgatccc ccatgttgtg caaaaaagcg
gtagctcct
11881 tcggtcctcc gatcgttgtc agaagtaagt tggccgcagt gttatcactc
atggttatgg
11941 cagcactgca taattctctt actgtcatgc catccgtaag atgcttttct
gtgactggtg
12001 agtactcaac caagtcattc tgagaatagt gtatgcggcg accgagttgc
tcttgcccgg
12061 cgtcaatagc ggataatacc gcgccacata gcagaacttt aaaagtgctc
atcattggaa
12121 aacgttcttc ggggcgaaaa ctctcaagga tcttaccgct gttgagatcc
agttcgatgt
12181 aaccactcgc tgcacccaac tgatcttcag catcttttac tttcaccagc
gtttctgggt
12241 gagcaaaaac aggaaggcaa aatgccgcaa aaaagggaat aagggcgaca
cggaaatggt
12301 gaatactcat actcttcctt tttcaatatt attgaagcat ttatcagggt
tattgtctca
12361 tgagcggata catatttgaa tgtatttaga aaaataaaca aataggggtt
ccgcgcat
12421 ttccccgaaa agtgccacct gacgt
//
```