



```

LOCUS       Exported                               12803 bp ds-DNA   circular SYN 06-
NOV-2020
DEFINITION synthetic circular DNA
ACCESSION   .
VERSION     .
KEYWORDS    pACT-All-hCMV-Puromycin
SOURCE      synthetic DNA construct
  ORGANISM  synthetic DNA construct
REFERENCE   1 (bases 1 to 12803)
AUTHORS     Hao
TITLE       Direct Submission
JOURNAL     Exported Friday, Nov 6, 2020 from SnapGene 5.2.1
            https://www.snapgene.com
FEATURES    Location/Qualifiers
             source          1..12803
                        /organism="synthetic DNA construct"
    
```

```

        misc_feature      /mol_type="other DNA"
                          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
virus
        misc_feature      type 1"
                          1333..1566
                          /label=RRE
                          /note="The Rev response element (RRE) of HIV-1
allows for
        misc_feature      Rev-dependent mRNA export from the nucleus to the
                          cytoplasm."
                          2093..2210
                          /label=cPPT/CTS
                          /note="central polypurine tract and central
termination
        promoter         sequence of HIV-1"
                          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=gRNA scaffold
                          /note="guide RNA scaffold for the CRISPR/Cas9
system"
        enhancer         2619..2998
                          /label=CMV enhancer
                          /note="human cytomegalovirus immediate early
enhancer"
        promoter         2999..3202
                          /label=CMV promoter
                          /note="human cytomegalovirus (CMV) immediate early
                          promoter"
        misc_feature      3244..9072
                          /label=dCas9_VPR
        misc_feature      3244..3245
                          /label=GA overhang
        CDS              3246..7349
                          /codon_start=1
                          /product="catalytically dead mutant of the Cas9
                          endonuclease from the Streptococcus pyogenes Type II
                          CRISPR/Cas system"
                          /label=Cas9m4
                          /note="RNA-guided DNA-binding protein that lacks
                          endonuclease activity due to the mutations D10A,
D839A,
                          H840A, and N863A (Mali et al., 2013)"

```

```
/translation="MDKKYSIGLAIGTNSVGVAVITDEYKVPSSKFKVLGNTDRHSIKK
NLIGALLFDSGETAEATRLKRTARRRYTRRKNRICYLQEIFSNEMAKVDDSSFFHRLEES
FLVEEDKKHERHPIFGNIVDEVAYHEKYPTIYHLRKKLVDSTDKADLRLIYLALAHMIK
FRGHFLIEGDLNPDNSDVKLFIQLVQTYNQLFEEENPINASGVDAKAILSARLSKSRRL
ENLIAQLPGEKKNGLFGNLIALSGLTPNFKSNFDLAEDAKLQLSKDXYDDDLNLLAQ
IGDQYADLFLAAKNLSDAILLSDILRVNTEITKAPLSASMIKRYDEHHQDLTLLKALVR
QQLPEKYKEIFFDQSKNGYAGYIDGGASQEEFYKFIKPILEKMDGTEELLVKNLREDLL
RKQRTFDNGSIPHQIHLGELHAILRRQEDFYFPLKDNREKIEKILTFRIPYYVGPLARG
NSRFAWMTRKSEETITPWNFEVVVDKGASAQSFIERMTNFDKNLPNEKVLPKHSLLEYEY
FTVYNELTKVKYVTEGMRKPAFLSGEQKKAIVDLLFKTNRKVTVKQLKEDYFKKIECFD
SVEISGVEDRFNASLGTYHDLKIKDKDFLDNEENEDILEDIVLTLTLFEDREMIIEER
LKTYAHLFDDKVMKQLKRRRYTGWGRLSRKLLINGIRDKQSGKTILDFLKSDGFANRNF
QLIHDDSLTFKEDIQKAQVSGQDSLHEHIANLAGSPAIKKILQTVKVVDELVKVMGR
HKPENIVIEMARENQTTQKGQKNSRERMKRIEEGIKELGSQILKEHPVENTQLQNEKLY
LYYLQNGRDMYVDQELDINRLSDYDVAIIVPQSFLKDDSIDNKVLTRSDKARGKSDNVP
SEEVVKKMKNYWRQLLNAKLITQRKFDNLTKAERGGLSELDKAGFIKRQLVETRQITKH
VAQILDSRMNTKYDENDKLIREVKVITLKSCLVSDFRKDFQFYKVVREINNYHHAHDAYL
NAVVGTAIIKKYPKLESEFVYGDYKVDVRKMIKSEQEIGKATAKYFFYSNIMNFFKT
EITTLANGEIRKRPLIETNGETGEIVWDKGRDFATVRKVLVSMQVNIIVKKTEVQTGGFSK
ESILPKRNSDKLIARKKDWDPKKGFFSPTVAYSVLVAKVEKSKKLSVKELLGI
TIMERSSEKPNIDFLEAKGYKEVKKDLIIKLPKYSLFELENGRKRMLASAGELQKGNE
LALPSKYVNFLYLASHYEKLGKSPEDNEQQLFVEQHKHYLDEIIEQISEFSKRVIAD
ANLDKVL SAYNKHRDKPIREQAENIIHLFTLTNLGAPAAFYFDTTIDRKRYTSTKEVL
DATLIHQSI TGLYETRIDLSQLGGD"
```

```
    CDS          7362..7382
                /codon_start=1
                /product="nuclear localization signal of SV40
(simian virus  40) large T antigen"
                /label=SV40 NLS
                /translation="PKKKRKV"
```

```
CDS          7473..7622
              /codon_start=1
              /product="tetrameric repeat of the minimal
activation
              domain of herpes simplex virus VP16 (Beerli et al.,
1998)"
              /label=VP64

/translation="DALDDFDLMLGSDALDDFDLMLGSDALDDFDLMLGSDALDDF
              DLDML"
CDS          7647..7667
              /codon_start=1
              /product="nuclear localization signal of SV40
(simian virus
              40) large T antigen"
              /label=SV40 NLS
              /translation="PKKKRKV"
CDS          8097..8453
              /codon_start=1
              /product="transcriptional activation domain of human
RelA,
              also known as p65 (O'Shea and Perkins, 2008)"
              /label=RelA (p65) AD

/translation="PTQAGEGTLSEALLQLQFDDEDLGALLGNSTDPVFTDLASVDNS
EFQQLLNQGI PVAPHTTEPMLMEYPEAITRLVTGAQRPPDPAPAPLGAPGLPNGLLSGD
              EDFSSIADMDFSALL"
CDS          8472..9041
              /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
REMADTVIPQKEEAAICGQMDLSHPPPRGHLDELTTTLESMTEDLNLDSP LTPELNEIL
              DTFLNDECLLHAMHISTGLSIFDTSLF"
CDS          9051..9107
              /codon_start=1
              /product="2A peptide from porcine teschovirus-1
              polyprotein"
              /label=P2A
              /note="Eukaryotic ribosomes fail to insert a peptide
bond
              between the Gly and Pro residues, yielding separate
              polypeptides."
              /translation="ATNFSLLKQAGDVEENPGP"
```

```
CDS          9108..9704
              /codon_start=1
              /gene="pac from Streptomyces alboniger"
              /product="puromycin N-acetyltransferase"
              /label=PuroR
              /note="confers resistance to puromycin"

/translation="TEYKPTVRLATRDDVPRAVRTLAAAFADYPATRHTVDPDRHIERV
TELQELFLTRVGLDIGKVVWADDGAAVAVWTTPEVVEAGAVFAEIGPRMAELSGSRLAA
QQQMEGLLAPHRPKPEAWFLATVGVSPDHQGKGLGSAVVLPVVEAAERAGVPAFLETS
PRNLPHYERLGFVTADVEVPEGPRTWCMTRKPGA"
misc_feature  9720..10308
              /label=WPRE
              /note="woodchuck hepatitis virus posttranscriptional
              regulatory element"
LTR          10380..10613
              /label=3' LTR (Delta-U3)
              /note="self-inactivating 3' long terminal repeat
(LTR) from
promoter     10634..10963
              /label=SV40
              /note="SV40 enhancer and early promoter"
rep_origin   complement(11052..11637)
              /direction=LEFT
              /label=ori
              /note="high-copy-number Cole1/pMB1/pBR322/pUC origin
of
              replication"
CDS          complement(11808..12668)
              /codon_start=1
              /gene="bla"
              /product="beta-lactamase"
              /label=AmpR
              /note="confers resistance to ampicillin,
carbenicillin, and
              related antibiotics"

/translation="MSIQHFRVALIPFFAAFLPVPFAHPETLVKVKDAEDQLGARVGYI
ELDLSNGKILESFRPEERFPMSTFKVLLCGAVLSRIDAGQEQLGRRIHYSQNDLVEYS
PVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTIGGPKELTAFLHNMGDHSVTRLDRW
EPELNEAIPNDERDITMPVAMATTLRKLTLGELLTLASRQQLIDWMEADKVAGPLLRS
LPAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIYTTGSQATMDERNRQIAEIGAS
LIKHW"
promoter     complement(12669..12773)
              /gene="bla"
              /label=AmpR promoter
ORIGIN
```

1 gacggatcgg gagatcctcg cgcgttgaca ttgattattg actagttatt
aatagtaatc
61 aattacgggg tcattagttc atagcccata tatggagttc cgcgttacat
aacttacggt
121 aaatggcccg cctggctgac cgcccaacga cccccgcca ttgacgtcaa
taatgacgta
181 tgttcccata gtaacgcaa tagggacttt ccattgacgt caatgggtgg
agtatttacg
241 gtaaactgcc cacttggcag tacatcaagt gtatcatatg ccaagtacgc
cccctattga
301 cgtcaatgac ggtaaatggc cgcctggca ttatgccag tacatgacct
tatgggactt
361 tcctacttgg cagtacatct acgtattagt catcgctatt accagctagc
gaggcgtggc
421 ctgggcgga ctggggagtg gcgagccctc agatcctgca tataagcagc
tgctttttgc
481 ctgtactggg tctctctggt tagaccagat ctgagcctgg gagctctctg
gctaactagg
541 gaaccactg cttaagcctc aataaagctt gccttgagtg cttcaagtag
tgtgtgcccg
601 tctgttgtgt gactctggta actagagatc cctcagacc ttttagtcag
tgtggaaaat
661 ctctagcagt ggcgccgaa cagggacttg aaagcgaag ggaaaccaga
ggagctctct
721 cgacgcagga ctcggttgc tgaagcgcgc acggcaagag gcgaggggcg
gcgactggtg
781 agtacgcaa aaatthtgac tagcggaggc tagaaggaga gagatgggtg
cgagagcgtc
841 agtattaagc gggggagaat tagatcgcga 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 gctcctgggg atttgggggt gctctggaaa actcatttgc accactgctg
tgccttgaa

1621 tgctagttgg agtaataaat ctctggaaca gatttggaat 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 tgttagagag ataattagaa
ttaatttgac
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 ttgaattcga cattgattat
tgactagtta
2641 ttaatagtaa tcaattacgg ggtcattagt tcatagccca tatatggagt
tccgcgttac
2701 ataacttacg gtaaatggcc cgcctggctg accgccaac gacccccgcc
cattgacgtc
2761 aataatgacg tatgttccca tagtaacgcc aatagggact ttccattgac
gtcaatgggt
2821 ggagtattta cggtaaactg cccacttggc agtacatcaa gtgtatcata
tgccaagtac
2881 gccccctatt gacgtcaatg acggtaaactg gcccgccctgg cattatgccc
agtacatgac
2941 cttatgggac tttcctactt ggcagtacat ctacgtatta gtcatcgcta
ttaccatggt
3001 gatgcggttt tggcagtaca tcaatgggcg tggatagcgg tttgactcac
ggggatttcc
3061 aagtctccac cccattgacg tcaatgggag tttgttttgg caccaaaatc
aacgggactt
3121 tccaaaatgt cgtaacaact ccgccccatt gacgcaaactg ggcggtaggc
gtgtacgggtg
3181 ggaggtctat ataagcagag ctctctggct aactagagaa cccactgctt
actggcttac

3241 cggttatgga caaaaaatac agcatcggac tggctatcgg aactaacagc
gtgggggtggg
3301 ccgtgattac agacgaatac aaagtgcctt caaagaagtt caagggtgctg
ggcaacaccg
3361 acagacactc tatcaagaag aatctgatcg gcgccctgct gtttgatagc
ggcgagacag
3421 cagaggcaac caggctgaag aggacagccc ggagaaggta taccgcgagg
aagaatagga
3481 tctgctacct gcaggagatc ttcagcaacg agatggccaa ggtggacgat
agcttctttc
3541 accgcctgga ggagtccttc ctggtggagg aggacaagaa gcacgagcgg
caccccatct
3601 ttggcaacat cgtggatgag gtggcctatc acgagaagta ccctaccatc
tatcacctga
3661 ggaagaagct ggtggattcc acagacaagg ccgatctgcg cctgatctat
ctggccctgg
3721 cccacatgat caagttccgg ggccactttc tgatcgaggg cgacctgaac
cctgataata
3781 gcgatgtgga caagctgttc atccagctgg tgcagaccta caatcagctg
tttgaggaga
3841 acccaatcaa tgcattccgga gtggacgcaa aggcaatcct gtctgcccgc
ctgtccaaat
3901 ctagaaggct ggagaacctg atcgcccagc tgcctggcga gaagaagaac
ggcctgttcg
3961 gcaatctgat cgccctgagc ctgggcctga ccccaaactt caagtccaat
ttgacctgg
4021 ccgaggatgc caagctgcag ctgagcaagg atacatatga cgatgacctg
gacaacctgc
4081 tggcccagat cggcgaccag tacgccgatc tgtttctggc cgccaagaat
ctgtccgatg
4141 ccatcctgct gtctgacatc ctgagagtga acacagagat caccaaggcc
ccactgagcg
4201 cctccatgat caagagatat gatgagcacc accaggacct gaccctgctg
aaggccctgg
4261 tgaggcagca gctgcccagag aagtacaagg agatcttctt tgaccagtcc
aagaatggct
4321 acgccggcta tatcgatggc ggccctctc aggaggagtt ctacaagttt
atcaagccca
4381 tcctggagaa gatggacggc accgaggagc tgctggtgaa gctgaatagg
gaggatctgc
4441 tgcggaagca gagaacattc gacaacggca gcatccccca ccagatccac
ctgggagagc
4501 tgcacgcaat cctgcgccgg caggaggatt tctacccttt tctgaaggac
aaccgggaga
4561 agatcgagaa gatcctgacc tttagaatcc cttactatgt gggcccactg
gccaggggca
4621 attctcgctt cgctggatg acaagaaaga gcgaggagac aatcaccctt
tggaactttg
4681 aggaggtggt ggacaagga gcaagcggc agtccttcat cgagaggatg
accaattttg
4741 ataagaacct gcctaagag aagggtgctgc caaagcactc cctgctgtac
gagtatttca
4801 cagtgtataa cgagctgacc aagggtgaagt acgtgacaga gggaatgagg
aagccagcct

4861 tcctgagcgg agagcagaag aaggccatcg tggacctgct gtttaagaca
aatcggaagg
4921 tgaccgtgaa gcagctgaag gaggattatt tcaagaagat cgagtgtttt
gacagcgtgg
4981 agatctccgg cgtggaggat agattcaacg cctccctggg cacctaccac
gacctgctga
5041 agatcatcaa ggataaggac tttctggata acgaggagaa tgaggacatc
ctggaggata
5101 tcgtgctgac actgaccctg ttcgaggacc gggagatgat cgaggagaga
ctgaagacct
5161 atgcccacct gtttgatgac aaagtgatga agcagctgaa gagaaggcgc
tacacaggat
5221 ggggcaggct gagccgcaag ctgatcaatg gcatccgca taagcagagc
ggcaagacca
5281 tcctggattt cctgaagtcc gacggcttcg ccaaccggaa cttcatgcag
ctgatccacg
5341 atgactccct gaccttcaag gaggacatcc agaaggcaca ggtgagcggg
cagggcgatt
5401 ccctgcacga gcacatcgca aacctggcag gcagccccgc catcaagaag
ggcatcctgc
5461 agaccgtgaa ggtggtggac gagctggtga aagtgatggg caggcacaag
cctgagaaca
5521 tcgtgatcga gatggccccgc gagaatcaga ccacacagaa gggccagaag
aacagccggg
5581 agagaatgaa gcgcatcgag gagggcatca aggagctggg ctcccagatc
ctgaaggagc
5641 acccctgga gaacaccag ctgcagaatg agaagctgta tctgtactat
ctgcagaatg
5701 gccgggacat gtacgtggat caggagctgg acatcaacag actgagcgat
tatgacgtgg
5761 ccgccatcgt gcctcagagc ttctgaagg atgactccat cgacaataag
gtgctgacct
5821 ggtccgataa ggccaggggc aagtctgaca acgtgccaaag cgaggaggtg
gtgaagaaga
5881 tgaagaacta ctggcggcag ctgctgaatg ccaagctgat caccagagg
aagttcgaca
5941 atctgacaaa ggacagagagg ggaggcctgt ctgagctgga taaggccggc
tttatcaaga
6001 ggcagctggt ggagacacgc cagatcacca agcacgtggc ccagatcctg
gacagcagaa
6061 tgaacaccaa gtacgacgag aatgataagc tgatcaggga ggtgaaagtg
atcacctga
6121 agtctaagct ggtgagcgat ttccggaagg acttccagtt ttataaggtg
agagagatca
6181 acaactacca ccacgccac gacgcatacc tgaacgcagt ggtgggaacc
gccctgatca
6241 agaagtacc aaagctggag agcgagttcg tgtacggcga ttataaggtg
tacgacgtgc
6301 ggaagatgat cgccaagtcc gagcaggaga tcggcaaggc cacagccaag
tatttctttt
6361 actctaacat catgaatttc ttttaagacag agatcacct ggccaatggc
gagatcagga
6421 agcgccccct gatcgagaca aacggcgaga caggcgagat cgtgtgggat
aagggccggg

6481 acttcgccac cgtgagaaag gtgctgtcca tgccacaagt gaatatcgtg
aagaagacag
6541 aggtgcagac cggcggcttt tctaaggaga gcatcctgcc caagaggaac
tctgacaagc
6601 tgatcgcccg caagaaggat tgggacccca agaagtatgg cggcttcgat
tctcctaccg
6661 tggcctacag cgtgctggtg gtggccaagg tggagaaggg caagtccaag
aagctgaagt
6721 ctgtgaagga gctgctgggc atcacaatca tggagagaag ctccctcgag
aagaatccca
6781 tcgactttct ggaggccaag ggctataagg aggtgaagaa ggatctgatc
atcaagctgc
6841 ctaagtactc tctgttcgag ctggagaacg gaaggaagag aatgctggca
agcgccggag
6901 agctgcagaa gggcaatgag ctggccctgc catccaagta cgtgaacttt
ctgtatctgg
6961 cctctcacta cgagaagctg aagggcagcc ccgaggacaa cgagcagaag
cagctgttcg
7021 tggagcagca caagcactat ctggatgaga tcatcgagca gatctccgag
ttttctaaga
7081 gagtgatcct ggccgatgcc aatctggaca aggtgctgtc cgcctacaac
aagcacaggg
7141 acaagcctat ccgcgagcag gccgagaata tcatccacct gttcacactg
accaacctgg
7201 gagcaccagc agccttcaag tattttgata ccacaatcga caggaagcgg
tacacaagca
7261 ccaaggaggt gctggacgcc accctgatcc accagtccat cacaggcctg
tacgagacac
7321 gcatcgatct gtcccagctg ggaggcgatt ctagggcaga cccaagaag
aagcgggaag
7381 tgagcccagc catccggaga ctggacgcc tgatctctac aagcctgtac
aagaaggccg
7441 gctacaagga ggcatccgga tctggaaggg cagacgcact ggatgacttc
gatctggaca
7501 tgctgggctc tgatgccctg gatgactttg atctggatat gctgggaagc
gagccctgg
7561 acgattttga tctggacatg ctgggatccg acgctctgga cgatttcgat
ctggatatgc
7621 tgatcaatag caggtctagc ggcagcccca agaagaagcg gaaagtgggc
tcccagtatc
7681 tgccagacac cgatgaccgg cacagaatcg aggagaagag gaagcgcaca
tacgagacat
7741 tcaagtctat catgaagaag agccatttt ccggaccaac agatcctcgg
ccccctcaa
7801 ggcgcatcgc agtgccctct agatcctctg ccagcgtgcc taagccagca
ccacagcctt
7861 atccattcac aagctccctg tctaccatca actacgacga gttccccacc
atggtgtttc
7921 ctagcggaca gatctctcag gcaagcggcc tggccccagc cccccctcag
gtgctgccac
7981 aggcaccagc acctgcacca gcacccgcca tgggtgtccgc cctggcccag
gccctgccc
8041 cagtgcccgt gctggccccc ggcccacccc aggcagtggc acctccagca
cctaagccaa

8101 cccaggcagg agagggcaca ctgtctgagg ccctgctgca gctgcagttt
gatgacgagg
8161 acctggggcgc cctgctggga aatagcaccg atcctgccgt gttcacagat
ctggcctccg
8221 tggacaactc tgagtttcag cagctgctga atcagggcat cccagtggcc
ccccacacca
8281 cagagcccat gctgatggag taccctgagg ccatcacacg gctggtgacc
ggagcacagc
8341 ggccccctga cccagcacct gccccactgg gcgccccctgg cctgccaaac
ggcctgctga
8401 gcggcgatga ggacttctct agcatcgccg atatggactt tagcgcctg
ctgggaagcg
8461 gatccggctc tcgggactcc agagagggca tgttctgccc aaagcctgag
gcaggatccg
8521 ccatctctga cgtgttcgag ggcagagagg tgtgccagcc aaagcggatc
agaccattcc
8581 acccaccagg ctctccctgg gcaaacaggc cactgccagc cagcctggca
cctacaccaa
8641 ccggaccagt gcacgagcca gtgggctccc tgaccccagc acctgtgcca
cagcccctgg
8701 accctgcacc agcagtgaca ccagaggcct cccacctgct ggaggatccc
gacgaggaga
8761 caagccaggc agtgaaggcc ctgagggaga tggccgatac agtgatcccc
cagaaggagg
8821 aggccgcat ctgtggccag atggacctga gccaccctcc accaagggga
cacctggatg
8881 agctgaccac aaccctggag tccatgaccg aggatctgaa cctggactct
cccctgacc
8941 ctgagctgaa cgagatcctg gatacattcc tgaatgacga gtgcctgctg
cacgctatgc
9001 acatttccac tgggctgagt atctttgaca cttccctggt cggatccggc
gcaacaaact
9061 tctctctgct gaaacaagcc ggagatgtcg aagagaatcc tggaccgacc
gagtacaagc
9121 ccacgggtgcg cctcgccacc cgcgacgacg tccccagggc cgtacgcacc
ctcgccgccc
9181 cgttcgccga ctaccccgcc acgcgccaca ccgtcgatcc ggaccgccac
atcgagcggg
9241 tcaccgagct gcaagaactc ttctcacgc gcgtcgggct cgacatcggc
aagggtgtgg
9301 tcgcgacga cggcgccgcg gtggcggtct ggaccacgcc ggagagcgtc
gaagcggggg
9361 cgggtgttcgc cgagatcggc ccgcgcatgg ccgagttgag cggttcccgg
ctggccgcgc
9421 agcaacagat ggaaggcctc ctggcgccgc accggcccaa ggagcccgcg
tggttcctgg
9481 ccaccgtcgg agtctcgccc gaccaccagg gcaagggctc gggcagcgcc
gtcgtgctcc
9541 ccggagtgga ggcgccgag cgcgccgggg tgcccgcctt cctggagacc
tccgcgcccc
9601 gcaacctccc cttctacgag cggctcggct tcaccgtcac cgccgacgtc
gaggtgcccg
9661 aaggaccgcg cacctggtgc atgaccgca agcccgggtgc ctgaacgcgt
taagtcgaca

9721 atcaacctct ggattacaaa atttgtgaaa gattgactgg tattcttaac
tatgttgctc
9781 cttttacgct atgtggatac gctgctttaa tgcctttgta tcatgctatt
gcttcccgta
9841 tggctttcat tttctctcc ttgtataaat cctggttgct gtctctttat
gaggagtgtg
9901 ggcccgttgt caggcaacgt ggcgtggtgt gcaactgtgtt tgctgacgca
acccccactg
9961 gttggggcat tgccaccacc tgtcagctcc tttccgggac tttcgctttc
ccctcccta
10021 ttgccacggc ggaactcatc gccgcctgcc ttgcccgctg ctggacaggg
gctcggctgt
10081 tgggcaactga caattccgtg gtgttgctcg ggaaatcatc gtcctttcct
tggctgctcg
10141 cctgtgttgc cacctggatt ctgcgcggga cgtccttctg ctacgtccct
tcggccctca
10201 atccagcggga cttccttcc cgcggcctgc tgccggctct gcggcctctt
ccgcgtcttc
10261 gccttcgccc tcagacgagt cggatctccc tttgggcccgc ctccccgcgt
cgactttaag
10321 accaatgact tacaaggcag ctgtagatct tagccacttt ttaaagaaa
aggggggact
10381 ggaagggcta attcactccc aacgaagaca agatctgctt tttgcttgta
ctgggtctct
10441 ctggttagac cagatctgag cctgggagct ctctggctaa ctagggaacc
cactgcttaa
10501 gcctcaataa agcttgcctt gagtgcttca agtagtggtg gcccgctctg
tgtgtgactc
10561 tggtaactag agatccctca gaccctttaa gtcagtgtgg aaaatctcta
gcagggcccg
10621 tttaaactgg aatgtgtgtc agttaggggtg tggaaagtcc ccaggctccc
cagcaggcag
10681 aagtatgcaa agcatgcatc tcaattagtc agcaaccagg tgtggaaagt
cccaggctc
10741 cccagcaggc agaagtatgc aaagcatgca tctcaattag tcagcaacca
tagtcccgcc
10801 cctaactccg cccatcccgc ccctaactcc gcccagttcc gccattctc
cgccccatgg
10861 ctgactaatt tttttatatt atgcagaggc cgaggccgcc tctgcctctg
agctattcca
10921 gaagtagtga ggaggctttt ttggaggcct aggcttttgc aaaaagctcc
cgggagcttg
10981 tatatccatt acatgtgagc aaaaggccag caaaaggcca ggaaccgtaa
aaaggccgcg
11041 ttgctggcgt ttttccatag gctccgcccc cctgacgagc atcacaaaaa
tcgacgctca
11101 agtcagaggt ggcgaaacct gacaggacta taaagatacc aggcgtttcc
ccctggaagc
11161 tcctcgtgc gctctctgt tccgaccctg ccgcttaccg gatacctgtc
cgcttttctc
11221 ccttcgggaa gcgtggcgct ttctcatagc tcacgctgta ggtatctcag
ttcgggtgtag
11281 gtcgttcgct ccaagctggg ctgtgtgcac gaaccccccg ttcagcccga
ccgctgcgcc

```
11341 ttatccggta actatcgtct tgagtccaac cgggtaagac acgacttatic
gccactggca
11401 gcagccactg gtaacaggat tagcagagcg aggtatgtag gcggtgctac
agagttcttg
11461 aagtgggtggc ctaactacgg ctacactaga agaacagtat ttggtatctg
cgctctgctg
11521 aagccagtta ccttcggaaa aagagttggt agctcttgat ccggcaaaca
aaccaccgct
11581 ggtagcgggt tttttgttg caagcagcag attacgcgca gaaaaaaagg
atctcaagaa
11641 gatcctttga tcttttctac ggggtctgac gctcagtgga acgaaaactc
acgttaaggg
11701 attttggtca tgagattatc aaaaaggatc ttcacctaga tccttttaaa
ttaaaaatga
11761 agttttaaat caatctaaag tatatatgag taaacttggt ctgacagtta
ccaatgctta
11821 atcagtgagg cacctatctc agcgatctgt ctatttcggt catccatagt
tgctgactc
11881 cccgtcgtgt agataactac gatacgggag ggcttaccat ctggccccag
tgctgcaatg
11941 ataccgcgag acccagctc accggctcca gatttatcag caataaacca
gccagccgga
12001 agggccgagc gcagaagtgg tcctgcaact ttatccgcct ccatccagtc
tattaattgt
12061 tgccgggaag ctagagtaag tagttcgcca gttaatagtt tgcgcaacgt
tgttgccatt
12121 gctacaggca tcgtggtgtc acgctcgtcg tttggtatgg cttcattcag
ctccggttcc
12181 caacgatcaa ggcgagttac atgatcccc atgttgtgca aaaaagcggc
tagtccttc
12241 ggtcctccga tcgttgctcag aagtaagttg gccgcagtgt tatcactcat
ggttatggca
12301 gcaactgcata attctcttac tgatcatgcca tccgtaagat gcttttctgt
gactggtgag
12361 tactcaacca agtcattctg agaatagtgt atgcggcgac cgagttgctc
ttgcccggcg
12421 tcaatacggg ataataccgc gccacatagc agaactttaa aagtgctcat
cattggaaaa
12481 cgttcttcggt ggcgaaaact ctcaaggatc ttaccgctgt tgagatccag
ttcgatgtaa
12541 cccactcgtg cacccaactg atcttcagca tcttttactt tcaccagcgt
ttctgggtga
12601 gcaaaaacag gaaggcaaaa tgccgcaaaa aagggataa gggcgacacg
gaaatggtga
12661 ataactacac tcttcctttt tcaatattat tgaagcattt atcagggtta
ttgtctcatg
12721 agcggataca tatttgaatg tatttagaaa aataaaciaa taggggttcc
gcgcacattt
12781 ccccgaaaag tgccacctga cgt
//
```