



LOCUS Exported 11085 bp ds-DNA circular SYN 06-  
NOV-2020  
DEFINITION synthetic circular DNA.  
ACCESSION .  
VERSION .  
KEYWORDS pINT-dCas9-KRAB-EFS-Blasticidin  
SOURCE synthetic DNA construct  
ORGANISM synthetic DNA construct  
REFERENCE 1 (bases 1 to 11085)  
AUTHORS Collecta  
TITLE Direct Submission  
JOURNAL Exported Friday, Nov 6, 2020 from SnapGene 5.2.1  
<https://www.snapgene.com>  
FEATURES Location/Qualifiers  
source 1..11085  
/organism="synthetic DNA construct"  
/mol\_type="other DNA"

```

promoter      6..232
              /label=RSV promoter
              /note="Rous sarcoma virus enhancer/promoter"
LTR           233..413
              /label=5' LTR (truncated)
              /note="truncated 5' long terminal repeat (LTR) from
HIV-1"
  misc_feature 460..585
              /label=HIV-1 Psi
              /note="packaging signal of human immunodeficiency
virustype
  misc_feature 1"
              1078..1311
              /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 1818..1933
              /label=cPPT/CTS
              /note="central polypurine tract and central
              terminationsequence of HIV-1 (lacking the first T)"
  promoter     1984..2195
              /label=EFS
              /note="core promoter for human elongation factorEF-
1-alpha"
  regulatory   2202..2211
              /regulatory_class="other"
              /label=Kozak sequence
              /note="vertebrate consensus sequence for strong
              initiationof translation (Kozak, 1987)"
  CDS          2214..2234
              /codon_start=1
              /product="nuclear localization signal of SV40 large
              Tantigen"
              /label=SV40 NLS
              /translation="PKKKRKV"
  CDS          2238..2258
              /codon_start=1
              /product="nuclear localization signal of SV40 large
              Tantigen"
              /label=SV40 NLS
              /translation="PKKKRKV"
  CDS          2262..2282
              /codon_start=1
              /product="nuclear localization signal of SV40 large
              Tantigen"
              /label=SV40 NLS
              /translation="PKKKRKV"
  CDS          2289..6389
              /codon_start=1
              /product="catalytically dead mutant of the
Cas9endonuclease

```

system" from the Streptococcus pyogenes Type II CRISPR/Cas  
/label=dCas9  
/note="RNA-guided DNA-binding protein that  
lacksendonuclease activity due to the D10 mutation  
in the RuvC-like domain and the H840A mutation in the HNH  
domain"

/translation="DKKYSIGLAIGTNSVGVAVITDEYKVPSKKFKVLGNTDRHSIKKN  
LIGALLFDSGETAEATRLKRTARRRYTRRKNRICYLQEIFSNEMAKVDDSFHRLEESF  
LVEEDKKHERHPIFGNIVDEVAYHEKYPTIYHLRKKLVDSTDKADLRLIYLALAHMIKF  
RGHFLIEGDLNPDNSDVKLFIQLVQTYNQLFEENPINASGVDAKAILSARLSKSRRL  
NLIAQLPGEKKNGLFGNLIASLGLTPNFKSNFDLAEDAKLQLSKDTYDDDLNLLAQI  
GDQYADLFLAAKNLSDAILLSDILRVNTEITKAPLSASMIKRYDEHHQDLTLLKALVRQ  
QLPEKYKEIFFDQSKNGYAGYIDGGASQEEFYKFIKPILEKMDGTEELLVKLNREDLLR  
KQRTFDNGSIPHQIHLGELHAILRRQEDFYFPLKDNREKIEKILTFRIPIYYVGPLARGN  
SRFAWMTRKSEETITPWNFEEVVDKGASAQSFIERMTNFDKNLPNEKVLPKHSLLYEYF  
TVYNELTKVKYVTEGMRKPAFLSGEQKKAIVDLLFKTNRKVTVKQLKEDYFKKIECFDS  
VEISGVEDRFNASLGTYHDLLKIKDKDFLDNEENEDILEDIVLTLTLFEDREMIEERL  
KTYAHLFDDKVMKQLKRRRYTGWGRLSRKLINGIRDKQSGKTILDFLKSDGFANRNFMQ  
LIHDDSLTFKEDIQKAQVSGQGDSLHEHIANLAGSPAIKKGILQTVKVVDELVKVMGRH  
KPENIVIAMARENQTTQKGQKNSRERMKRIEEGIKELGSQILKEHPVENTQLQNEKLYL  
YYLQNGRDMYVDQELDINRLSDYDVDAIVPQSFLKDDSIDNKVLTRSDKNRGKSDNVPS  
EEVVKMKNYWRQLLNAKLITQRKFDNLTKAERGGLSELDKAGFIKRQLVETRQITKHV  
AQILD SRMNTKYDENDKLIREVKVITLKSCLVSDFRKDFQFYKVINNYHHAHDAYLN  
AVVGTALIKKYPKLESEFVYGDYKVYDVRKMIKSEQEIGKATAKYFFYSNIMNFFKTE  
ITLANGEIRKRPLIETNGETGEIVWDKGRDFATVRKVL SMPQVNI VKKTEVQTGGFSKE  
SILPKRNSDKLIARKKDWDPKKGFFSPTVAYSVLVAKVEKSKKLSVKELLGIT  
IMERSSF EKNPIDFLEAKGYKEVKDLIIKLPKYSLFELENGRKRMLASAGELQKGNEL  
ALPSKYVNFLYLASHYEKLGSPEDNEQQLFVEQHKHYLDEIEQISEFSKRVI LADA  
NLDKVLSAYNKHRDKPIREQAENIIHLFTLTNLGAPAAFYFDTTIDRKRYTSTKEVLD

```

        ATLIHQSI TGLYETRIDLSQLGGD"
CDS      6390..6437
        /codon_start=1
        /product="bipartite nuclear localization signal
        fromnucleoplasmin"
        /label=nucleoplasmin NLS
        /translation="KRPAATKKAGQAKKKK"
CDS      6447..6671
        /codon_start=1
        /gene="ZNF10"
        /gene_synonym="KOX1"
        /product="Kruppel-associated box (KRAB)
        transcriptionalrepression domain from the human zinc
finger
        protein ZNF10 (Margolin et al., 1994)"
        /label=KRAB

/translation="MDAKSLTAW SRTLVTFKDVFVDF TREEWKLLD TAQQIVYRNVMLE
        NYKNLVS LGYQLTKPDVILRLEKGE EPWL V"
CDS      6696..6749
        /codon_start=1
        /product="2A peptide from Thosea asigna virus
        capsidprotein"
        /label=T2A
        /note="Eukaryotic ribosomes fail to insert a peptide
bond
        between the Gly and Pro residues, yielding separate
        polypeptides."
        /translation="EGRGSLLTCGDVEENPGP"
CDS      6756..7154
        /codon_start=1
        /gene="Aspergillus terreus BSD"
        /product="blasticidin S deaminase"
        /label=Blast (BSD)
        /note="confers resistance to blasticidin"

/translation="MAKPLSQEESTLIERATATINSIPISEDYSVASAALSSDGRIFTG
VNVYHFTGGPCAELVVLGTAAAAAAGNLTCIVAIGNENRGILSPCGRCRQVLLDLHPGI
        KAIVKDS DGQPTAVGIRELLPSGYVWEG"
misc_feature 7164..7752
        /label=WPRE
        /note="woodchuck hepatitis virus
        posttranscriptionalregulatory element"
LTR      7826..8059
        /label=3' LTR (Delta-U3)
        /note="self-inactivating 3' long terminal repeat
(LTR) from
        HIV-1"
polyA_signal 8131..8252
        /label=SV40 poly(A) signal
        /note="SV40 polyadenylation signal"
rep_origin  8292..8427
        /label=SV40 ori

```

```

rep_origin      /note="SV40 origin of replication"
                complement(8862..9450)
                /direction=LEFT
                /label=ori
                /note="high-copy-number ColE1/pMB1/pBR322/pUC origin
of

```

```

CDS             replication"
                complement(9621..10481)
                /codon_start=1
                /gene="bla"
                /product="beta-lactamase"
                /label=AmpR
                /note="confers resistance to ampicillin,
carbenicillin, and
                related antibiotics"

```

```

/translation="MSIQHFRVALIPFFAAFCCLPVFAHPETLVKVKDAEDQLGARVGYI
ELDLSNGKILESFRPEERFPMMSSTFKVLLCGAVLSRIDAGQEQLGRRIHYSQNDLVEYS
PVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTIGGPKELTAFLHNMGDHSVTRLDRW
EPELNEAIPNDERDITMPVAMATTLRKLTLGELLTLASRQQLIDWMEADKVAGPLLRS
LPAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIYTTGSQATMDERNRQIAEIGAS
LIKHW"

```

```

promoter       complement(10482..10586)
                /gene="bla"
                /label=AmpR promoter

```

ORIGIN

```

      1  acgcgtgtag tcttatgcaa tactcttgta gtcttgcaac atggtaacga
tgagttagca
     61  acatgcctta caaggagaga aaaagcaccg tgcattgccga ttggtggaag
taagtggtga
    121  cgatcgtgcc ttattaggaa ggcaacagac gggctctgaca tggattggac
gaaccactga
    181  attgccgcat tgcagagata ttgtatttaa gtgcctagct cgatacataa
acgggtctct
    241  ctggttagac cagatctgag cctgggagct ctctggctaa ctagggaacc
cactgcttaa
    301  gcctcaataa agcttgccctt gagtgcttca agtagtgtgt gcccgtctgt
tgtgtgactc
    361  tggtaactag agatccctca gacccttcta gtcagtgtgg aaaatctcta
gcagtggcgc
    421  ccgaacaggg acttgaaagc gaaagggaaa ccagaggagc tctctcgacg
caggactcgg
    481  cttgctgaag cgcgcacggc aagaggcgag gggcggcgac tggtgagtac
gccaaaaatt
    541  ttgactagcg gaggctagaa ggagagagat gggtgcgaga gcgtcagtat
taagcggggg
    601  agaattagat cgcgatggga aaaaattcgg ttaaggccag ggggaaagaa
aaaatataaa
    661  ttaaaacata tagtatgggc aagcaggag ctagaacgat tcgcagttaa
tcctggcctg

```

721 ttagaaacat cagaaggctg tagacaaata ctgggacagc tacaaccatc  
ccttcagaca  
781 ggatcagaag aacttagatc attatataat acagtagcaa ccctctattg  
tgtgcatcaa  
841 aggatagaga taaaagacac caaggaagct ttagacaaga tagaggaaga  
gcaaaaacaaa  
901 agtaagacca ccgcacagca agcggccact gatcttcaga cctggaggag  
gagatatgag  
961 ggacaattgg agaagtgaat tatataaata taaagtagta aaaattgaac  
cattaggagt  
1021 agcaccacc aaggcaaaga gaagagtggg gcagagagaa aaaagagcag  
tgggaatagg  
1081 agctttgttc cttgggttct tgggagcagc aggaagcact atgggcgag  
cgtcaatgac  
1141 gctgacggta caggccagac aattattgtc tggatatagtg cagcagcaga  
acaatttgct  
1201 gagggctatt gaggcgcaac agcatctggt gcaactcaca gtctggggca  
tcaagcagct  
1261 ccaggcaaga atcctggctg tggaaagata cctaaaggat caacagctcc  
tggggatttg  
1321 gggttgctct ggaaaactca tttgcaccac tgctgtgcct tggaatgcta  
gttggagtaa  
1381 taaatctctg gaacagattht ggaatcacac gacctggatg gagtgggaca  
gagaaattaa  
1441 caattacaca agcttaatac actccttaat tgaagaatcg caaaaccagc  
aagaaaagaa  
1501 tgaacaagaa ttattggaat tagataaatg ggcaagtttg tggaaattggt  
ttaacataac  
1561 aaattggctg tggatatataa aattattcat aatgatagta ggaggcttgg  
taggtttaag  
1621 aatagttttt gctgtacttt ctatagttaa tagagttagg cagggatatt  
caccattatc  
1681 gtttcagacc cacctcccaa ccccgagggg acccgacagg cccgaaggaa  
tagaagaaga  
1741 aggtggagag agagacagag acagatccat tcgattagtg aacggatctc  
gacggtatcg  
1801 ttgcttggat cgagcaattht aaaagaaaag gggggatttg ggggtacagt  
gcaggggaaa  
1861 gaatagtaga cataatagca acagacatac aaactaaaga attacaaaa  
caaattacaa  
1921 aaattcaaaa tttctgcggt gttgtcggtg ctcgttctct gctcttcacg  
ctactgaatt  
1981 cgtgggcaga gcgcacatcg cccacagtcc ccgagaagtt ggggggaggg  
gtcggcaatt  
2041 gaacgggtgc ctagagaagg tggcgcgggg taaactggga aagtgatgtc  
gtgtactggc  
2101 tccgcctttt tcccaggggt gggggagaaac cgtatataag tgcagtagtc  
gccgtgaacg  
2161 ttctttttcg caacgggttht gccgccagaa cacatctaga cgccaccatg  
gccccaaaa  
2221 agaagagaaa ggtagatcca aaaaagaaga gaaaggtaga tccaaaaaag  
aagagaaagg  
2281 taggtggaga caagaagtac agcatcggcc tggccatcgg caccaactct  
gtgggctggg

2341 ccgtgatcac cgacgagtac aaggtgccca gcaagaaatt caaggtgctg  
ggcaacaccg  
2401 accggcacag catcaagaag aacctgatcg gcgccctgct gttcgacagc  
ggagaaacag  
2461 ccgaggccac ccggctgaag agaaccgcca gaagaagata caccagacgg  
aagaaccgga  
2521 tctgctatct gcaagagatc ttcagcaacg agatggccaa ggtggacgac  
agcttcttcc  
2581 acagactgga agagtccttc ctggtggaag aggataagaa gcacgagcgg  
caccccatct  
2641 tcggcaacat cgtggacgag gtggcctacc acgagaagta ccccaccatc  
taccacctga  
2701 gaaagaaact ggtggacagc accgacaagg ccgacctgcg gctgatctat  
ctggccctgg  
2761 cccacatgat caagttccgg ggccacttcc tgatcgaggg cgacctgaac  
cccgacaaca  
2821 gcgacgtgga caagctgttc atccagctgg tgcagaccta caaccagctg  
ttcgaggaaa  
2881 accccatcaa cgccagcggc gtggacgcca aggccatcct gtctgccaga  
ctgagcaaga  
2941 gcagacggct ggaaaatctg atcgcccagc tgcccggcga gaagaagaat  
ggcctgttcg  
3001 gcaacctgat tgccctgagc ctgggcctga cccccaactt caagagcaac  
ttcgacctgg  
3061 ccgaggatgc caaactgcag ctgagcaagg acacctacga cgacgacctg  
gacaacctgc  
3121 tggcccagat cggcgaccag tacgccgacc tgtttctggc cgccaagaac  
ctgtccgacg  
3181 ccatcctgct gagcgacatc ctgagagtga acaccgagat caccaaggcc  
cccctgagcg  
3241 cctctatgat caagagatac gacgagcacc accaggacct gaccctgctg  
aaagctctcg  
3301 tgcggcagca gctgcctgag aagtacaaag agatthttctt cgaccagagc  
aagaacggct  
3361 acgccggcta catcgatggc ggagccagcc aggaagagtt ctacaagttc  
atcaagccca  
3421 tcctggaaaa gatggacggc accgaggaac tgctcgtgaa gctgaacaga  
gaggacctgc  
3481 tgcggaagca gcggaccttc gacaacggca gcatccccca ccagatccac  
ctgggagagc  
3541 tgcacgccat tctgcggcgg caggaagatt tttaccatt cctgaaggac  
aaccgggaaa  
3601 agatcgagaa gatcctgacc ttccgcatcc cctactacgt gggccctctg  
gccaggggaa  
3661 acagcagatt cgcttgatg accagaaaga gcgaggaaac catcaccccc  
tggaacttcg  
3721 aggaagtggg ggacaagggc gccagcggcc agagcttcat cgagcggatg  
accaacttcg  
3781 ataagaacct gcccaacgag aaggtgctgc ccaagcacag cctgctgtac  
gagtacttca  
3841 ccgtgtacaa cgagctgacc aaagtgaaat acgtgaccga gggaaatgaga  
aagcccgcct  
3901 tcctgagcgg cgagcagaaa aaagccatcg tggacctgct gttcaagacc  
aaccggaag

3961 tgaccgtgaa gcagctgaaa gaggactact tcaagaaaat cgagtgcttc  
gactccgtgg  
4021 aaatctccgg cgtggaagat cggttcaacg cctccctggg cacataccac  
gatctgctga  
4081 aaattatcaa ggacaaggac ttcttgaca atgaggaaaa cgaggacatt  
ctggaagata  
4141 tcgtgctgac cctgacactg tttgaggaca gagagatgat cgaggaacgg  
ctgaaaacct  
4201 atgcccacct gttcgacgac aaagtgatga agcagctgaa gcggcggaga  
tacaccggct  
4261 ggggcaggct gagccggaag ctgatcaacg gcatccggga caagcagtcc  
ggcaagacaa  
4321 tcctggattt cctgaagtcc gacggcttcg ccaacagaaa cttcatgcag  
ctgatccacg  
4381 acgacagcct gacctttaa gaggacatcc agaaagccca ggtgtccggc  
cagggcgata  
4441 gcctgcacga gcacattgcc aatctggccg gcagccccgc cattaagaag  
ggcatcctgc  
4501 agacagtgaa ggtggtggac gagctcgtga aagtgatggg ccggcacaag  
cccgagaaca  
4561 tcgtgatcga aatggccaga gagaaccaga ccaccagaa gggacagaag  
aacagccgcg  
4621 agagaatgaa gcggatcgaa gagggcatca aagagctggg cagccagatc  
ctgaaagaac  
4681 acccctgga aacacccag ctgcagaacg agaagctgta cctgtactac  
ctgcagaatg  
4741 ggcgggatat gtacgtggac caggaactgg acatcaaccg gctgtccgac  
tacgatgtgg  
4801 acgctatcgt gcctcagagc tttctgaagg acgactccat cgataacaaa  
gtgctgactc  
4861 ggagcgacaa gaaccggggc aagagcgaca acgtgccctc cgaagaggtc  
gtgaagaaga  
4921 tgaagaacta ctggcgccag ctgctgaatg ccaagctgat taccagagg  
aagttcgaca  
4981 atctgaccaa ggccgagaga ggcggcctga gcgaactgga taaggccggc  
ttcatcaaga  
5041 gacagctggt ggaaaccgg cagatcacia agcacgtggc acagatcctg  
gactcccga  
5101 tgaacactaa gtacgacgag aacgacaaac tgatccggga agtgaaagtg  
atcacctga  
5161 agtccaagct ggtgtccgat ttccggaagg atttccagtt ttacaaagtg  
cgcgagatca  
5221 acaactacca ccacgccac gacgcctacc tgaacgccgt cgtgggaacc  
gcctgatca  
5281 aaaagtacc taagctggaa agcgagttcg tgtacggcga ctacaaggtg  
tacgacgtgc  
5341 ggaagatgat cgccaagagc gagcaggaaa tcggcaaggc taccgccaag  
tacttcttct  
5401 acagcaacat catgaacttt ttcaagaccg agattaccct ggccaacggc  
gagatccgga  
5461 agcggcctct gatcgagaca aacggcgaaa caggcgagat cgtgtgggat  
aagggccggg  
5521 actttgccac cgtgcggaaa gtgctgtcta tgcccaagt gaatatcgtg  
aaaaagaccg



5581 aggtgcagac aggcggcttc agcaaagagt ctatcctgcc caagaggaac  
agcgacaagc  
5641 tgatcgccag aaagaaggac tgggacccta agaagtacgg cggcttcgac  
agccccaccg  
5701 tggcctattc tgtgctggtg gtggcceaag tggaaaaggg caagtccaag  
aaactgaaga  
5761 gtgtgaaaga gctgctgggg atcaccatca tggaaagaag cagcttcgag  
aagaatccca  
5821 tcgactttct ggaagccaag ggctacaaag aagtgaaaaa ggacctgatc  
atcaagctgc  
5881 ctaagtactc cctgttcgag ctggaaaacg gccggaagag aatgctggcc  
tctgccggcg  
5941 aactgcagaa gggaaacgaa ctggccctgc cctccaaata tgtgaacttc  
ctgtacctgg  
6001 ccagccacta tgagaagctg aagggtccc ccgaggataa tgagcagaaa  
cagctgtttg  
6061 tggaacagca caaacactac ctggacgaga tcatcgagca gatcagcgag  
ttctccaaga  
6121 gagtgatcct ggccgacgct aatctggaca aggtgctgag cgcctacaac  
aagcacagag  
6181 acaagcctat cagagagcag gccgagaata tcatccacct gtttacctg  
accaatctgg  
6241 gagcccctgc cgccttcaag tactttgaca ccaccatcga ccggaagagg  
tacaccagca  
6301 ccaaagaggt gctggacgcc accctgatcc accagagcat caccggcctg  
tacgagacac  
6361 ggatcgacct gtctcagctg ggaggcgaca aaaggccggc ggccacgaaa  
aaggccggcc  
6421 agggcaaaaa gaaaaaggcg gccgaaatgg atgctaagtc actaactgcc  
tgggtcccga  
6481 cactggtgac cttcaaggat gtatthgtgg acttcaccag ggaggagtgg  
aagctgctgg  
6541 aactgctca gcagatcgtg tacagaaatg tgatgctgga gaactataag  
aacctggttt  
6601 ccttgggtta tcagcttact aagccagatg tgatcctccg gttggagaag  
ggagaagagc  
6661 cctggctggt ggagagagaa gcggcccgag gatgagaggg cagaggaagc  
cttctaacat  
6721 gcggtgacgt ggaggagaat cccggccctt ccgggatggc caagcctttg  
tctcaagaag  
6781 aatccaccct cattgaaaga gcaacggcta caatcaacag catccccatc  
tctgaagact  
6841 acagcgtcgc cagcgcagct ctctctagcg acggccgcat cttcactggt  
gtcaatgtat  
6901 atcattttac tgggggacct tgtgcagaac tcgtggtgct gggcaactgct  
gctgctgcgg  
6961 cagctggcaa cctgacttgt atcgtcgca tcggaaatga gaacaggggc  
atcttgagcc  
7021 cctgcggacg gtgccgacag gtgcttctcg atctgcatcc tgggatcaaa  
gccatagtga  
7081 aggacagtga tggacagccg acggcagttg ggattcgtga attgctgccc  
tctggttatg  
7141 tgtgggaggg ctaataagtc gacaatcaac ctctggatta caaaatttgt  
gaaagattga

7201 ctgggtattct taactatggt gctcctttta cgctatgtgg atacgctgct  
ttaatgcctt  
7261 tgtatcatgc tattgcttcc cgtatggcct tcattttctc ctccttgat  
aaatcctggt  
7321 tgctgtctct ttatgaggag ttgtggccc ttgtcaggca acgtggcgtg  
gtgtgcactg  
7381 tgtttgctga cgcaaccccc actggttggg gcattgccac cacctgtcag  
ctcctttccg  
7441 ggactttcgc tttccccctc cctattgcca cggcggaact catcgccgcc  
tgccttgccc  
7501 gctgctggac aggggctcgg ctggtgggca ctgacaattc cgtggtgttg  
tcggggaaat  
7561 catcgtcctt tccttggctg ctgcctgtg ttgccacctg gattctgcgc  
gggacgtcct  
7621 tctgctacgt cccttcggcc ctcaatccag cggaccttcc ttcccgggc  
ctgctgcccg  
7681 ctctgcggcc tcttccgct ctccgccttc gccctcagac gagtcggatc  
tctctttggg  
7741 ccgcctcccc gcctggtacc tttaagacca atgacttaca aggcagctgt  
agatcttagc  
7801 cactttttaa aagaaaagg gggactggaa gggctaattc actcccaacg  
aagataagat  
7861 ctgctttttg cttgtactgg gtctctctgg ttagaccaga tctgagcctg  
ggagctctct  
7921 ggctaactag ggaaccact gcttaagcct caataaagct tgccttgagt  
gcttcaagta  
7981 gtgtgtgccc gtctgttgtg tgactctggt aactagagat ccctcagacc  
cttttagtca  
8041 gtgtggaaaa tctctagcag tagtagttca tgtcatctta ttattcagta  
ttataactt  
8101 gcaaagaaat gaatatcaga gagtgagagg aacttgttta ttgcagctta  
taatggttac  
8161 aaataaagca atagcatcac aaatttcaca aataaagcat ttttttact  
gcattctagt  
8221 tgtggtttgt ccaaactcat caatgtatct tatcatgtct ggctctagct  
atcccgcgcc  
8281 taactccgcc catcccgcct ctaactccgc ccagttccgc ccattctccg  
ccccatggct  
8341 gactaatttt ttttatttat gcagaggccg aggccgcctc ggcctctgag  
ctattccaga  
8401 agtagtgagg aggccttttt ggaggcctag acttttgag agaccaaatt  
cgtaatcatg  
8461 tcatagctgt ttctgtgtg aaattgttat ccgctcacia ttccacacia  
catacagacc  
8521 ggaagcataa agtgtaaage ctggggtgcc taatgagtga gctaactcac  
attaattgag  
8581 ttgcgctcac tgcccgcttt ccagtcggga aacctgtcgt gccagctgca  
ttaatgaatc  
8641 ggccaacgag cggggagagg cggtttgctg attgggcgct cttccgcttc  
ctcgtcact  
8701 gactcgtgc gctcggctgt tcggctgcgg cgagcggat cagctcactc  
aaaggcggta  
8761 atacggttat ccacagaatc aggggataac gcaggaaaga acatgtgagc  
aaaaggccag

8821 caaaaggcca ggaaccgtaa aaaggccgcg ttgctggcgt ttttccatag  
gctccgcccc  
8881 cctgacgagc atcacaaaaa tcgacgctca agtcagaggt ggcgaaaccc  
gacaggacta  
8941 taaagatacc aggcgtttcc ccctggaagc tcctcgtgc gctctcctgt  
tccgaccctg  
9001 ccgcttaccg gatacctgtc cgcctttctc ccttcgggaa gcgtggcgct  
ttctcatagc  
9061 tcacgctgta ggtatctcag ttcgggtgtag gtcgttcgct ccaagctggg  
ctgtgtgcac  
9121 gaaccccccg ttcagcccga ccgctgcgcc ttatccggta actatcgtct  
tgagtccaac  
9181 ccggtaaagc acgacttata gccactggca gcagccactg gtaacaggat  
tagcagagcg  
9241 aggtatgtag gcggtgctac agagtctctg aagtgggtggc ctaactacgg  
ctacactaga  
9301 agaacagtat ttggtatctg cgctctgctg aagccagtta ccttcgga  
aagagttggt  
9361 agctcttgat ccgcaaaaa aaccaccgct ggtagcgggt gttttttgt  
ttgcaagcag  
9421 cagattacgc gcagaaaaaa aggatctcaa gaagatcctt tgatcttttc  
tacggggtct  
9481 gacgctcagt ggaacgaaaa ctcacgtaa gggattttgg tcatgagatt  
atcaaaaagg  
9541 atcttcacct agatcctttt aaattaaaaa tgaagtttta aatcaatcta  
aagtatatat  
9601 gagtaaactt ggtctgacag ttaccaatgc ttaatcagtg aggcacctat  
ctcagcgatc  
9661 tgtctatttc gttcatccat agttgcctga ctccccgctg tgtagataac  
tacgatacgg  
9721 gagggcttac catctggccc cagtgctgca atgataccgc gagaccacg  
ctcaccggct  
9781 ccagatztat cagcaataaa ccagccagcc ggaagggccg agcgcagaag  
tggctctgca  
9841 actttatccg cctccatcca gtctattaat tgttgccggg aagctagagt  
aagtagttcg  
9901 ccagttaata gtttgcgcaa cgttgttgcc attgctacag gcatcgtgg  
gtcagcctcg  
9961 tcgtttggtg ttgcttcatt cagctccggt tcccaacgat caaggcgagt  
tacatgatcc  
10021 cccatgttgt gcaaaaaagc ggtagctcc ttcggctctc cgatcgttgt  
cagaagtaag  
10081 ttggccgcag tgttatcact catggttatg gcagcactgc ataattctct  
tactgtcatg  
10141 ccatccgtaa gatgcttttc tgtgactggt gagtactcaa ccaagtcatt  
ctgagaatag  
10201 tgtatgcggc gaccgagttg ctcttgcccg gcgtcaatac gggataatac  
cgcgccacat  
10261 agcagaactt taaaagtgtc catcattgga aaacgttctt cggggcgaaa  
actctcaagg  
10321 atcttaccgc tgttgagatc cagttcgatg taaccactc gtgcacccaa  
ctgatcttca  
10381 gcatctttta ctttcaccag cgtttctggg tgagcaaaaa caggaaggca  
aatgccgca

```
10441 aaaaagggaa taagggcgac acggaaatgt tgaataactca tactcttcct
ttttcaatat
10501 tattgaagca tttatcaggg ttattgtctc atgagcggat acatatttga
atgtatttag
10561 aaaaataaac aaataggggt tccgcgcaca tttccccgaa aagtgccacc
tgacgtctaa
10621 gaaaccatta ttatcatgac attaacctat aaaaataggc gtatcacgag
gccctttcgt
10681 ctgcgcggtt tcggtgatga cggtgaaaac ctctgacaca tgcagctccc
ggagacggtc
10741 acagcttgtc tgtaagcggg tgccgggagc agacaagccc gtcagggcgc
gtcagcgggt
10801 gttggcgggt gtcggggctg gcttaactat gcggcatcag agcagattgt
actgagagtg
10861 caccatatgc ggtgtgaaat accgcacaga tgcgtaagga gaaaataccg
catcaggcgc
10921 cattcgccat tcaggctgcg caactgttgg gaagggcgat cggtgccggc
ctcttcgcta
10981 ttacgccagc tggcgaaagg gggatgtgct gcaaggggat taagttgggt
aacgccaggg
11041 ttttcccagt cacgacgttg taaaacgacg gccagtgcca agctg
//
```