pCAGGS

PVT1020 2ug Lot no 1901093

Store at -20℃ Expiry date

pCAGGS Information

Promoter: CAG promoter

Replicator: SV40 ori, ori

Terminator: beta -globin poly (A) signal

Plasmid classification: lactation serial plasmid; lactation expression plasmid; pCAG series plasmid.

Plasmid size: 4801bp

Prokaryotic resistance: ampicillin Amp (100 u g/ml)

Cloned strains of Escherichia coli, DH5 A and other Escherichia coli

Culture conditions: 37 centigrade, aerobic, LB

Expression host: mammalian cells such as 293T

Culture conditions: 37℃, 5%CO2

Induction mode: no induction, instantaneous expression

5'sequencing primers: pcaggs-F (GTTCGGCTTCTGGCGTGT)

3'sequencing primers: pcaggs-R (TATGTCCTTCCGAGTGAGAG)

pCAGGS Description

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pCAGGS plasmid can be used to express gene efficiently under the control of chicken b- actin, rabbit b- globulin heterozygous promoter (CAG), and human CMV-IE enhancer in various mammalian cells. The CAG promoter sequence is part of the chicken b- actin promoter, the first exon and the first intron (it seems to have strong enhanced subtype activity. " It is linked to the rabbit b- globin fragment, the 3'part of the second intron includes the branching point needed for normal splicing reaction and the 5' portion of the third exon.

This plasmid is useful for highly efficient expression of genes under the control of the AG promoter and the human CMV-IE enhancer in various mammalian cells.The AG promoter sequence consists of the chicken β-actin promoter, the first exon and part of the first intron (that seems to have a strong enhancer-like activity) linked to a rabbit β-globin fragment, consisting of a 3' part of the second intron (inclusive a branch point which is required for normal splicing reactions) and a 5' part of the third exon.When cloning a fragment downstream from the lac promoter it may be advisable to use lacIq strains in order to prevent fortuitous expression of a possibly noxious polypeptide.

pCAGGS Map

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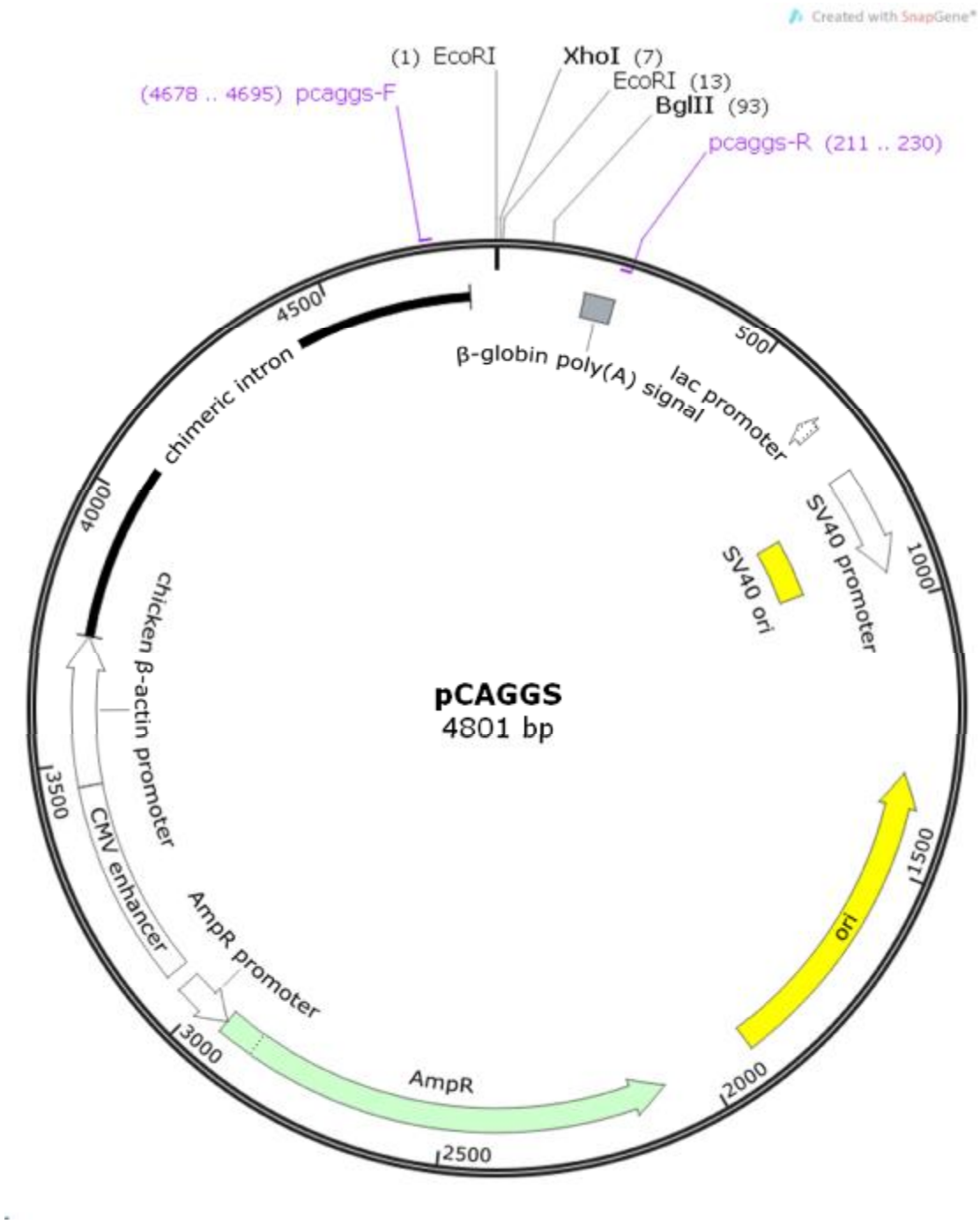

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pCAGGS Sequences

LOCUS Exported 4801 bp ds-DNA circular SYN 18-MAY-2017

DEFINITION synthetic circular DNA

KEYWORDS pCAGGS

SOURCE synthetic DNA construct

ORGANISM synthetic DNA construct

REFERENCE 1 (bases 1 to 4801)

TITLE Direct Submission

JOURNAL Exported Thursday, May 18, 2017

FEATURES Location/Qualifiers

source 1..4801

/organism="synthetic DNA construct"

/mol_type="other DNA"

polyA_site 158..213

/note="beta-globin poly(A) signal"

/note="rabbit beta-globin polyadenylation signal"

primer_bind complement(574..590)

/note="M13 rev"

/note="common sequencing primer, one of multiple similar variants"

protein_bind 598..614

/bound_moiety="lac repressor encoded by lacI"

/note="lac operator"

/note="The lac repressor binds to the lac operator to inhibit transcription in E. coli. This inhibition can be relieved by adding lactose or isopropyl-beta-D-thiogalactopyranoside (IPTG)."

promoter complement(622..652)

/note="lac promoter"

/note="promoter for the E. coli lac operon"

protein_bind 666..687

/bound_moiety="E. coli catabolite activator protein"

/note="CAP binding site"

/note="CAP binding activates transcription in the presence

of cAMP."

promoter 746..941

/note="SV40 promoter"

/note="SV40 early promoter"

rep_origin 792..927

/note="SV40 ori"

/note="SV40 origin of replication"

polyA_signal 947..1081

/note="SV40 poly(A) signal"

/note="SV40 polyadenylation signal"

rep_origin complement(1319..1907)

/direction=LEFT

/note="ori"

/note="high-copy-number ColE1/pMB1/pBR322/pUC origin of

replication"

CDS complement(2078..2938)

/codon_start=1

/gene="bla"

/product="beta-lactamase"

/note="AmpR"

/note="confers resistance to ampicillin, carbenicillin, and

related antibiotics"

/translation="MSIQHFRVALIPFFAAFCLPVFAHPETLVKVKDAEDQLGA
RVGYI

ELDLNSGKILESFRPEERFPMMSTFKVLLCGAVLSRIDAGQEQLGRRIHYS
QNDLVEYS

PVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTTIGGPKELTAFLHNMG
DHVTRLDRW

EPELNEAIPNDERDTTMPVAMATTLRKLLTGELLTLASRQQLIDWMEADK
VAGPLLRSA

LPAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIYTTGSQATMDERN
RQIAEIGAS

LIKHW"

promoter complement(2939..3043)

/gene="bla"

/note="AmpR promoter"

enhancer 3074..3453

/note="CMV enhancer"

/note="human cytomegalovirus immediate early enhancer"

promoter 3455..3732

/note="chicken beta-actin promoter"

intron 3733..4750

/note="chimeric intron"

/note="chimera between introns from chicken beta-actin and

rabbit beta-globin"

ORIGIN

1 ttcctcgagg aattcactcc tcaggtgcag gctgcctatc agaaggtggt ggctggtgtg

61 gccaatgccc tggctcacaa ataccactga gatctttttc cctctgccaa aaattatggg

121 gacatcatga agccccttga gcatctgact tctggctaat aaaggaaatt tattttcatt

181 gcaatagtgt gttggaattt tttgtgtctc tcactcggaa ggacatatgg gagggcaaat

241 catttaaaac atcagaatga gtatttggtt tagagtttgg caacatatgc ccatatgctg

301 gctgccatga acaaaggttg gctataaaga ggtcatcagt atatgaaaca gccccctgct

361 gtccattcct tattccatag aaaagccttg acttgaggtt agatttttt tatattttgt

421 tttgtgttat ttttttcttt aacatcccta aaattttcct tacatgtttt actagccaga

481 ttttttcctcc tctcctgact actcccagtc atagctgtcc ctcttctctt atggagatcc

541 ctcgacctgc agcccaagct tggcgtaatc atggtcatag ctgtttcctg tgtgaaattg

601 ttatccgctc acaattccac acaacatacg agccggaagc ataaagtgta aagcctgggt

661 gcctaatgag tgagctaact cacattaatt gcgttgcgct cactgcccgc tttccagtcg

721 ggaaacctgt cgtgccagcg gatccgcatc tcaattagtc agcaaccata gtcccgcccc

781 taactccgcc catcccgccc ctaactccgc ccagttccgc ccattctccg ccccatggct

841 gactaatttt ttttatttat gcagaggccg aggccgcctc ggcctctgag ctattccaga

901 agtagtgagg aggcttttt ggaggcctag gcttttgcaa aaagctaact tgtttattgc

961 agcttataat ggttacaaat aaagcaatag catcacaaat ttcacaaata aagcattttt

1021 ttcactgcat tctagttgtg gtttgtccaa actcatcaat gtatcttatc atgtctggat

1081 ccgctgcatt aatgaatcgg ccaacgcgcg gggagaggcg gtttgcgtat tgggcgctct

1141 tccgcttcct cgctcactga ctcgctgcgc tcggtcgttc ggctgcggcg agcggtatca

1201 gctcactcaa aggcggtaat acggttatcc acagaatcag ggataacgca ggaaagaaca

1261 tgtgagcaaa aggccagcaa aaggccagga accgtaaaaa ggccgcgttg ctggcgtttt

1321 tccataggct ccgcccccct gacgagcatc acaaaaatcg acgctcaagt cagaggtggc

1381 gaaacccgac aggactataa agataccagg cgtttccccc tggaagctcc ctcgtgcgct

1441 ctcctgttcc gaccctgccg cttaccggat acctgtccgc ctttctccct tcgggaagcg

1501 tggcgctttc tcatagctca cgctgtaggt atctcagttc ggtgtaggtc gttcgctcca

1561 agctgggctg tgtgcacgaa ccccccgttc agcccgaccg ctgcgcctta tccggtaact

1621 atcgtcttga gtccaacccg gtaagacacg acttatcgcc actggcagca gccactggta

1681 acaggattag cagagcgagg tatgtaggcg gtgctacaga gttcttgaag tggtggccta

1741 actacggcta cactagaaga acagtatttg gtatctgcgc tctgctgaag ccagttacct

1801 tcggaaaaag agttggtagc tcttgatccg gcaaacaaac caccgctggt agcggtggtt

1861 tttttgtttg caagcagcag attacgcgca gaaaaaaagg atctcaagaa gatcctttga

1921 tcttttctac ggggtctgac gctcagtgga acgaaaactc acgttaaggg attttggtca

1981 tgagattatc aaaaaggatc ttcacctaga tccttttaaa ttaaaaatga agttttaaat

2041 caatctaaag tatatatgag taaacttggt ctgacagtta ccaatgctta atcagtgagg

2101 cacctatctc agcgatctgt ctatttcgtt catccatagt tgcctgactc cccgtcgtgt

2161 agataactac gatacgggag ggcttaccat ctggccccag tgctgcaatg ataccgcgag

2221 acccacgctc accggctcca gatttatcag caataaacca gccagccgga agggccgagc

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2341 ctagagtaag tagttcgcca gttaatagtt tgcgcaacgt tgttgccatt gctacaggca

2401 tcgtggtgtc acgctcgtcg tttggtatgg cttcattcag ctccggttcc caacgatcaa

2461 ggcgagttac atgatccccc atgttgtgca aaaaagcggt tagctccttc ggtcctccga

2521 tcgttgtcag aagtaagttg gccgcagtgt tatcactcat ggttatggca gcactgcata

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2641 agtcattctg agaatagtgt atgcggcgac cgagttgctc ttgcccggcg tcaatacggg

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2821 cacccaactg atcttcagca tcttttactt tcaccagcgt ttctgggtga gcaaaaacag

2881 gaaggcaaaa tgccgcaaaa aagggaataa gggcgacacg gaaatgttga atactcatac

2941 tcttccтttt tcaatattat tgaagcattt atcagggtta ttgtctcatg agcggataca

3001 tatttgaatg tatttagaaa aataaacaaa taggggttcc gcgcacattt ccccgaaaag

3061 tgccacctgg gtcgacattg attattgact agttattaat agtaatcaat tacggggtca

3121 ttagttcata gcccatatat ggagttccgc gttacataac ttacggtaaa tggcccgcct

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3241 acgccaatag ggactttcca ttgacgtcaa tgggtggagt atttacggta aactgcccac

3301 ttggcagtac atcaagtgta tcatatgcca agtacgcccc ctattgacgt caatgacggt

3361 aaatggcccg cctggcatta tgcccagtac atgaccttat gggactttcc tacttggcag

3421 tacatctacg tattagtcat cgctattacc atggtcgagg tgagccccac gttctgcttc

3481 actctcccca tctccccccc ctccccaccc ccaattttgt atttatttat tttttaatta

3541 ttttgtgcag cgatgggggc ggggggggggg ggggggcccc ccccaggcgg ggcggggcgg

3601 ggcgaggggc ggggcggggc gaggcggaaa ggtgcggcgg cagccaatca gagcggcgcg

3661 ctccgaaagt ttccttttat ggcgaggcgg cggcggcggc ggccctataa aaagcgaagc

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4141 gtgcggggtg tgtgcgtggg ggggtgagca gggggtgtgg gcgcgtcggt cgggctgcaa

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4201 ccccccctgc acccccctcc ccgagttgct gagcacggcc cggcttcggg tgcggggctc

4261 cgtacggggc gtggcgcggg gctcgccgtg ccgggcgggg ggtggcggca ggtgggggtg

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4801 a

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