



LOCUS Exported 5461 bp ds-DNA circular SYN 16-FEB-2016

DEFINITION Mammalian cell expression vector with the CMV promoter and a neomycin (G418) resistance marker.

ACCESSION U47120

VERSION .

KEYWORDS pCI-neo (Updated)

SOURCE synthetic DNA construct

ORGANISM synthetic DNA construct

REFERENCE 1 (bases 1 to 5461)

AUTHORS Promega

TITLE Direct Submission

JOURNAL Exported Tuesday, Feb 16, 2016 from SnapGene 3.0.3
<http://www.snapgene.com>

FEATURES Location/Qualifiers
 source 1..5461
 /organism="synthetic DNA construct"
 /lab_host="Mammalian Cells"

```

        enhancer          /mol_type="other DNA"
                          213..517
                          /note="CMV enhancer"
                          /note="human cytomegalovirus immediate early
enhancer"
        promoter         691..729
                          /note="minimal CMV promoter"
                          /note="human cytomegalovirus (CMV) immediate early
                          promoter"
        intron           890..1022
                          /note="chimeric intron"
                          /note="chimera between introns from human beta-
globin and
        promoter         immunoglobulin heavy chain genes"
                          1067..1085
                          /note="T7 promoter"
                          /note="promoter for bacteriophage T7 RNA polymerase"
        misc_feature     1085..1126
                          /note="MCS"
                          /note="multiple cloning site"
        promoter         complement(1130..1147)
                          /note="T3 promoter"
                          /note="promoter for bacteriophage T3 RNA polymerase
                          (shorter by one base than the standard T3 promoter)"
        polyA_signal     1165..1286
                          /note="SV40 poly(A) signal"
                          /note="SV40 polyadenylation signal"
        rep_origin       1472..1927
                          /direction=RIGHT
                          /note="f1 ori"
                          /note="f1 bacteriophage origin of replication; arrow
                          indicates direction of (+) strand synthesis"
        promoter         2044..2401
                          /note="SV40 promoter"
                          /note="SV40 enhancer and early promoter"
        rep_origin       2252..2387
                          /note="SV40 ori"
                          /note="SV40 origin of replication"
        CDS              2452..3246
                          /codon_start=1
                          /gene="aph(3')-II (or nptII)"
                          /product="aminoglycoside phosphotransferase from
Tn5"
                          /note="NeoR/KanR"
                          /note="confers resistance to neomycin, kanamycin,
and G418
                          (Geneticin)"

/translation="MIEQDGLHAGSPAAWVERLFGYDWAQQQTIGCSDAAVFRLSAQGRP
VLFVKTDLSGALNELQDEAARLSWLATTGVPCA AVL DVVTEAGR DWLLLGEVPGQDLLS
SHLAPA EKVSIMADAM RRLHTLDPATCFD HQAKHRIERARTRMEAGLVDQDDLDEEHQ

```

```
GLAPAE L FAR L K AR M P D G E D L V V T H G D A C L P N I M V E N G R F S G F I D C G R L G V A D R Y Q D I A
      L A T R D I A E E L G G E W A D R F L V L Y G I A A P D S Q R I A F Y R L L D E F F "
polyA_signal 3310..3358
              /note="synthetic polyadenylation signal"
promoter     3664..3768
              /gene="bla"
              /note="AmpR promoter"
CDS          3769..4629
              /codon_start=1
              /gene="bla"
              /product="beta-lactamase"
              /note="AmpR"
              /note="confers resistance to ampicillin,
carbenicillin, and
              related antibiotics"

/translation="MSIQHFRVALIPFFAAFC L PVFAHPETLVKVKDAEDQLGARVGYI
ELD L N S G K I L E S F R P E E R F P M M S T F K V L L C G A V L S R I D A G Q E Q L G R R I H Y S Q N D L V E Y S
P V T E K H L T D G M T V R E L C S A A I T M S D N T A A N L L L T T I G G P K E L T A F L H N M G D H V T R L D R W
E P E L N E A I P N D E R D T T M P V A M A T T L R K L L T G E L L T L A S R Q Q L I D W M E A D K V A G P L L R S A
L P A G W F I A D K S G A G E R G S R G I I A A L G P D G K P S R I V V I Y T T G S Q A T M D E R N R Q I A E I G A S
      L I K H W "
rep_origin   4800..5388
              /direction=RIGHT
              /note="ori"
              /note="high-copy-number Cole1/pMB1/pBR322/pUC origin
of
              replication"
ORIGIN
      1 tcaatattgg ccattagcca tattattcat tggttatata gcataaatca
atattggcta
      61 ttggccattg catacgttgt atctatatca taatatgtac atttatattg
gctcatgtcc
      121 aatatgaccg ccatgttggc attgattatt gactagttat taatagtaat
caattacggg
      181 gtcattagtt catagcccat atatggagtt ccgcgttaca taacttacgg
taaatggccc
      241 gcctggctga ccgccaacg acccccgcc attgacgtca ataatgacgt
atgttcccat
      301 agtaacgcca atagggactt tccattgacg tcaatgggtg gagtatttac
ggtaaactgc
      361 ccaattggca gtacatcaag tgtatcatat gccaagtccg ccccctattg
acgtcaatga
      421 cggtaaatgg cccgcctggc attatgcca gtacatgacc ttacgggact
ttctacttg
      481 gcagtacatc tacgtattag tcatcgctat taccatggtg atgcgggtttt
ggcagtacac
      541 caatgggcgt ggatagcggg ttgactcacg gggatttcca agtctccacc
ccattgacgt
```

601 caatgggagt ttgttttggc accaaaatca acgggacttt ccaaaatgtc
gtaacaactg
661 cgatcgcccg ccccgttgac gcaaattgggc ggtagggcgtg tacgggtggga
ggtctatata
721 agcagagctc gtttagtgaa ccgtcagatc actagaagct ttattgcggt
agtttatcac
781 agttaaattg ctaacgcagt cagtgccttct gacacaacag tctcgaactt
aagctgcagt
841 gactctctta aggtagcctt gcagaagttg gtcgtgaggc actgggcagg
taagtatcaa
901 ggttacaaga caggtttaag gagaccaata gaaactgggc ttgtcgagac
agagaagact
961 cttgcgtttc tgataggcac ctattggctct tactgacatc cactttgcct
ttctctccac
1021 aggtgtccac tcccagttca attacagctc ttaaggctag agtacttaat
acgactcact
1081 ataggctagc ggcgcgccga attcgtcgac ttaattaagc ggccgcttcc
ctttagttag
1141 ggттаатgct tcgagcagac atgataagat acattgatga gtttgacaa
accacaacta
1201 gaatgcagtg aaaaaaatgc tttatttgtg aaatttgtga tgctattgct
ttatttghtaa
1261 ccattataag ctgcaataaa caagttaaca acaacaattg cattcatttt
atgtttcagg
1321 ttcaggggga gatgtgggag gttttttaa gcaagtaaaa cctctacaaa
tgtggtaaaa
1381 tccgataagg atcgatccgg gctggcgtaa tagcgaagag gcccgaccg
atcgccctc
1441 ccaacagttg cgcagcctga atggcgaatg gacgcgcct gtagcggcgc
attaagcgcg
1501 gcgggtgtgg tggttacgcg cagcgtgacc gctacacttg ccagcgcct
agcggccgct
1561 cttttcgctt tttcccttc ctttctcgcc acgttcgccc gctttccccg
tcaagctcta
1621 aatcgggggc tccctttagg gttccgattt agtgctttac ggcacctcga
ccccaaaaa
1681 cttgattagg gtgatggttc acgtagtggg ccatcgccct gatagacggt
ttttcgccct
1741 ttgacgttgg agtccacggt ctttaatagt ggactcttgt tccaaactgg
aacaactc
1801 aaccctatct cggcttatte ttttgattta taagggattt tgccgatttc
ggcctattgg
1861 ttaaaaaatg agctgattta acaaaaattt aacgcgaatt ttaacaaaat
attaacgctt
1921 acaatttcct gatgcggtat tttctcctta cgcactctgtg cggtatttca
caccgcatac
1981 gcggatctgc gcagcaccat ggcctgaaat aacctctgaa agaggaactt
ggttaggtac
2041 cttctgaggc ggaaagaacc agctgtggaa tgtgtgtcag ttaggggtgtg
gaaagtcccc
2101 aggctcccca gcaggcagaa gtatgcaaag catgcatctc aattagtcag
caaccaggtg
2161 tggaaagtcc ccaggctccc cagcaggcag aagtatgcaa agcatgcatc
tcaattagtc

2221 agcaaccata gtcccgcccc taactccgcc catcccgcc ctaactccgc
ccagttccgc
2281 ccattctccg ccccatggct gactaatttt ttttatttat gcagaggccg
aggccgcctc
2341 ggcctctgag ctattccaga agtagtgagg aggctttttt ggaggcctag
gcttttgcaa
2401 aaagcttgat tcttctgaca caacagtctc gaacttaagg ctagagccac
catgattgaa
2461 caagatggat tgcacgcagg ttctccgcc gcttgggtgg agaggctatt
cggctatgac
2521 tgggcacaac agacaatcgg ctgctctgat gccgccgtgt tccggctgtc
agcgcagggg
2581 cgcccggttc tttttgtcaa gaccgacctg tccggtgccc tgaatgaact
gcaggacgag
2641 gcagcgcggc tatcgtggct ggccacgacg ggcgttcctt gcgcagctgt
gctcgacgtt
2701 gtcactgaag cgggaagga ctggctgcta ttgggcgaag tgccggggca
ggatctcctg
2761 tcatctcacc ttgctcctgc cgagaaagta tccatcatgg ctgatgcaat
gcggcggctg
2821 catacgttg atccggctac ctgcccattc gaccaccaag cgaaacatcg
catcgagcga
2881 gcacgtactc ggatggaagc cggctctgtc gatcaggatg atctggacga
agagcatcag
2941 gggctcgcgc cagccgaact gttcgccagg ctcaaggcgc gcatgccga
cggcgaggat
3001 ctcgctcgtga cccatggcga tgccctgctg ccgaatatca tgggtgaaaa
tggccgcttt
3061 tctggattca tcgactgtgg ccggctgggt gtggcggacc gctatcagga
catagcgttg
3121 gctacccgtg atattgctga agagcttggc ggcgaaatggg ctgaccgctt
cctcgtgctt
3181 tacggtatcg ccgctcccga ttccgcagcgc atcgccttct atcgccttct
tgacgagttc
3241 ttctgagcgg gactctgggg ttccgaaatga ccgaccaagc gacgcccaac
ctgccatcac
3301 gatggccgca ataaaatata tttattttca ttacatctgt gtgttggttt
tttgtgtgaa
3361 tcgatagcga taaggatccg cgtatggtgc actctcagta caatctgctc
tgatgccgca
3421 tagttaagcc agccccgaca cccgcccaaca cccgctgacg cggcctgacg
ggcttgtctg
3481 ctcccggcat ccgcttacag acaagctgtg accgtctccg ggagctgcat
gtgtcagagg
3541 ttttcaccgt catcaccgaa acgcgcgaga cgaaagggcc tcgtgatacg
cctattttta
3601 taggttaatg tcatgataat aatggtttct tagacgtcag gtggcacttt
tcggggaaat
3661 gtgcgcggaa ccctatttg tttatttttc taaatacatt caaatatgta
tccgctcatg
3721 agacaataac cctgataaat gcttcaataa tattgaaaaa ggaagagtat
gagtattcaa
3781 catttccgtg tcgcccttat tccctttttt gcggcatttt gccttcctgt
ttttgctcac

3841 ccagaaacgc tggtgaaagt aaaagatgct gaagatcagt tgggtgcacg
agtgggttac
3901 atcgaactgg atctcaacag cggtaagatc cttgagagtt ttcgccccga
agaacgtttt
3961 ccaatgatga gcacttttaa agttctgcta tgtggcgcggt tattatcccc
tattgacgcc
4021 gggcaagagc aactcgggtcg ccgcatacac tattctcaga atgacttggt
tgagtactca
4081 ccagtcacag aaaagcatct tacggatggc atgacagtaa gagaattatg
cagtgtgcc
4141 ataaccatga gtgataacac tgcggccaac ttacttctga caacgatcgg
aggaccgaag
4201 gagctaaccg cttttttgca caacatgggg gatcatgtaa ctgccttga
tcgttgggaa
4261 ccggagctga atgaagccat accaaacgac gagcgtgaca ccacgatgcc
tgtagcaatg
4321 gcaacaacgt tgcgcaaact attaactggc gaactactta ctctagcttc
ccggcaacaa
4381 ttaatagact ggatggaggc ggataaagtt gcaggaccac ttctgcgctc
ggccttccg
4441 gctggctggt ttattgctga taaatctgga gccggtgagc gtgggtctcg
cggatcatt
4501 gcagcactgg ggccagatgg taagccctcc cgtatcgtag ttatctacac
gacggggagt
4561 caggcaacta tggatgaacg aaatagacag atcgctgaga taggtgcctc
actgattaag
4621 cattggtaac tgtcagacca agtttactca tatatacttt agattgattt
aaaacttcat
4681 ttttaattta aaaggatcta ggtgaagatc ctttttgata atctcatgac
caaatccct
4741 taacgtgagt tttcgttcca ctgagcgtca gaccccgtag aaaagatcaa
aggatcttct
4801 tgagatcctt ttttctgcg cgtaatctgc tgcttgcaaa caaaaaaacc
accgtacca
4861 gcggtggttt gtttgccgga tcaagagcta ccaactcttt ttccgaaggt
aactggcttc
4921 agcagagcgc agataccaaa tactgttctt ctagtgtagc cgtagttagg
ccaccacttc
4981 aagaactctg tagcaccgcc tacatactc gctctgctaa tcctgttacc
agtggctgct
5041 gccagtggcg ataagtcgtg tcttaccggg ttggactcaa gacgatagtt
accggataag
5101 gcgcagcggc cgggctgaac ggggggttcg tgcacacagc ccagcttga
gcgaacgacc
5161 tacaccgaac tgagatacct acagcgtgag ctatgagaaa gcgccacgct
tcccgaaggg
5221 agaaaggcgg acaggtatcc ggtaagcggc agggtcggaa caggagagcg
cacgaggag
5281 cttccagggg gaaacgcctg gtatctttat agtcctgtcg ggtttcgcca
cctctgactt
5341 gagcgtcgat ttttgtgatg ctcgtcaggg gggcggagcc tatggaaaaa
cgccagcaac
5401 gcggcctttt tacggttcct ggccttttgc tggccttttg ctcacatggc
tcgacagatc

// 5461 t