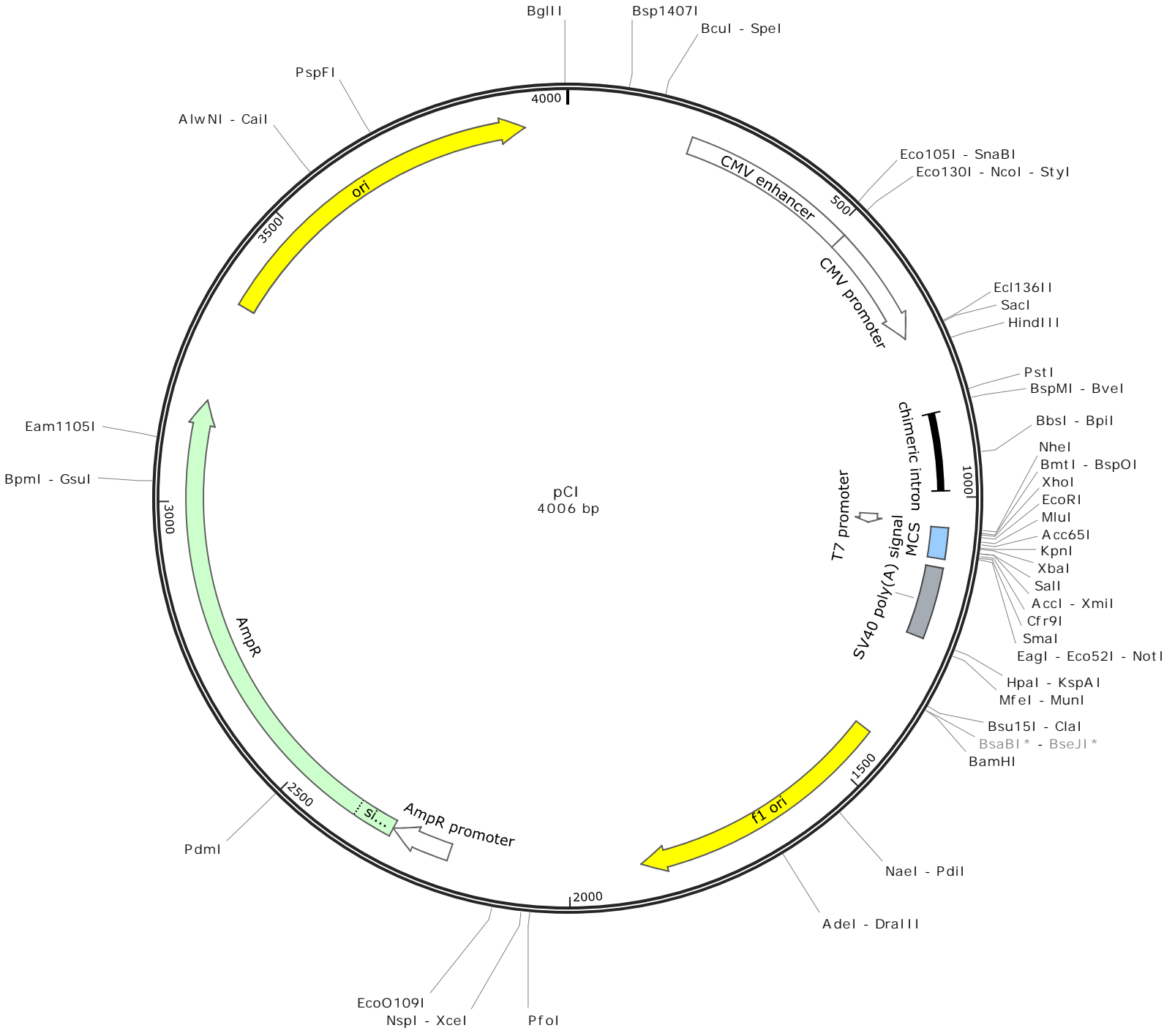


Mammalian cell expression vector with the CMV promoter.





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 chimeric intron

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 AGACTATCCGTGGATAACCAGAATGACTGTAGGTGAAACGGAAAGAGAGGTGTCCACAGGTGAGGGTCAAGTTAATGTCTGAGAAT  
 chimeric intron

AGGCTAGAGTACTTAATACGACTCACTATAGGCTAGCCTCGAGAATTCACGCGTGGTACCTCTAGAGTTCGACCCGGGGCGGCCGCT  
 TCCGATCTCATGAATTATGCTGAGTGATATCCGATCGGAGCTCTTAAGTGCGCACCATGGAGATCTCAGCTGGGCCCGCCGGCGA  
 MCS  
 T7 promoter

NheI BmtI BspOI XhoI EcoRI MluI Acc65I KpnI SalI XmiI AccI Cfr9I SmaI NotI EagI Eco52I

TCGAGCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATT  
 AGCTCGTCTGTACTATTCTATGTAACACTACTCAAACCTGTTTGGTGTGATCTTACGTCACCTTTTTTACGAAATAAACACTTTAA  
 SV40 poly(A) signal

TGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTTATGTTTCAGG  
 AACTACGATAACGAAATAAACATTGGTAATATTCGACGTTATTTGTTCAATTGTTGTTGTTAACGTAAGTAAAATACAAAGTCC  
 SV40 poly(A) signal

HpaI KspAI MfeI MunI

TTCAGGGGGAGATGTGGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTAAAATCGATAAGGATCCGGGCTGGCGTAA  
 AAGTCCCCCTCTACACCCTCCAAAAAATTTTCGTTTCATTTTGGAGATGTTTACACCATTTTAGCTATTCTAGGCCCGACCGCATT  
 TAGCGAAGAGGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGACGCGCCCTGTAGCGGGCGCATTAA  
 ATCGCTTCTCCGGGCGTGGCTAGCGGGAAAGGTTGTCAACGCGTGGACTTACCGCTTACCTGCGCGGGACATCGCCGCGTAATT  
 f1 ori

Clal BseJI\* Bsu15I BsaBI\* BamHI

GC GCGGGCGGGTGTGGTGGTTACGCGCAGCGTGACCGCTACACTTGCCAGCGCCCTAGCGCCCGCTCCTTTTCGCTTTCTTCCCTTC  
 CGCGCCGCCCACACCACCAATGCGCGTGCCTACTGGCGATGTGAACGGTGC GCGGGATCGCGGGCGAGGAAAGCGAAAGAAGGGGAAG  
 f1 ori

CTTTCTCGCCACGTTTCGCCGGCTTTCCCGTCAAGCTCTAAATCGGGGGCTCCCTTTAGGGTTCCGATTTAGTGCTTTACGGCAC  
 GAAAGAGCGGTGCAAGCGGCCGAAAGGGGCGAGTTTCGAGATTTAGCCCCGAGGGGAAATCCCAAGGCTAAATCACGAAATGCCGTG  
 f1 ori

PdII NaeI

Adel  
DraI I

CTCGACCCCAAAAACTTGATTAGGGTGATGGTTCACGTAGTGGGCCATCGCCCTGATAGACGGTTTTTCGCCCTTTGACGTTGG  
GAGCTGGGGTTTTTGAACATAATCCCACTACCAAGTGCATCACCCGGTAGCGGGACTATCTGCCAAAAAGCGGGAAACTGCAACC

1700

f1 ori

AGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACCTGGAACAACACTCAACCCTATCTCGGTCTATTCTTTTGATTTATAAGG  
TCAGGTGCAAGAAATTATCACCTGAGAACAAGGTTTGACCTTGTGTGAGTTGGGATAGAGCCAGATAAGAAAATAAATATTCC

1785

f1 ori

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CTAAAACGGCTAAAGCCGGATAACCAATTTTTACTCGACTAAATTGTTTTTAAATTGCGCTTAAAATTGTTTTATAATTGCGAA

1870

f1 ori

ACAATTTCTGATGCGGTATTTTCTCCTTACGCATCTGTGCGGTATTTACACCCGCATATGGTGCCTCTCAGTACAATCTGCTC  
TGTTAAAGGACTACGCCATAAAAGAGGAATGCGTAGACACGCCATAAAGTGTGGCGTATACCACGTGAGAGTCATGTTAGACGAG

1955

f1 ori

TGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCT  
ACTACGGCGTATCAATTCGGTTCGGGGCTGTGGGCGGTTGTGGGCGACTGCGCGGGACTGCCCGAACAGACGAGGGCCGTAGGCGA

2040

PfoI

XceI  
NspI

EcoO109I

TACAGACAAGCTGTGACCGTCTCCGGGAGCTGCATGTGTGTCAGAGGTTTTACCGTCATCACCGAAACGCGCGAGACGAAAGGGCC  
ATGCTGTTCGACACTGGCAGAGGCCCTCGACGTACACAGTCTCCAAAAGTGGCAGTAGTGGCTTTGCGCGCTCTGCTTTCCCGG

2125

TCGTGATACGCCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTTCTTAGACGTCAGGTGGCACTTTTTCGGGGAAATGTGCG  
AGCACTATGCGGATAAAAATATCCAATTACAGTACTATTATTACCAAAGAATCTGCAGTCCACCGTGAAAAGCCCCTTTACACGC

2210

AmpR promoter

CGGAACCCCTATTTGTTTTATTTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAA  
GCCTTGGGGATAAAACAAATAAAAAGATTTATGTAAGTTTATACATAGGCGAGTACTCTGTTATTGGGACTATTTACGAAGTTATT

2295

AmpR promoter

TATTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTGCTTCCCTGTTTTTTG  
ATAACTTTTTCTTCTCATACTCATAAGTTGTAAGGCACAGCGGGAATAAGGGAAAAAACGCCGTAAAACGGAAGGACAAAAAC

2380

1 5 10 15 20  
M S I Q H F R V A L I P F F A A F C L P V F  
signal sequence  
AmpR

AmpR promoter

CTCACCCAGAAACGCTGGTGAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGAACTGGATCTCAACAG  
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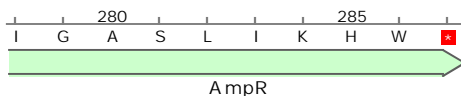
2465

25 30 35 40 45 50  
A H P E T L V K V K D A E D Q L G A R V G Y I E L D L N S  
AmpR



TAGGTGCCTCACTGATTAAGCATTGGTAACTGTCAGACCAAGTTTACTCATATATACTTTAGATTGATTTAAAACCTTCATTTTTA  
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3230

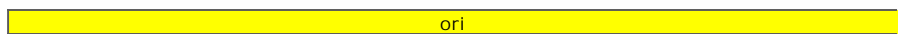


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3315

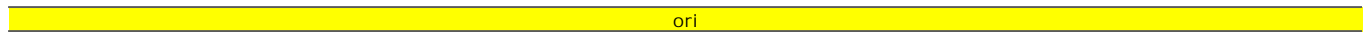
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3400



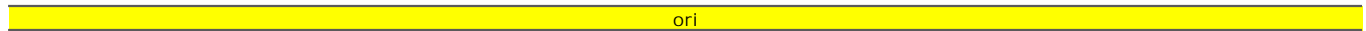
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3485



TACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTG  
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3570



CaiI  
 A|wNI

TTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGT  
 AATGGTCACCGACGACGGTCACCGCTATTTCAGCACAGAATGGCCCAACCTGAGTTCTGCTATCAATGGCCTATTCCGCGTCGCCA

3655



PspFI

CGGGCTGAACGGGGGGTTTCGTGCACACAGCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATG  
 GCCCGACTTGCCCCCAAGCACGTGTGTCGGGTCGAACCTCGCTTGTGATGTGGCTTGACTCTATGGATGTCGCACTCGATAC

3740



AGAAAAGCGCCACGCTTCCCGAAGGGAGAAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCCGGAACAGGAGAGCGCACGAGGGAG  
 TCTTTTCGCGGTGCGAAGGGCTTCCCTCTTTCCGCCTGTCCATAGGCCATTTCGCCGTCCAGCCTTGTCTCTCGCGTGCTCCCTC

3825



CTTCCAGGGGAAACGCCTGGTATCTTTATAGTCTGTGCGGTTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGT  
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3910



CAGGGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTTCTGGCCTTTTGTGTCCTTTTGTGCTCACATGGC  
 GTCCCCCGCCTCGGATACCTTTTTGCGGTGCTTGCGCCGAAAAATGCCAAGGACCGGAAAAACGACCGGAAAAACGAGTGTACCG























3995



BglII

TCGACAGATCT 3'  
 AGCTGTCTAGA 5'

Enzymes	Sites	
AccI	1	1088
Acc65I	1	1075
Adel	1	1655
AlwNI	1	3580
BamHI	1	1343
BbsI	1	928
BcuI	1	152
BglII	1	4001
BmtI	1	1056
BpiI	1	928
Bpml	1	3032
BsaBI	1*	1342*
BseJI	1*	1342*
Bsp1407I	1	96
BspMI	1	844
BspOI	1	1056
Bsu15I	1	1336
BveI	1	844
CaiI	1	3580
Cfr9I	1	1092
Clal	1	1336
DraIII	1	1655
EagI	1	1098
Eam1105I	1	3101
Ecl136II	1	719
Eco52I	1	1098
Eco105I	1	493
Eco130I	1	513
EcoO109I	1	2121
EcoRI	1	1063
GsuI	1	3032
HindIII	1	748
HpaI	1	1241
KpnI	1	1079
KspAI	1	1241
MfeI	1	1250
MluI	1	1069
MunI	1	1250
NaeI	1	1549
NcoI	1	513
NheI	1	1052
NotI	1	1098
NspI	1	2076
PdiI	1	1549
Pdml	1	2501
PfoI	1	2062
PspFI	1	3689
PstI	1	830
SacI	1	721
Sall	1	1087
SmaI	1	1094
SnaBI	1	493
SpeI	1	152
StyI	1	513
XbaI	1	1081
XceI	1	2076
XhoI	1	1058
XmiI	1	1088

Feature	Location	Size (bp)			Type
✓ CMV enhancer /note = human cytomegalovirus immediate early enhancer	213 .. 517	305			enhancer
✓ CMV promoter /note = human cytomegalovirus (CMV) immediate early promoter	518 .. 721	204			promoter
✓ chimeric intron /note = chimera between introns from human $\gamma$ -globin and immunoglobulin heavy chain genes	857 .. 989	133			intron
✓ T7 promoter /note = promoter for bacteriophage T7 RNA polymerase	1034 .. 1052	19			promoter
✓ MCS /note = multiple cloning site	1052 .. 1104	53			misc_feature
✓ SV40 poly(A) signal /note = SV40 polyadenylation signal	1120 .. 1241	122			polyA_signal
✓ f1 ori /direction = RIGHT /note = f1 bacteriophage origin of replication; arrow indicates direction of (+) strand synthesis	1422 .. 1877	456			rep_origin
✓ AmpR promoter /gene = bla	2209 .. 2313	105			promoter
✓ AmpR ▶ 2 segments /gene = bla /product = $\beta$ -lactamase /note = confers resistance to ampicillin, carbenicillin, and related antibiotics /translation = MSIQHFRVALIPFFAAFCPLPVFA,HPETLVKVKDAEDQLGARVGYIELDLSNGKILESFRPEERFPMSTFKVLLCGAVLSRIDAGQE QLGRRIHYSQNDLVEYSPVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTIGGPKELTAFLHNMGDHVTSLDRWEPELNEAIPN DERDITMPVAMATTLRKLTLGELLTLASRQQLIDWMEADKVAAGPLLRSAALPAAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIY TTGSAATMDFRNROIAFIGASIKHW* 286 amino acids = 31.6 kDa	2314 .. 3174	861			CDS
✓ ori /direction = RIGHT /note = high-copy-number ColE1/pMB1/pBR322/pUC origin of replication	3345 .. 3933	589			rep_origin



Description: Mammalian cell expression vector with the CMV promoter.

Created: Monday, May 10, 2004

Last Modified: Saturday, Jan 5, 2013

Accession Number: U47119

Code Number:

Sequence Author: Promega

DNA Type: Synthetic DNA

Laboratory Host Organism: Mammalian Cells

Bacterial Transformation Strain: Unspecified

Dam<sup>+</sup> Dcm<sup>+</sup> EcoKI<sup>+</sup>

Comments:

References: