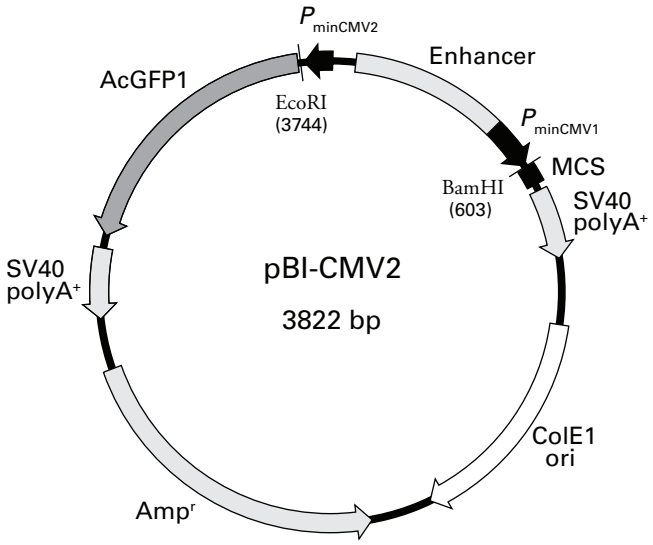
Vector Information

pBI-CMV2 Vector Information PT4441-5

Catalog No. 631631



NheI HindIII
NotI SalI
BamHI MluI EagI ClaI EcoRV

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601  GGGATCCTCT AGTCAGCTGA CGCGTGCTAG CGCGGCCGCA TCGATAAGCT TGTCGACGAT
     CCCTAGGAGA TCAGTCGACT GCGCACGATC GCGCCGGCGT AGCTATTCGA ACAGCTGCTA
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EcoRV

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661  ATCTCCAGAG
     TAGAGGTCTC
```

pBI-CMV2 Vector Map and Multiple Cloning Site.

Description

pBI-CMV2 is a mammalian bidirectional expression vector designed to constitutively express a protein of interest and AcGFP1, a green fluorescent protein derived from *Aequorea coerulescens*. The vector allows straightforward detection of transfected mammalian cells by flow cytometry or fluorescence microscopy, as cells expressing the protein of interest can be quickly identified by screening for AcGFP1 fluorescence.

Protein expression is driven by one of two constitutively active, minimal human cytomegalovirus promoters: $P_{minCMV1}$ (located upstream of the multiple cloning site [MCS]), drives the expression of the protein of interest, and $P_{minCMV2}$ drives the expression of AcGFP1. To allow propagation and selection in *E. coli*, the vector contains a ColE1 origin of replication and an ampicillin resistance gene (Amp^r).

Clontech

United States/Canada
800.662.2566
Asia Pacific
+1.650.919.7300
Europe
+33.(0)1.3904.6880
Japan
+81.(0)77.543.6116

Clontech Laboratories, Inc.
A Takara Bio Company
1290 Terra Bella Ave.
Mountain View, CA 94043
Technical Support (US)
E-mail: tech@clontech.com
www.clontech.com

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Use

pBI-CMV2 is designed to constitutively express a protein of interest and the green fluorescent protein AcGFP1. The gene of interest must contain an initiation codon and a stop codon.

pBI-CMV2 can be transfected into mammalian cells using any standard transfection method. Cells expressing AcGFP1 (excitation and emission maxima: 475 and 505, respectively) can be detected by flow cytometry or fluorescence microscopy 8–12 hr after transfection. AcGFP1 can be detected with standard FITC filter sets.

Location of features

- Enhancer: 64–473
- $P_{minCMV1}$ (minimal human cytomegalovirus promoter 1): 474–599
- MCS (multiple cloning site): 602–663
- SV40 polyA signals: 675–862
- ColE1 origin of replication: 1038–1637
- Amp^r (ampicillin resistance gene): 1799–2659 (complementary)
- SV40 polyA signals: 2795–2982 (complementary)
- AcGFP1 (human codon optimized): 3017–3736
- $P_{minCMV2}$ (minimal human cytomegalovirus promoter 2): 3754–3822

Propagation in *E. coli*

- Recommended host strain: DH5α™ and other general purpose strains.
- Selectable marker: plasmid confers resistance to ampicillin (100 µg/ml) in *E. coli* hosts.
- *E. coli* replication origin: ColE1
- Plasmid incompatibility group: pMB1/ColE1

Note: The vector sequence was compiled from information in the sequence databases, published literature, and other sources, together with partial sequences obtained by Clontech. This vector has not been completely sequenced.