

Product Information

pBICEP-CMV™-1 Expression Vector

Catalog Number **E0779**

Storage Temperature -20 °C

TECHNICAL BULLETIN

Product Description

The pBICEP-CMV-1 bicistronic expression vector is a 5.4 kb derivative of pCMV5¹ used for transient or stable co-expression of an N-terminal 1X FLAG[®] fusion protein and the neomycin resistance gene in mammalian cells.

The promoter-regulatory region of the human cytomegalovirus immediate early promoter^{2,3} drives transcription of the FLAG-fusion construct along with the downstream neomycin resistance gene. The EMCV IRES^{4,5} region controls translation of the neomycin resistance gene by recruiting the ribosomal subunits for cap-independent translational initiation. The aminoglycoside phosphotransferase II gene⁶ (Neo) confers resistance to aminoglycosides such as G 418,⁷ allowing for selection of stable transfectants.

The pBICEP-CMV-1 bicistronic expression vector allows for faster and easier integration and selection of recombinant genes into the chromosomal DNA of the host, creating stable expression cell lines.

Stable transfectants can be generated by transfection using the appropriate selection from the ESCORT product line for the specific cell type utilized. Cells are then selected in the antibiotic containing media for 20 to 30 days. Cell culture media is supplemented with the antibiotic, G 418 (Product Number G 8168), at a typical concentration of 1 mg/ml. A kill curve is recommended for each individual cell line used prior to initiation of selection experiments.

Reagents Provided

- E 9903 pBICEP-CMV-1
10 mM Tris, 1 mM EDTA, pH 8.0
- E 0154 pBICEP-CMV-1-lacZ
10 mM Tris, 1 mM EDTA, pH 8.0

Precautions/Disclaimers

For laboratory use only. Not for drug, household or other uses.

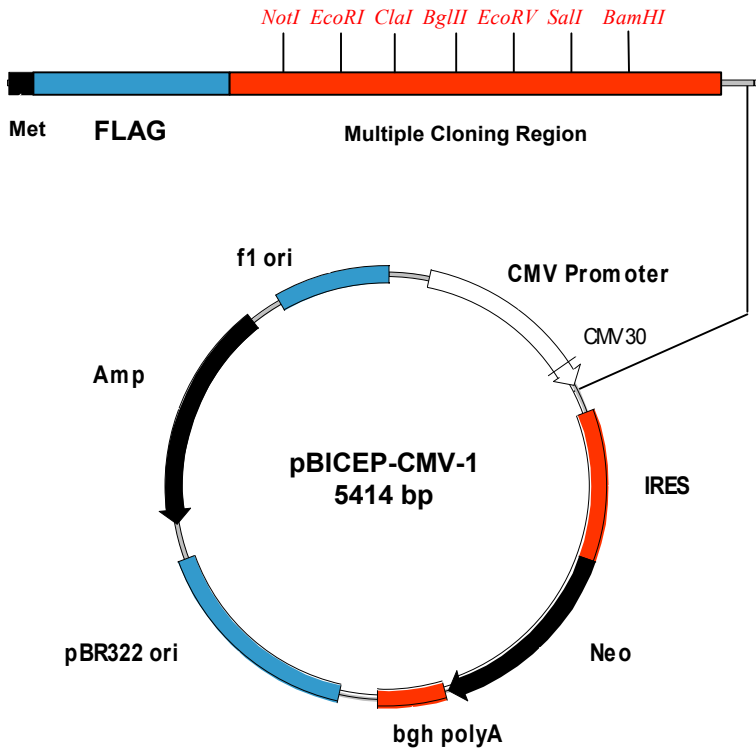
Storage

This product ships on dry ice and storage at -20 °C is recommended.

References

1. Andersson, S., et al., *J. Biol. Chem.*, **264**, 8222-8229 (1989).
2. Thomsen, D. R., et al., *Proc. Natl. Acad. Sci. USA*, **81**, 659-663 (1984).
3. Chapman, B. S., et al., *Nucleic Acids Res.*, **19**, 3937-3986 (1991).
4. Jang, S. K., et al., *J. Virol.*, **62**, 2636-2643 (1988).
5. Jackson, R. J., et al., *Trends Biochem. Sci.*, **15**, 477-483 (1990).
6. Brewer, C. B., *Methods in Cell Biology*, **43**, 233-245 (1994).
7. Jiminez, A., and Davies, J., *Nature*, **287**, 869-871 (1980).

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pBICEP-CMV-1 Features

Feature	Map Position
CMV Promoter	166-916
FLAG	935-958
MCS	962-1018
IRES	1037-1647
Neo	1648-2448
bGH polyA	2465-2741
pBR322 ori	3643-3762
Amp	3909-4827
f1 ori	4962-5414

**Nucleotide Sequence of the Multiple Cloning Region
pBICEP-CMV-1 Expression Vector**

Sequence Range: 929 to 1021 bp

Translational initiation

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ACC ATG GAC TAC AAA GAC GAT GAC GAC AAG CTT GC↓G GCC GCG↓ AAT TCA-
TGG TAC CTG ATG TTT CTG CTA CTG CTG TTC GAA CG C CGG ↑CGC TTA A↑GT
    Asp Tyr Lys Asp Asp Asp Asp Lys
    ←----- FLAG Coding Sequence -----→          Multiple Cloning Region -----→
    
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Cla I *Bgl II* *EcoR V* *Sall* *Bam HI*

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