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Product Information

pBICEP-CMV™-2 Expression Vector

Catalog Number **E0904**
Storage Temperature –20 °C

TECHNICAL BULLETIN

Product Description

The pBICEP-CMV™-2 bicistronic expression vector is a 5.4 kb derivative of pCMV5[1] used for transient or stable co-expression of an N-terminal 3X 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-independant translational initiation. The aminoglycoside phosphotransferase II gene[6] (Neo) confers resistance to aminoclycosides such as G 418,[7] allowing for selection of stable transfectants.

The pBICEP-CMV-2 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 medium for 20 to 30 days. The cell culture medium 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 0279 pBICEP-CMV-2
10 mM Tris, 1 mM EDTA, pH 8.0
E 0404 pBICEP-CMV-2-lacZ
10 mM Tris, 1 mM EDTA, pH 8.0

Precautions/Disclaimer

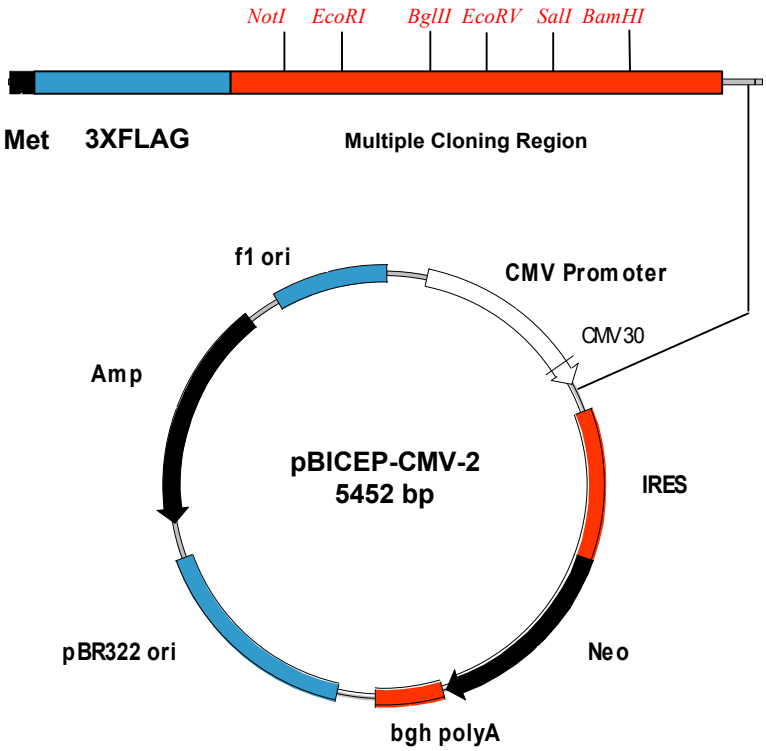
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information

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).



pBICEP-CMV-2 Features

Feature	Map Position
CMV Promoter	166-916
3XFLAG	931-996
MCS	1000-1056
IRES	1075-1685
Neo	1686-2486
bGH polyA	2503-2779
pBR322 ori	3681-3800
Amp	3947-4865
f1 ori	5000-5452

Nucleotide Sequence of the Multiple Cloning Region of the pBICEP-CMV-2 Expression Vector

Sequence Range: 925 to 1059 bp

Translational initiation

```
ACC ATG GAC TAC AAA GAC CAT GAC GGT GAT TAT AAA GAT CAT GAC ATC GAT TAC
TGG TAC CTG ATG TTT CTG GTA CTG CCA CTA ATA TTT CTA GTA CTG TAG CTA ATG
      Asp Tyr Lys Asp His Asp Gly Asp Tyr Lys Asp His Asp Ile Asp Tyr
```

← ***3XFLAG Coding Sequence*** →

NotI ***EcoRI*** ***BglII***

```
AAG GAT GAC GAT GAC AAG CTT GCGGCCGCG AATTCA TCG ATAGATCTG
TTC CTA CTG CTA CTG TTC GAA CGCCGGCGC TTAAGT AGC TATCTAGAC
Lys Asp Asp Asp Asp Lys
```

← ***3XFLAG Coding Sequence*** →

← ***Multiple Cloning Region*** →

EcoR V ***Sal I*** ***Bam HI***

```
ATATCG GTA CCA GTCGAC TCT AGA GGATCC CTC
TATAGC CAT GGT CAGCTG AGA TCT CCTAGG GAG
```

← ***Multiple Cloning Region*** →