pFLAG-CMV™-3 Expression Vector

**Catalog Number** E6783

**Storage Temperature** –20 °C

**Product Description**

The pFLAG-CMV-3 Expression Vector is a 6.3 kb vector used for transient or stable expression in mammalian cells. The vector is a derivative of pCMV5\(^1\) used for transient or stable expression and secretion of a properly inserted open reading frame as an N-terminal FLAG\(^\circledR\) fusion protein.

The promoter-regulatory region of the human cytomegalovirus\(^2\) drives transcription of FLAG-fusion constructs. The preprotrypsin leader sequence\(^3\) precedes the FLAG sequence and directs secretion of the fusion protein into the culture medium. The aminoglycoside phosphotransferase II gene\(^4\) (neo\(^5\)) confers resistance to aminoglycosides such as G 418,\(^5\) allowing for selection of stable transfectants.

The pFLAG-CMV-3 Expression Vector is a shuttle vector containing both bacterial and SV40 origins of replication for propagation in both *Escherichia coli* and mammalian cells. Efficiency of replication and genomic integration is optimal when using host cells that express the SV40 T antigen (e.g. COS-7). pFLAG-CMV-3 has been used for stable transfection of HEK 293 cells\(^6\).

The FLAG epitope is a small, hydrophilic 8 amino acid tag (DYKDDDDK)\(^7\) that provides for sensitive detection and high quality purification using ANTI-FLAG\(^\circledR\) products (visit www.sigma-aldrich.com for a complete listing). Removal of the N-terminal FLAG tag is possible using enterokinase, which cleaves following the Asp-Asp-Asp-Asp-Lys recognition site at the C-terminal end of the FLAG peptide.

The pFLAG-CMV-3-BAP Control Plasmid is a 7.7 kb derivative of pCMV5\(^1\) used for transient expression and secretion of N-terminal FLAG bacterial alkaline phosphatase fusion protein in mammalian cells.

The promoter-regulatory region of the human cytomegalovirus\(^2\) drives transcription of bacterial alkaline phosphatase. The preprotrypsin leader sequence\(^3\) precedes the FLAG sequence. The aminoglycoside phosphotransferase II gene\(^4\) (Neo) confers resistance to aminoglycosides such as G 418.\(^5\)

pFLAG-CMV-3-BAP Control Plasmid is a shuttle vector for *E. coli* and mammalian cells. Efficiency of replication and genomic integration is optimal when using an SV40 T antigen-expressing host, such as COS cells.

Map positions of key features in the pFLAG-CMV-3 Expression Vector and the pFLAG-CMV-3-BAP Control Plasmid can be found at www.sigma.com/vectormaps.

**Components**

- pFLAG-CMV-3 Expression Vector 20 µg
  
  Catalog Number E8770
  
  Supplied as 0.5 mg/ml in 10 mM Tris-HCl, pH 8.0, 1 mM EDTA.

- pFLAG-CMV-3-BAP Control Plasmid 20 µg
  
  Catalog Number C3972
  
  Supplied as 0.5 mg/ml in 10 mM Tris-HCl, pH 8.0, 1 mM EDTA.

**Precautions and 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 regarding hazards and safe handling practices.

**Storage/Stability**

Store at –20 °C

**References**


FLAG is a registered trademark and pFLAG-CMV is a trademark of Sigma-Aldrich Biotechnology LP and Sigma-Aldrich Co.