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Product Information

pFLAG-CTC™ Expression Vector

Catalog Number **E8408**
Storage Temperature –20 °C

Product Description

The pFLAG-CTC Expression Vector is a 5348 bp *Escherichia coli* expression vector used for cytoplasmic expression of a properly inserted open reading frame as a C-terminal FLAG® fusion protein. The FLAG epitope is a small, hydrophilic 8 amino acid tag (DYKDDDDK)[1] that provides for sensitive detection and high quality purification using ANTI-FLAG® products. The promoter-regulatory region of the strong *tac* promoter (a hybrid of the *trp* and *lac* promoters from *E.coli*)[2,3] drives transcription of ORF-FLAG fusion constructs. Control of transcription is regulated by the presence of the *lacO* sequences and inclusion of the *lac* repressor gene (*lacI*) on the plasmid.

Sequence verification of the MCS can be performed using the N-26 Sequencing Primer, Catalog Number P7832, and the C-24 Sequencing Primer , Catalog Number P7957.

C-terminal FLAG fusion proteins may be purified using Monoclonal ANTI-FLAG M2, Catalog Number F3165, and ANTI-FLAG M2 Affinity Gel, Catalog Number A2220. Please visit www.sigma-aldrich.com for a complete listing of antibodies, resins and affinity capture plates.

The pFLAG-CTS™-BAP Control Plasmid is a 6735 bp *E. coli* plasmid used for efficient and controlled periplasmic expression of C-terminal FLAG-BAP fusion protein.

The FLAG-BAP fusion protein may be detected using Monoclonal ANTI-FLAG® M2 antibody, Catalog Number F3165, or purified using ANTI-FLAG M2 Affinity Gel, Catalog Number A2220.

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

Components

- pFLAG-CTC Expression Vector 10 µg
  Catalog Number E5394
  Supplied as 0.5 mg/ml in 10 mM Tris-HCl, pH 8.0, 1 mM EDTA.
- pFLAG-CTS-BAP Control Plasmid 1 µg
  Catalog Number P7707
  Supplied as 0.05 mg/ml in 1 mM Tris-HCl, pH 8.0, 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

1. Hopp, T. P., et al., A short polypeptide marker sequence useful for recombinant protein identification and purification., *Bio/Technology*, **6**, 1204-1210 (1988).
2. DeBoer, H. A., et al., The *tac* promoter: a functional hybrid derived from the *trp* and *lac* promoters. *Proc. Natl. Acad. Sci U.S.A.*, **80**, 21-25 (1983). Miceli, R.M., *et al., J. Immunol. Methods*, **167**, 279-287 (1994)
3. Russell, D. R. and Bennett, G. N., Construction and analysis of *in vivo* activity of *E. coli* promoter hybrids and promoter mutants that alter the -35 to -10 spacing. *Gene*, **20**, 231-243 (1982).

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