



# Recombinant Escherichia coli Probable phosphatidylethanolamine transferase Mcr-1 (mcr1)

**Product Code** CSB-CF745804ENL

**Relevance**

Probably catalyzes the addition of a phosphoethanolamine moiety to lipid A. Phosphoethanolamine modification of lipid A gives polymyxin resistance (PubMed:26603172).<sup>1</sup> Publication Confers resistance to polymyxin-type antibiotics; expression of the Mcr-1 protein in E.coli increases colistin and polymyxin B minimal inhibitory concentration (MIC) from 0.5 mg/ml to 2.0 mg/ml. The pHNSHP45 plasmid can transfer efficiently (0.1 to 0.001) to other E.coli strains by conjugation and increases polymyxin MIC by 8- to 16-fold; it may not require selective pressure to be maintained in the cell. When transformed into K.pneumoniae or P.aeruginosa it also increases polymyxin MIC 8- to 16-fold. In a murine (BALB/c mice) thigh infection study using an mcr1-encoding plasmid isolated from a human patient, the plasmid confers in vivo protection against colistin (PubMed:26603172).

**Storage**

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.

**Uniprot No.**

A0A0R6L508

**Product Type**

Transmembrane Protein

**Immunogen Species**

Escherichia coli

**Purity**

Greater than 90% as determined by SDS-PAGE.

**Sequence**

MMQHTSVWYRRSVSPFVLVASVAVFLTATANLTFDKISQTYPIADNLGFVLT  
AVVLFGAMLLITLLSSYRYVLKPVLLLLIMGAVTSYFTDTYGTVDYDTMLQNAL  
QTDQAETKDLLNAAFIMRIIGLVLPSELLVAFVKVDYPTWGKGLMRRRLGLIVASL  
ALILLPVVAFSSHYSFFRVHKPLRSYVNPIMPIYSVGKLASIEYKKASAPKDTIY  
HAKDAVQATKPDMRKPRLVVFVGETARADHVSFNGYERDTFPQLAKIDGVT  
NFSNVTSCGTSTAYSVPCMFSYLGADEYDVTAKYQENVLDTLDRLGVSILWR  
DNNSDSKGVMKLPKQAFADYKSATNNAICNTNPYNECRDVGMLVGLDDFVA  
ANNGKDMMLHQMGNHGPAYFKRYDEKFAKFTPVCEGNEELAKCEHQSLINA  
YDNALLATDDFIAQSIQWLQTHSNAYDVSMYVSDHGESLGENGVYLHGMPN  
AFAPKEQRSVPAFFWTDKQTGITPMATDTVLTHDAITPTLLKLFVDTADKVKDR  
TAFIR

**Research Area**

Others

**Source**

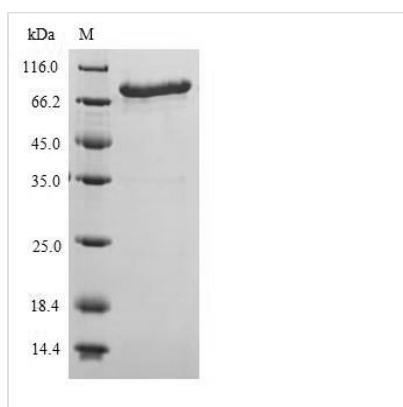
in vitro E.coli expression system

**Target Names**

mcr1



<b>Protein Names</b>	Polymyxin resistance protein MCR-1
<b>Expression Region</b>	1-541aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	N-terminal 6xHis-SUMO-tagged
<b>Mol. Weight</b>	76.1kDa
<b>Protein Length</b>	Full Length

**Image**


(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

**Reconstitution**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

**Shelf Life**

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