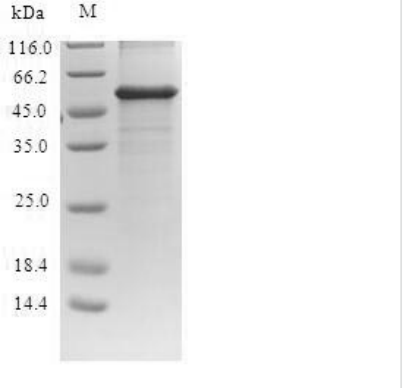
Recombinant Escherichia coli Probable phosphatidylethanolamine transferase Mcr-1 (mcr1), partial

Product Code	CSB-EP745804ENL1
Relevance	Probably catalyzes the addition of a phosphoethanolamine moiety to lipid A. Phosphoethanolamine modification of lipid A gives polymyxin resistance (PubMed:26603172).1 Publication Confers resistance to polymyxin-type antibiotics; expression of the Mcr-2 prin 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 polymxin 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 polymxin 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).
Abbreviation	Recombinant E.coli mcr1 protein, partial
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
Alias	Polymyxin resistance protein MCR-1
Product Type	Recombinant Protein
Immunogen Species	Escherichia coli
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	HYASFFRVHKPLRSYVNPIMPIYSVGKLASIEYKKASAPKDTIYHAKDAVQATKP DMRKPRLVVFVVGETARADHVSFNGYERDTFPQLAKIDGVTNFSNVTSCGTS TAYSVPCMFSYLGADEYDVDTAKYQENVLDTLDRLGVSILWRDNNSDSKGVM DKLPKAQFADYKSATNNAICNTNPYNECRDVGMLVGLDDFVAANNGKDMLIM LHQMGNHGPAYFKRYDEKFAKFTPVCEGNELAKCEHQSLINAYDNALLATDDF IAQSIQWLQTHSNAYDVSMLYVSDHGESLGENGVYLHGMPNAFAPKEQRSVP AFFWTDKQTGITPMATDTVLTHDAITPTLLKLFDVTADKVKDRTAFIR
Research Area	Microbiology
Source	E.coli
Target Names	mcr1
Protein Names	Polymyxin resistance protein MCR-1
Expression Region	178-541aa

Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	56.7 kDa
Protein Length	Partial

Image



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

Description

The first step in producing the recombinant Escherichia coli mcr1 protein is to construct a plasmid that encodes the Escherichia coli mcr1 protein (178-541aa). The next is to transform this plasmid into e.coli cells, select positive e.coli cells, from which positive cells can be screened and cultured to express the protein. A N-terminal 6xHis-SUMO tag is fused to the protein. The recombinant Escherichia coli mcr1 protein is purified through affinity purification from the cell lysate. Its purity is greater than 90%, determined by the SDS-PAGE analysis.

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

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.