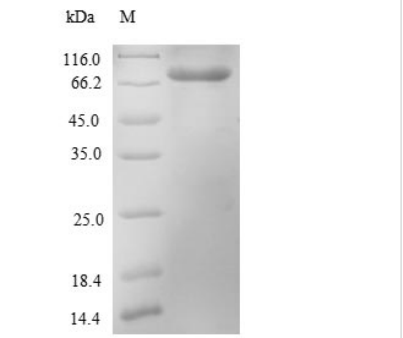
Recombinant Escherichia coli Probable phosphatidylethanolamine transferase Mcr-1 (mcr1)

Product Code	CSB-EP745804ENL
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-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 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
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	MMQHTSVWYRRSVSPFVLVASVAVFLTATANLTFFDKISQTYPIADNLGFVLTI AVVLFGAMLLITTLLSSYRYVLKPVLILLLIMGAVTSYFTDTYGTVYDTTMLQNAL QTDQAETKDLLNAAFIMRIIGLGVLPSLLVAFVKVDYPTWGKGLMRRLGLIVASL ALILLPVVAFSSHYASFFRVHKPLRSYVNPIMPIYSVGKLASIEYKKASAPKDTIY HAKDAVQATKPDMRKPRLVVFVVGETARADHVSFNGYERDTFPQLAKIDGVT NFSNVTSCGTSTAYSVPCMFSYLGADEYDVDTAKYQENVLDTLDRLGVSILWR DNNSDSKGVMDKLPKAQFADYKSATNNAICNTNPYNECRDVGMLVGLDDFVA ANNGKDMLIMLHQMGNHGPAYFKRYDEKFAKFTPVCEGNELAKCEHQSLINA YDNALLATDDFIAQSIQWLQTHSNAYDVSMLYVSDHGESLGENGVYLHGMPN AFAPKEQRSVPAFFWTDKQTGITPMATDTVLTHDAITPTLLKLFDVTADKVKDR TAFIR
Research Area	Microbiology
Source	E.coli

Target Names	mcr1
Protein Names	Polymyxin resistance protein MCR-1
Expression Region	1-541aa
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	76.1 kDa
Protein Length	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	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.