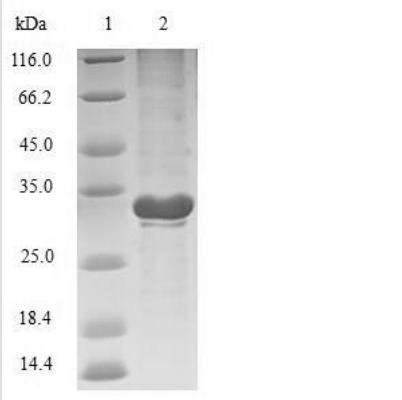
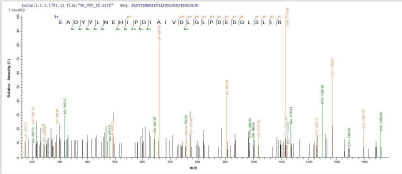
Recombinant Escherichia coli Transcriptional regulatory protein phoP (phoP)

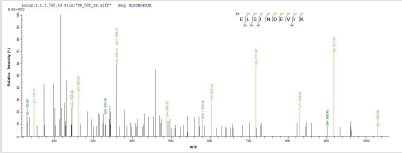
Product Code	CSB-MP326097ENV
Relevance	Member of the two-component regulatory system PhoP/PhoQ involved in adaptation to low Mg2+ environments and the control of acid resistance genes. In low periplasmic Mg2+, PhoQ phosphorylates PhoP, resulting in the expression of PhoP-activated genes (PAG) and repression of PhoP-repressed genes (PRG). In high periplasmic Mg2+, PhoQ dephosphorylates phospho-PhoP, resulting in the repression of PAG and may lead to expression of some PRG. Mediates magnesium influx to the cytosol by activation of MgtA. Promotes expression of the two-component regulatory system rstA/rstB and transcription of the hemL, mgrB, nagA, slyB, vboR and yrbL genes.
Abbreviation	Recombinant E.coli phoP 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.	P23836
Product Type	Recombinant Protein
Immunogen Species	Escherichia coli (strain K12)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MRVLVVEDNALLRHHLKVQIQDAGHQVDDAEDAKEADYYLNEHIPDIAIVDLGL PDEDGLSLIRRWRSNDVSLPILVLTARESWQDKVEVLSAGADDYVTKPFHIEEV MARMQALMRRNSGLASQVISLPPFQVDLSRRELSINDEVIKLTAFEYTIMETLIR NNGKVVSKDSLMLQLYPDAELRESHTIDVLMGRLRKKIQAQYPQEVITTVRGQ GYLFELR
Research Area	others
Source	Mammalian cell
Target Names	phoP
Protein Names	Recommended name: Transcriptional regulatory protein phoP
Expression Region	1-223aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	29.5kDa
Protein Length	Full Length
Image	



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



Based on the SEQUEST from database of Mammalian Cell host and target protein, the LC-MS/MS Analysis result of CSB-MP326097ENV could indicate that this peptide derived from Mammalian Cell-expressed Escherichia coli (strain K12) phoP.



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Description

Just like other recombinant proteins, the production of this recombinant E.coli phoP protein began with appropriate cDNA and PCR methods, and then the phoP expression plasmids were built. Following sequence determination of the constructs, plasmids were transformed into Mammalian cell for the expression of the recombinant E.coli phoP protein. N-terminal 10xHis tag & C-terminal Myc tag was used in the process. And we finally get the protein of interest with purity of 90%+.

phoP is a gene providing an instruction of making a protein called transcriptional regulatory protein PhoP (also called Phop) widely presented in Gram-negative bacteria, such as Escherichia coli (E.coli). Phop is a virulence regulator conserved in both pathogenic and non-pathogenic Enterobacteriaceae. PhoP plays an important role as a transcriptional regulator in the two-component phoP/phoQ regulatory system with DNA-binding transcription activator activity. Moreover, This protein has phosphorelay response regulator activity and also can bind to transcription cis-regulatory region.

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.

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