



Recombinant Escherichia coli Transcriptional regulatory protein phoP (phoP)

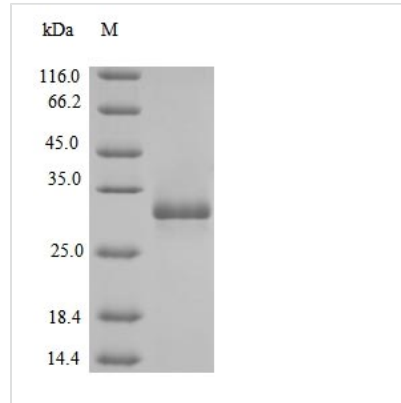
Product Code	CSB-EP326097ENV
Relevance	Member of the two-component regulatory system PhoP/PhoQ involved in adaptation to low Mg ²⁺ environments and the control of acid resistance genes. In low periplasmic Mg ²⁺ , PhoQ phosphorylates PhoP, resulting in the expression of PhoP-activated genes (PAG) and repression of PhoP-repressed genes (PRG). In high periplasmic Mg ²⁺ , 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. Feedback inhibited by MgrB, which seems to bind PhoQ, altering its activity and that of downstream effector PhoP. PhoP-regulated transcription is redox-sensitive, being activated when the periplasm becomes more reducing (deletion of dsbA/dsbB, or treatment with dithiothreitol). MgrB acts between DsbA/DsbB and PhoP/PhoQ in this pathway.
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	≥ 90% as determined by SDS-PAGE.
Sequence	MRVLVVEDNALLRHHLKVQIQDAGHQVDDAEDAKEYDYLLNEHIPDIAIVDLGL PDEDGLSLIRRWRSNDVSLPILVLTARES WQDKVEVLSAGADDYVTKPFHIEEV MARMQALMRRNSGLASQVISLPPFQVDLSRRELSINDEVIKLTAFEYTIMETLIR NNGKVVS KDSLMLQLYPDAELRESHTIDVLMGRLRKKIQAQYPQEVITTVRGQ GYLFELR
Research Area	others
Source	E.coli
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 30.5kDa

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.