

Recombinant Escherichia coli PHOP Protein (1-223 aa), His-Myc-tagged

Cat. No. PHOP-2203E **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Escherichia coli (strain K12) PHOP Protein (1-223 aa) is produced by E. coli expression system. This protein is fused with a 10xHis tag at the N-terminal and a Myc tag at the C-terminal. Protein Description: Full Length.
Species	E.coli
Source	E.coli
ProteinLength	1-223 aa
Description	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.

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Form	Tris-based buffer, 50% glycerol
Molecular Mass	30.5 kDa
AA Sequence	MRVLVVEDNALLRHHLLKVQIQDAGHQVDDAEDAKEYLNEHIPDIAIVDLGLPDE DGLSLIRRWRSNDVSLPILVLTARESWQDKVEVLSAGADDYVTKPFHIEEVMARMQA LMRRNSGLASQVISLPPFQVDLSRRELSINDEVIKLTAFEYTIMETLIRNNGKVVSIDS LMLQLYPDAELRESHTIDVLMGRLRKKIQAQYPQEVITTVRGQGYLFELR
Purity	> 90% as determined by SDS-PAGE.
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4 centigrade for up to one week.
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 centigrade/-80 centigrade. The shelf life of lyophilized form is 12 months at -20 centigrade/-80 centigrade.
Concentration	A hardcopy of COA will be sent along with the products. Please refer to it for detailed information.

GENE INFORMATION

Gene Name	phoP DNA-binding transcriptional dual regulator PhoP [Escherichia coli str. K-12 substr. MG1655]
Official Symbol	PHOP
Synonyms	phoP; ECK1116;

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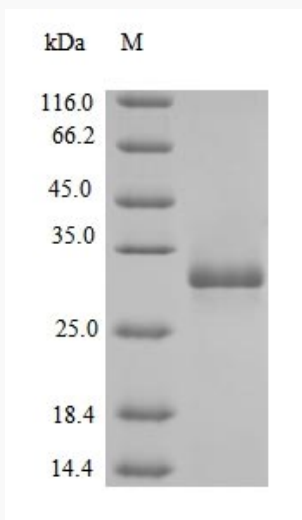
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Gene ID 945697

Protein Refseq NP_415648

UniProt ID P23836



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

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