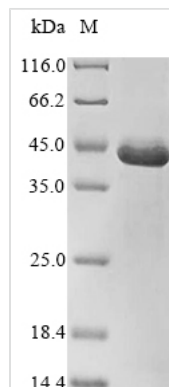




Recombinant Escherichia coli RNA polymerase sigma factor RpoH (rpoH)

Product Code	CSB-EP313777ENV
Abbreviation	Recombinant E.coli rpoH 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.	P0AGB3
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Escherichia coli (strain K12)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MTDKMQSLALAPVGNLDSYIRAANAWPMLSADDEERALAEKLHYHGDLEAAKT LILSHLRFVVIHARNYAGYGLPQADLIQEGNIGLMKAVRRFNPEVGVRLVSFAV HWIKAEIHEYVLRNWRIVKVATTKAQRKLFFNLRTKQRLGWFNQDEVEMVAR ELGVTSKDVREMESRMAAQDMTFDLSSDDSDSQPMAPVLYLQDKSSNFAD GIEDDNWEEQAANRLTDAMQGLDERSQDIIRARWLDEDNKSTLQELADRYGV SAERVRQLEKNAMKKLRAAIEA
Research Area	Others
Source	E.coli
Target Names	rpoH
Protein Names	Recommended name: RNA polymerase sigma-32 factor Alternative name(s): Heat shock regulatory protein F33.4
Expression Region	1-284aa
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	39.9 kDa
Protein Length	Full Length
Image	



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

Description

The expression region of this recombinant Escherichia coli (strain K12) rpoH covers amino acids 1-284. The expected molecular weight for the rpoH protein is calculated to be 39.9 kDa. This rpoH protein is produced using e.coli expression system. The N-terminal 10xHis tag and C-terminal Myc tag was smoothly integrated into the coding gene of rpoH, which enables a simple process of detecting and purifying the rpoH recombinant protein in the following steps.

The Escherichia coli RNA polymerase sigma factor RpoH is a key regulator involved in the bacterial heat shock response. RpoH is responsible for directing RNA polymerase to transcribe genes that encode heat shock proteins, which are essential for the cell's survival under conditions of elevated temperature or other stressors. In non-stress conditions, RpoH is present at low levels in the cell. However, when exposed to heat or other stressful conditions, the concentration of RpoH increases, leading to its association with RNA polymerase and subsequent activation of the transcription of heat shock genes. These heat shock proteins assist in the proper folding and refolding of proteins, preventing denaturation and aggregation, and helping the cell to adapt and survive stressful conditions. The study of RpoH and the heat shock response provides insights into the cellular mechanisms that bacteria employ to cope with environmental challenges.

Shelf Life

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