



Recombinant Escherichia coli Periplasmic serine endoprotease DegP (degP)

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| Product Code | CSB-EP314631ENV |
| Relevance | DegP acts as a chaperone at low temperatures but switches to a peptidase (heat shock protein) at higher temperatures. It degrades transiently denatured and unfolded proteins which accumulate in the periplasm following heat shock or other stress conditions. DegP is efficient with Val-Xaa and Ile-Xaa peptide bonds, suggesting a preference for beta-branched side chain amino acids. Only unfolded proteins devoid of disulfide bonds appear capable of being cleaved, thereby preventing non-specific proteolysis of folded proteins. Its proteolytic activity is essential for the survival of cells at elevated temperatures. It can degrade IciA, ada, casein, globin and PapA. DegP shares specificity with DegQ. DegP is also involved in the biogenesis of partially folded outer-membrane proteins (OMP). |
| 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. | P0C0V0 |
| Alias | Heat shock protein DegPProtease Do |
| Product Type | Recombinant Protein |
| Immunogen Species | Escherichia coli (strain K12) |
| Purity | Greater than 90% as determined by SDS-PAGE. |
| Sequence | AETSSATTAQQMPSLAPMLEKVMPSVVSINVEGSTTVNTPRMPRNFQQFFGD DSPFCQEGSPFQSSPFCQGGQGGNGGGQQQKFMALGSGVIIDADKGYVVTN NHVVDNATVIKVQLSDGRKFDKMGKDPKRSIALIQINPKNLTAIKMADSDA LRVGDTVAIGNPFGLGETVTSGIVSALGRSGLNAENYENFIQTDAAINRGNSG GALVNLNGELIGINTAILAPDGGNIGIGFAIPSNMVKNLTSQMVEYGQVKRGEL GIMGTELNSELAKAMKVDAQRGAFVSQVLPNSSAAKAGIKAGDVITSLNGKPIS SFAALRAQVGTMPVGSKLTLGLLRDQKQVNVNLELQQSSQNQVDSSSIFNGIE GAEMSNKKGKDQGVVVNNVKTGTPAAQIGLKKGDVIGANQQAVKNIAELRKVL DSKPSVLALNIQRGDSTIYLLMQ |
| Lead Time | Delivery time may differ from different purchasing way or location, please kindly consult your local distributors for specific delivery time. |
| Research Area | Others |
| Source | E.coli |
| Gene Names | degP |
| Expression Region | 27-474aa |
| Notes | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week. |

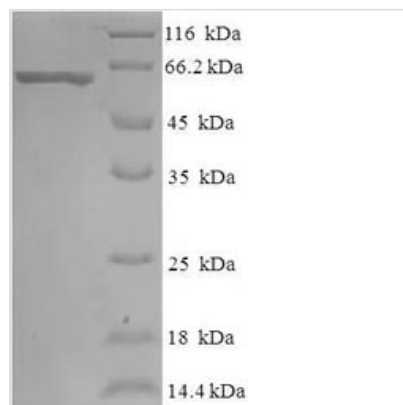


Tag Info N-terminal 6xHis-SUMO-tagged

Mol. Weight 62.8kDa

Protein Description Full Length of Mature Protein

Image



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

Description

The production of this recombinant E.coli degP protein is just like all recombinant proteins. The process involved transfecting E.coli cells with DNA vector containing the template of recombinant DNA. The E.coli cells containing the template were then cultured so that they could transcribe and translate the degP protein. N-terminal 6xHis-SUMO tag was used in the process. The purity is 90% determined by SDS-PAGE.

degP is a gene providing instructions for making a protein called periplasmic serine endoprotease DegP (also known as heat shock protein DegP or protease Do). DegP protein belongs to the peptidase S1C family. DegP is a heat shock protein induced in response to pac overexpression, suggesting that the protein could possibly suppress the physiological toxicity caused by pac overexpression. Increasing evidence indicates that the production of soluble recombinant penicillin acylase in Escherichia coli can be enhanced via coexpression of a periplasmic protease/chaperone, DegP.

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.