

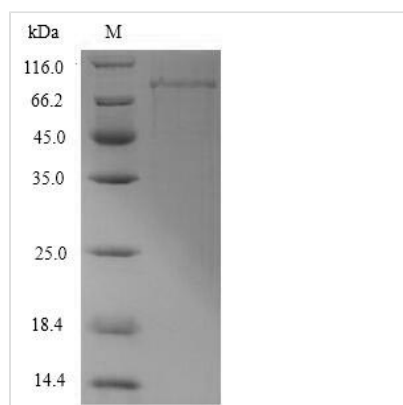


# Recombinant Escherichia coli Chaperone protein DnaK (dnaK)

<b>Product Code</b>	CSB-EP633459EGW
<b>Relevance</b>	Acts as a chaperone
<b>Abbreviation</b>	dnaK
<b>Storage</b>	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.
<b>Uniprot No.</b>	Q1RGI8
<b>Alias</b>	HSP70 Heat shock 70 kDa protein Heat shock protein 70
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Escherichia coli (strain UTI89 / UPEC)
<b>Purity</b>	Greater than 90% as determined by SDS-PAGE.
<b>Sequence</b>	MGKIIGIDLGTTNSCVAIMDGTTPRVLENAEGDRTPSIIAYTQDGETLVGQPAK RQAVTNPQNTLFAIKRLIGRRFQDEEVQRDVSIMPFKIIAADNGDAWVEVKGQK MAPPQISAEVLKKMKKTAEDYLGEPTVEAVITVPAYFNDAQRQATKDAGRIAGL EVKRIINEPTAAALAYGLDKGTGNRTIAVYDLGGGTFDISIIEIDEVDGEKTFEVL ATNGDTHLGGEDFDSRLINYLVEEFKKDQGIDLRNDPLAMQRLKEAAEKAKIEL SSAQQTVDVNLPIYITADATGPKHMNIKVTRAKLESLVEDLVNRSIEPLKVALQDA GLSVSDIDDVILVGGQTRMPMVQKKVAEFFGKEPRKDVNPDEAVAIGA AVQG GVLTGDKVDVLLLDVTPLSLGIETMGGVMTTLIAKNTTIPTKHSQVFSTAEDNQ SAVTIHVLQGERKRAADNKSLGQFNLDGINPAPRGMPQIEVTFDIDADGILHVS AKDKNSGKEQKITIKASSGLNEDEIQKMVRDAEANA EADRKFEELVQTRNQGD HLLHSTRKQVEEAGDKLPADDKTAIESALTALETALKGEDKAAIEAKMQELAQV SQKLMEIAQQQHAQQQTAGADASANNAKDDDDVVDAAEFEEVKDKK
<b>Lead Time</b>	3-7 business days
<b>Research Area</b>	Signal Transduction
<b>Source</b>	E.coli
<b>Gene Names</b>	dnaK
<b>Protein Names</b>	HSP70 Heat shock 70KDA protein Heat shock protein 70
<b>Expression Region</b>	1-638aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	N-terminal 6xHis-tagged
<b>Mol. Weight</b>	73.1 kDa
<b>Protein Description</b>	Full Length



## Image



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

## Description

Amino acids 1-638 constitute the expression domain of recombinant *Escherichia coli* (strain UTI89 / UPEC) dnaK. The expected molecular weight for the dnaK protein is calculated to be 73.1 kDa. Expression of this dnaK protein is conducted in *e.coli*. Fusion of the N-terminal 6xHis tag into the dnaK encoding gene fragment was conducted, allowing for easier detection and purification of the dnaK protein in subsequent stages.

*Escherichia coli* chaperone protein DnaK is a key molecular chaperone in bacterial cells, essential for protein folding and quality control. It assists in protein refolding during stress and prevents protein aggregation. In microbiology, DnaK is crucial for bacterial survival under various conditions. In biotechnology, it facilitates recombinant protein expression and production. DnaK's involvement in bacterial virulence makes it a target in infectious disease research. In cell biology, DnaK is a model chaperone for understanding cellular protein folding. Investigating DnaK provides insights into bacterial stress responses, protein homeostasis, and potential applications in biopharmaceuticals, antibiotics, and understanding bacterial pathogenesis.

## 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.