

# Recombinant E.coli Dnak(1-384aa) protein

Catalog Number: DNK3002

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-384aa

### UniProt No.

P0A6Y8

### NCBI Accession No.

NP\_414555

### Alternative Names

dnaK, Dnak (N-term, 1-384), ATPase binding domain, Heat shock protein 70, Heat shock 70 kDa protein, HSP70, Chaperone protein dnaK, Chaperone Hsp70, Co chaperone with Dnaj,

## PRODUCT SPECIFICATION

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### Molecular Weight

41.6 kDa (384aa)

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 25mM Tris-HCl buffer (pH 7.5) containing 100mM NaCl, 5mM DTT, 10%glycerol

### Purity

> 95% by SDS-PAGE

### Endotoxin level

### Tag

Non-Tagged

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

DnaK, originally identified for its DNA replication by bacteriophage lambda in E. coli is the bacterial hsp70 chaperone. This protein is involved in the folding and assembly of newly synthesized polypeptide chains and in preventing the aggregation of stress-denatured proteins. DnaK (amino acids1-384) is N-terminal ATPase domain and ATP bound to the ATPase domain induces a conformational change in the substrate binding domain

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(residues385-638). The protein coding region of the ATPase domain of DNAK (amino acids 1-384) was amplified by PCR and cloned into an E. coli expression vector. The ATPase domain of DNAK was overexpressed in E. coli and the recombinant protein was purified to apparent homogeneity by using conventional column chromatography techniques.

## Amino acid Sequence

MGKIIIGIDLG TTNSCVAIMD GTTPRVLENA EGDRTTSPSII AYTQDGETLV GQPAKRQAVT NPQNTLFAIK RLIGRRFQDE  
EVQRDVSIMP FKIIAADNGD AWVEVKGQKM APPQISAEVL KKMCKTAEDY LGEPVTEAVI TVPAYFNDAQ RQATKDAGRI  
AGLEVKRIIN EPTAAALAYG LDKGTGNRTI AVYDLGGGTF DISIIEIDEV DGEKTFEVLA TNGDTHLGGE DFDSRLINYL  
VEEFKKDQGI DLRNDPLAMQ RLKEAAEKAK IELSSAQQTQ VNLPHYTADA TGPKHMNIKV TRAKLESLVE DLVNRSEIPL  
KVALQDAGLS VSDIDDVILV GGQTRMPMVQ KKVAEFFGKE PRKDVNPDEA VAIGA AVQGG VLTG

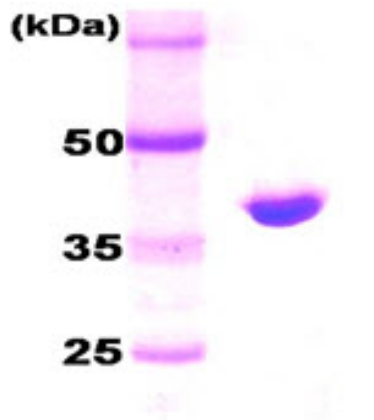
## General References

Bardwell & Craig (1984) Proc. Natl. Acad. Sci. 81, 848-852

Zhu et al., (1996) Science. 272, 1606-1614.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

13.5% SDS-PAGE (3ug)