

HSP70/DnaK Protein, *E. coli* (*P.pastoris*, His)

Cat. No.:	HY-P71824
Synonyms:	dnaK; HSP70; Heat shock 70kDa protein; Heat shock protein 70
Species:	<i>E.coli</i>
Source:	<i>P. pastoris</i>
Accession:	Q1RGI8 (M1-K638)
Gene ID:	58463508
Molecular Weight:	Approximately 71.1 kDa

PROPERTIES

AA Sequence

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MGKIIIGIDLG   TTNSCVAIMD   GTTPRVLENA   EGDRTTPSII
AYTQDGETLV    GQPAKRQAVT   NPQNTLFAIK   RLIGRRFQDE
EVQRDVSIMP    FKIIAADNGD   AWVEVKGQKM   APPQISAEVL
KKMKKTAEDY    LGEPVTEAVI   TVPAYFNDAQ   RQATKDAGRI
AGLEVKRIIN    EPTAAALAYG   LDKGTGNRTI   AVYDLGGGTF
DISIIIEIDEV   DGEKTFEVL A   TNGDTHLGGE   DFDSRLINYL
VEEFKKDQGI    DLRNDPLAMQ   RLKEAAEKAK   IELSSAQQTD
VNLPHYITADA   TGPKHMNIKV   TRAKLESLVE   DLVNRSIEPL
KVALQDAGLS    VSDIDDVILV   GGQTRMPMVQ   KKVAEFFGKE
PRKDVNPDEA    VAIGAAVQGG   VLTGDVKDVL   LLDVTPLSLG
IETMGGVMTT    LIAKNTTIP T   KHSQVFSTAE   DNQSAVTIHV
LQGERKRAAD    NKS LGQFNLD   GINPAPRGMP   QIEVTFDIDA
DGI LHVSAKD   KNSGKEQKIT   IKASSGLNED   EI QKMVRDAE
ANA EADRKFE   ELVQTRNQGD   HLLHSTRKQV   EEAGDKLPAD
DKTAIESALT    ALETALKGED   KAAIEAKMQE   LAQVSQKLME
IAQQQHAQQQ    TAGADASANN   AKDDDVVDAE   FEEVKDKK
  
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Appearance

Lyophilized powder.

Formulation

Lyophilized after extensive dialysis against solution in 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.

Endotoxin Level

<1 EU/μg, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH₂O.

Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

HSP70/DnaK protein functions as a molecular chaperone, primarily responding to stress conditions, such as heat shock. In times of cellular stress, this protein plays a crucial role in assisting the proper folding of other proteins, preventing misfolding or aggregation. The chaperone activity of HSP70/DnaK is especially vital for cellular homeostasis and survival under adverse environmental conditions, where maintaining the correct conformation of proteins becomes challenging. The protein's ability to recognize and assist in the refolding of misfolded or denatured proteins is essential for cellular resilience and the prevention of proteotoxicity induced by various stressors, particularly elevated temperatures.

Caution: Product has not been fully validated for medical applications. For research use only.

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