Heat Shock 70kDa Protein 1A/1B Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: Heat shock 70 kDa protein 1/2, HSP70-1/HSP70-2, HSP70.1/HSP70.2, HSPA1A, HSPA1, HSPA1B

Cat. No.:
RD172271100 (0.1 mg)

Description

Total 650 AA. MW: 71.16 kDa (calculated). UniProtKB acc.no. P08107. N-Terminal His-tag (10 extra AA)

Introduction to the Molecule

The Heat shock protein 70(HSP70) family was found in many intracellular compartments. Members of this protein occur in chloroplasts, endoplasmic reticulum, mitochondria, and cytosol. These proteins are induced by a variety of biological stresses, including heat stress, in every organism. HSP70 serves a variety of roles: It acts as molecular chaperones facilitating the assembly of multi-protein complexes, It participates in the translocation of polypeptides across cell membranes and to the nucleus It aids in the proper folding of nascent polypeptide chains. HSP70 is mitochondrial import machinery and plays key roles in the cytosolic endoplasmic reticulum. Recently, extracellular localized HSP have been found to play key roles in the induction of a cellular immune response.

Research topic

Diabetology - Other Relevant Products, Others

Amino Acid Sequence

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MKHHHHHHAS AKAAAIGIDL GTTYSCVGVF QHGKVEIIAN DQGNRTTPSY VAFTDTERLI GDAAKNQVAL NPQNTVFDAK
RLIGRKFGDP VVQSDMKHWP FQVINDGDKP KVQVSYKGET KAFYPEEISS MVLTKMKEIA EAYLGYPVTN AVITVPAYFN
DSQRQATKDA GVIAGLNVLR IINEPTAAAI AYGLDRTGKG ERNVLIFDLG GGTFDVSILT IDDGIFEVKA TAGDTHLGGE
DFDNRLVNHF VEEFKRKHKK DISQNKRAVR RLRTACERAK RTLSSSTQAS LEIDSLFEGI DFYTSITRAR FEELCSDLFR
STLEPVEKAL RDAKLDKAQI HDLVLVGGST RIPKVQKLLQ DFFNGRDLNK SINPDEAVAY GAAVQAAILM GDKSENVQDL
LLLDVAPLSL GLETAGGVMT ALIKRNSTIP TKQTQIFTTY SDNQPGVLIQ VYEGERAMTK DNNLLGRFEL SGIPPAPRGV
PQIEVTFDID ANGILNVTAT DKSTGKANKI TITNDKGRLS KEEIERMVQE AEKYKAEDEV QRERVSAKNA LESYAFNMKS
AVEDEGLKGK ISEADKKKVL DKCQEVISWL DANTLAEKDE FEHKRKELEQ VCNPIISGLY QGAGGPGPGG FGAQGPKGGS
GSGPTIEEVD
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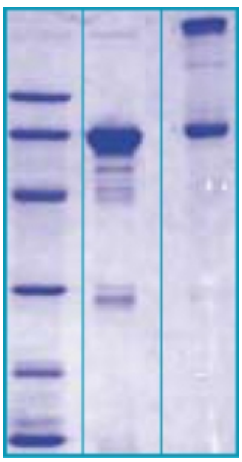
Source

E. coli

SDS-PAGE gel



12% SDS-PAGE separation of Human HSP70
1. M.W. marker - 97, 66, 45, 31, 21, 14 kDa
2. reduced and boiled sample, 5µg/lane
3. non-reduced and non-boiled sample, 5µg/lane

Formulation

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 0.05 M phosphate buffer, 0.075 M NaCl, pH 7.4

Reconstitution

Add deionized water to prepare a working stock solution of 0.5 mg/mL and let the lyophilized pellet dissolve completely. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

At temperature 2 - 8°C Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store lyophilized protein at -80°C. Lyophilized protein remains stable until the expiry date when stored at -80°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a week. Avoid storage of lyophilized product at room temperature. Transport on dry ice.

Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.
LAL TEST to determine endotoxin level.

Applications

ELISA, Immunoassays, Western blotting

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