

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). N-Terminal His-tag (10 extra AA)

Introduction to the Molecule

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

Research topic

Diabetology - Other Relevant Products, Others

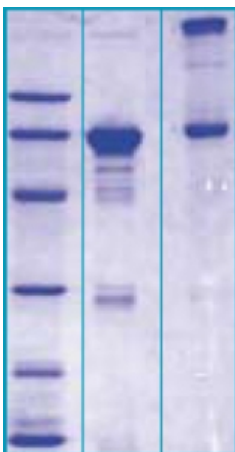
Amino Acid Sequence

MKHHHHHHAS AKAAAGIDL GTTYSVGVF QHGKVEIIAN DQGNRTTPSY VAFDTERLI GDAAKNQVAL NPQNTVFDAK
RLIGRKFQDP VVQSDMKHWP FQVINDGDKP KVQVSYKGET KAFYPEEISS MVLTKMKEIA EAYLGYPVTN AVITVPAYFN
DSQRQATKDA GVIAGLNVLR IINEPTAAAI AYGLDRTGKG ERNVLIFDLG GGTFDVSILT IDDGIFEVKA TAGDTHLGGE
DFDNRLVNHF VEEFKRKHKK DISQNKRAVR RLRTACERAK RTLSSSTQAS LEIDSLFEGI DFYTSITRAR FEELCSDLFR
STLEPVEKAL RDAKLDKAI HDLVLVGGST RIPKVQKLLQ DFFNGRDLNK SINPDEAVAY GAAVQAAILM GDKSENVQDL
LLLDVAPLSL GLETAGGVT ALIKRNSTIP TKQTQIFTTY SDNQPGVLIQ VYEGERAMTK DNNLLGRFEL SGIPPAPRGV
PQIEVTFDID ANGILNVTAT DKSTGKANKI TITNDKGRLS KEEIERMVQE AEKYKADEV QRERVSARKNA LESYAFNMKS
AVEDEGLKKG ISEADKKKVL DKCQEVISWL DANTLAEKDE FEHKKRKELEQ VCNPIISGLY QGAGGPGPGG FGAQGPKGGS
GSGPTIEEVD

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.

Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the 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