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**Product Data Sheet**


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Product Name: HSPA1B Human  
 Cat. No.: GP25103  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Heat shock 70kDa protein 1B; HSP70-2; HSP70-1/HSP70-2; FLJ54328; HSPA1A; heat shock 70kDa protein 1A/1B; HSPA1.		
Amino Acid Sequence	<p>MKHHHHHHAS AKAAAIGIDL GTTYSCVGVF QHGKVEIIAN DQGNRTTPSY          VAFTDTERLI GDAAKNQVAL NPQNTVFDK RLIGRKFGDP VVQSDMKHWP          FQVINDGDKP KVQVSYKGET KAFYP EEISS MVLTKMKEIA EAYLGYPVTN          AVITVPAYFN DSQRQATKDA GVIAGLNVLR IINEPTAAAI AYGLDRTGKG          ERNVLIFDLG GGTFDVSILT IDDGIFEVKA TAGDTHLGGEDFDNRLVNHF          VEEFKRKHKK DISQNKRAVR RLRTACERAK RTLSSSTQAS LEIDSLFEGI          DFYTSITRAR FEELCSDLFR STLEPVEKAL RDAKLDKAQI HDLVLVGGST          RIPKVQKLLQ DFFNGRDLNK SINPDEAVAY GAAVQAAILM GDKSENVQDL          LLLDVAPLSL GLETAGGVM T ALIKRNSTIP TKQTQIFTTY SDNQPGVLIQ          VYEGERAMTK DNNLLGRFEL SGIPPAPRGVPQIEVTFDID ANGILNVTAT          DKSTGKANKI TITNDKGRLS KEEIERMVQE AEKYKAEDEV QRERVS AKNA          LESYAFNMKS AVEDEGLK GK ISEADKKKVL DKCQEVISWL DANTLAEKDE          FEHKRKELEQ VCNPIISGLY QGAGGPGPGG FGAQGPKGGS GSGPTIEEVD.</p>		
Solubility	It is recommended to add deionized water to prepare a working stock solution of 0.5mg/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.		
Formulation	The protein was filtered (0.4µm) and lyophilized from a 0.5mg/ml solution containing 50mM phosphate buffer, 75mM NaCl, pH 7.4.		

**Introduction**

The HSP70 family is found in many intracellular compartments such as chloroplasts, endoplasmic reticulum, mitochondria, and cytosol. These proteins are induced by a

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

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variation of biological stresses, including heat stress, in every organism. HSP70 has a range of functions. For example: HSP70 acts as molecular chaperones facilitating the assembly of multi-protein complexes, HSP70 take part in the translocation of polypeptides across cell membranes and to the nucleus, and HSP70 assists in the proper folding of nascent polypeptide chains. HSP70 is a mitochondrial import equipment and has a crucial part in the cytosolic endoplasmic reticulum. Lately, extracellular localized HSP was discovered to take an important part in the induction of a cellular immune response.

### Stability

Lyophilized HSPA1B although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution HSPA1B should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . Please prevent freeze-thaw cycles.

### Background

The HSPA1B Protein Human produced in E.Coli is a single, non-glycosylated polypeptide chain containing 650 amino acids having a molecular mass of 71.16kDa. HSPA1B is fused to a 10 amino acids His-Tag at N-terminus and purified by proprietary chromatographic techniques.

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