

Recombinant Human HSP70/HSPA1A Protein (His Tag)

Catalog No. PKSH030303

Note: Centrifuge before opening to ensure complete recovery of vial contents.

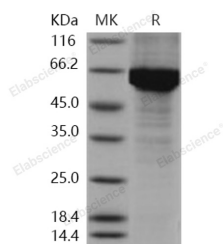
Description

Synonyms	HEL-S-103;HSP70-1;HSP70-1A;HSP70I;HSP72;HSPA1
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Ala 2-Asp 641
Accession	P08107
Calculated Molecular Weight	72.2 kDa
Tag	N-His
Bioactivity	1. Measured by its ability to bind human PARP1 in a functional ELISA. 2. Measured by its ability to bind mouse PARP1 in a functional ELISA.

Properties

Purity	> 85 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% glycerol Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 85 % as determined by reducing SDS-PAGE.

Background

HSPA1A is a member of the Hsp70 protein family. The 70 kilodalton heat shock proteins (Hsp70s) are a family of ubiquitously expressed heat shock proteins. HSP are abundant and conserved proteins present in all cells. Upon

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temperature shock or other stress stimuli, HSP are synthesized intracellularly, which may protect cells from protein denaturation or from death. Extracellularly, HSP can serve a cytokine function to initiate both innate and adaptive immunity through activation of APC. HSP serves also a chaperone function and facilitates presentation of antigen peptide to T cells. Molecular chaperones of the Hsp70 family have diverse functions in cells. They assist the folding of newly synthesized and stress-denatured proteins, as well as the import of proteins into organelles, and the dissociation of aggregated proteins. The well-conserved Hsp70 chaperones are ATP dependent: binding and hydrolysis of ATP regulates their interactions with unfolded polypeptide substrates, and ATPase cycling is necessary for their function. All cellular functions of Hsp70 chaperones use the same mechanism of ATP-driven polypeptide binding and release.