

Active Recombinant Human HSPA4 Protein

Cat. No. HSPA4-012H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human HSPA4 protein (2-641) without tag was expressed in insect cell.
Species	Human
Source	Insect Cells
ProteinLength	2-641
Description	HSPA4 heat shock protein family A (Hsp70) member 4 are abundant and stress-inducible 70 kDa molecular chaperone proteins encoded by a highly conserved, multigene family. They are monomeric proteins that can be divided into two functional domains: an N-terminal ATPase domain and a substrate binding domain that contains a highly conserved EEVD motif at its C-terminus. Hsp70s are found in the cytosol, nuclei, endoplasmic reticulum, mitochondria, and chloroplasts of eukaryotes, as well as in bacteria. They function as molecular chaperones that assist in a wide range of cellular processes, including refolding of aggregated or misfolded proteins, co- and post-translational folding and assembly of nascent peptides, membrane translocation of secretory and organellar proteins, controlling activity of regulatory nuclear receptors, kinases and transcription factors, as well as acting cooperatively with the Hsp90 chaperone system in eukaryotes. The HSPA4 chaperone cycle is ATP-dependent and initiated by transient interaction of the HSPA4 substrate binding domain with hydrophobic regions within a peptide or protein. It consists of an alteration between the low-affinity ATP-bound state with fast rates of substrate exchange and the high-affinity ADP bound state with slow rates of substrate

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

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exchange. HSPA4 are subject to a variety of post-translational modifications and their expression is upregulated under conditions of cellular stress and in a variety of disease states.

Form	50 mM HEPES, pH 8.0, 150 mM sodium chloride, 1 mM DTT, and 10% glycerol
Bio-activity	ATPase activity confirmed by ADP detection assay
Molecular Mass	71.7 kDa
Purity	≥75% estimated by SDS-PAGE
Stability	≥ 1 year
Storage	Store at -80 centigrade

GENE INFORMATION

Gene Name	HSPA4 heat shock protein family A [Homo sapiens (human)]
Official Symbol	HSPA4
Synonyms	HSPA4; heat shock protein family A; RY; APG-2; HSPH2; hsp70; hsp70RY; HEL-S-5a; HS24/P52; heat shock 70 kDa protein 4; epididymis secretory sperm binding protein Li 5a; heat shock 70-related protein APG-2; heat shock 70kD protein 4; heat shock 70kDa protein 4; heat shock protein, 110 kDa; hsp70 RY
Gene ID	3308
mRNA Refseq	NM_002154

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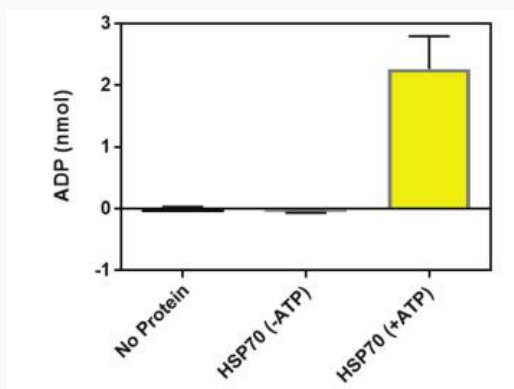
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Protein Refseq NP_002145

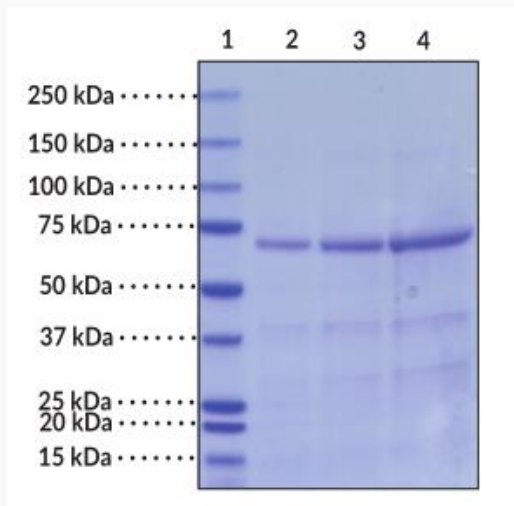
MIM 601113

UniProt ID P34932

ATPase Activity of
HSPA4 Expressed In
Insect Cell.



SDS-PAGE analysis
of HSPA4.



Lane 1: MW Markers
Lane 2: HSPA4 BV (1 g)

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Lane 3: HSPA4 BV (2 g)

Lane 4: HSPA4 BV (4 g)

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