

Hsc70 Active Protein | HSPA8 active protein

Recombinant Human HSC70

CATALOG #
AAA103775

APPLICATIONS
ELISA, Functional Assay, SDS-Page, Western Blot

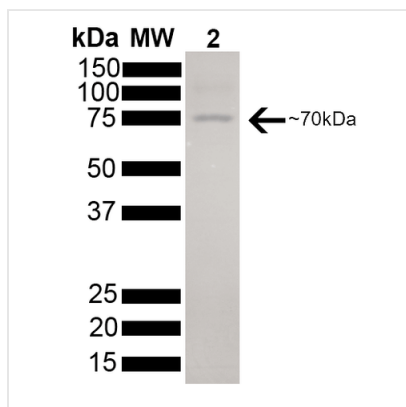
PRODUCT SYNONYMS

Hsc70; Recombinant Human HSC70; Constitutive heat shock protein 70 Protein; HSC54 Protein; HSC71 Protein; HSC73 Protein; HSP71 Protein; HSP74 Protein; HSPA10 Protein; HSPA8 Protein; LAP1 Protein; NIP71 Protein; HSPA8 active protein

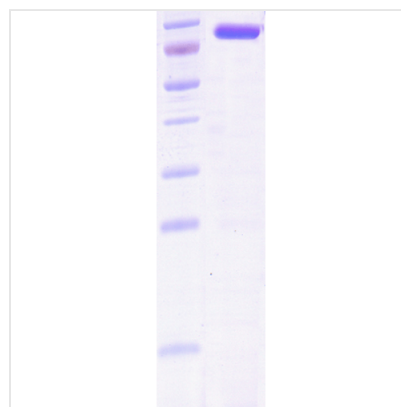
PRODUCT SPECIFICATIONS

Purity/Purification	Affinity Purified
Form/Format	50mM Tris/HCl, pH 8, 0.3M NaCl
Concentration	1mg/mL (varies by lot)
Sequence Length	2085
Applicable Applications for HSPA8 active protein	ELISA, FA (Functional Assay), SDS-PAGE, WB (Western Blot)
Certificate of Analysis	This product has been certified >90% pure using SDS-PAGE analysis. The protein has ATPase activity at the time of manufacture of 3.2uM phosphate liberated/hr/ug protein in a 200ul reaction at 37 degree C (pH 8) in the presence of 20ul of 1mM ATP using a Malachite Green assay.
Tag	His tag
Expression System	E. coli
Research Areas	Cancer, Heat Shock
Cellular Localization	Cytoplasm, Melanosome
Preparation and Storage	Store at -20°C; 1 year+ Avoid freeze/thaw cycles.

IMAGES



SDS-PAGE
SDS-PAGE of 73kDa Hsc70 protein



SDS-PAGE
SDS-PAGE of 73kDa Hsc70 protein.

ADDITIONAL INFORMATION

Related Product Information for HSPA8 active protein	Hsp70 genes encode abundant heat-inducible 70-kDa hsps (hsp70s). In most eukaryotes hsp70 genes exist as part of a multigene family. They are found in most cellular compartments of eukaryotes including nuclei, mitochondria, chloroplasts, the endoplasmic reticulum and the cytosol, as well as in bacteria. The genes show a high degree of conservation, having at least 50% identity (2). The N-terminal two thirds of hsp70s are more conserved than the C-terminal third. Hsp70 binds ATP with high affinity and possesses a weak ATPase activity which can be stimulated by binding to unfolded proteins and synthetic peptides (3). When hsc70 (constitutively expressed) present in mammalian cells was truncated, ATP binding activity was found to reside in an N-terminal fragment of 44 kDa which lacked peptide binding capacity. Polypeptide binding ability therefore resided within the C-terminal half (4). The structure of this ATP binding domain displays multiple features of nucleotide binding proteins (5). When cells are subjected to metabolic stress (e.g., heat shock) a member of the hsp 70 family, hsp 70 (hsp72), is expressed; hsp 70 is highly related to hsc70 (>90% sequence identity). Constitutively expressed hsc70 rapidly forms a stable complex with the highly inducible hsp70 in cells following heat shock. The interaction of hsc70 with hsp 70 is regulated by ATP. These two heat shock proteins move together in the cell experiencing stress. Furthermore, research on hsc70 has implicates it with a role in facilitating the recovery of centrosomal structure and function after heat shock (6).
Product Categories/Family for HSPA8 active protein	Chaperones; Heat Shock; Trafficking
References	1. Brown, C. L. et al. (1993) J.Cell Biol., 120 (5): 1101-1112 2. Boorstein, W. R., Ziegelhoffer, T. & Craig, E. A. (1993), J. Mol. Evol. 38(1): 1-17. 3. Rothman, J. (1989), Cell 59, 591 -601. 4. DeLuca-Flaherty et al. (1990), Cell 62, 875- 887. 5. Bork, P., Sander, C. & Valencia, A. (1992). Proc. Natl Acad. Sci. USA 89: 7290-7294. 6. Brown, C. L. et al. (1996) J. Biol. Chem., 271 (2): 833-840. 1. Takino, J., Kobayashi, Y. and Takeuchi, M. (2010). The formation of intracellular glyceraldehyde-derived advanced glycation end-products and cytotoxicity. Journal of Gastroenterology. 45 (6), 646-655. doi: 10.1007/s00535-009-0193-9 2. Fujiwara, Y. et al. (2013). Discovery of a novel type of autophagy targeting RNA. Autophagy. 9 (3), 403-409. doi: 10.4161/auto.23002 3. Zwang, N.A. et al. (2009). Identification of Phosphorylation-Dependent Binding Partners of Aquaporin-2 Using Protein Mass Spectrometry. J. Proteome Res. 8 (3), 1540-1554. doi: 10.1021/pr800894p

NCBI AND UNIPROT INFORMATION

NCBI GI #	13273303
NCBI GeneID	3312
UniProt Accession #	P11142; Q9H3R6
Molecular Weight	~70kD
NCBI Official Full Name	Homo sapiens constitutive heat shock protein 70 (HSC70) mRNA, complete cds
NCBI Official Synonym Full Names	heat shock 70kDa protein 8
NCBI Official Symbol	HSPA8
NCBI Official Synonym Symbols	LAP1; HSC54; HSC70; HSC71; HSP71; HSP73; LAP-1; NIP71; HEL-33; HSPA10; HEL-S-72p
NCBI Protein Information	heat shock cognate 71 kDa protein; LPS-associated protein 1; heat shock 70kd protein 10; epididymis luminal protein 33; heat shock cognate protein 54; constitutive heat shock protein 70; lipopolysaccharide-associated protein 1; N-myristoyltransferase inhibitor protein 71; epididymis secretory sperm binding protein Li 72p
UniProt Protein Name	Heat shock cognate 71 kDa protein
UniProt Gene Name	HSPA8
UniProt Synonym Gene Names	HSC70; HSP73; HSPA10; LAP-1; LPS-associated protein 1
UniProt Entry Name	HSP7C_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/active-protein/hsc70/103775>