

Mouse HSC70 (HSP73) Monoclonal Antibody | anti-HSPA8 antibody

Hsc70 (Hsp73) Antibody: Biotin

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA102825	Mouse	Human, Mouse, Rat	Immunohistochemistry, Immunoprecipitation, ELISA, Western Blot

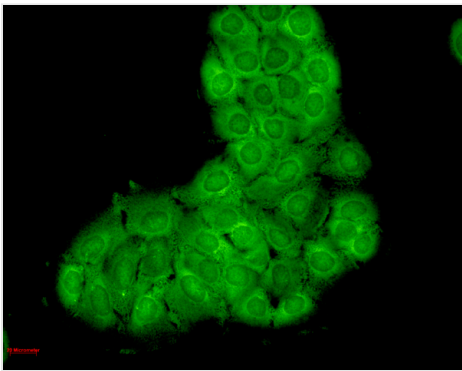
PRODUCT SYNONYMS

HSC70 (HSP73); Monoclonal Antibody; Hsc70 (Hsp73) Antibody: Biotin; Hsc54; Hsc71; Hsc73; Hsp71; Hsp73; HspA10; HspA8; LAP1; NIP71; anti-HSPA8 antibody

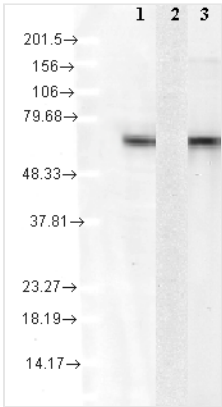
PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Isotype	IgG2a Kappa
Clone Number	1F2-H5
Specificity	Detects ~73kDa, Does not cross react with HSP70.
Form/Format	Protein G Purified
Concentration	1mg/mL (varies by lot)
Sequence Length	646
Applicable Applications for anti-HSPA8 antibody	IHC (Immunohistochemistry), IP (Immunoprecipitation), ELISA, WB (Western Blot)
Conjugate	Biotin
Immunogen	Full length human HSC70
Storage Buffer	PBS pH7.4, 50% glycerol, 0.09% sodium azide
Certificate of Analysis	1 ug/ml of SMC-151 was sufficient for detection of HSC70 in 10 ug of HeLa lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG: HRP as the secondary antibody.
Research Area(s)	Cancer Heat Shock
Cellular Localization	Cytoplasm Melanosome.
Preparation and Storage	-20 degree C; 1 year + Avoid freeze/thaw cycle.

IMAGES



ICC (Immunocytochemistry)
Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Hsc70 Monoclonal Antibody, Clone 1F2-H5. Tissue: HaCaT cells. Species: Human. Fixation: Cold 100% methanol for 10 minutes at -20 degree C. Primary Antibody: Mouse Anti-Hsc70 Monoclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Bright cytoplasmic staining, duller nuclear staining.



WB (Western Blot)
Western Blot analysis of Human Cell lysates showing detection of Hsc70 protein using Mouse Anti-Hsc70 Monoclonal Antibody, Clone 1F2-H5. Load: 15 ug. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsc70 Monoclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT. 1: mix of 10 different human cell lines, 2: Hsp72 recombinant protein, and 3: Hsc70(Hsp73) recombinant protein.

ADDITIONAL INFORMATION

Related Product Information for anti-HSPA8 antibody	Background Info: Detects ~73kDa. Does not cross react with Hsp70 Scientific Background: Hsp70 genes encode abundant heat-inducible 70-kDa hsp (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 anti-HSPA8 antibody	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., and 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., and Valencia A. (1992) Proc. Nutl Acad. Sci. USA 89: 7290-7294. 6. Brown C.L. et al. (1996) J. Biol. Chem. 271(2): 833- 840. 1. Shiota, M. et al. (2009). Heat Shock Cognate Protein 70 Is Essential for Akt Signaling in Endothelial Function. Arteriosclerosis, Thrombosis, and Vascular Biology. 30, 491-497. doi: 10.1161/ATVBAHA.109.193631 2. Kawano, F. et al. (2011). Responses of HSC70 expression in diencephalon to iron deficiency anemia in rats. J Physiol Sci. 61 (6), 445-456. doi:10.1007/s12576-011-0164-9. 3. Baaklini, I. et al. (2012). The DNAJA2 Substrate Release Mechanism Is Essential for Chaperone-mediated Folding. J Biol Chem. 287, 41939-41954. doi: 10.1074/jbc.M112.413278 4. Shimomura, H., Imai, A., Nashida, T. (2013) Characterization of cysteine string protein in rat parotid acinar cells. Archives of Biochemistry and Biophysics. Available online 10 August 2013. doi: 10.1016/j.abb.2013.08.001

NCBI AND UNIPROT INFORMATION

NCBI GI #	5729877
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NCBI GeneID	3312
NCBI Accession #	NP_006588.1
NCBI GenBank Nucleotide #	NM_006597.5
UniProt Accession #	P11142 ; Q9H3R6
Molecular Weight	53,518 Da
NCBI Official Full Name	heat shock cognate 71 kDa protein isoform 1
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/monoclonal/hsc70-hsp73-antibody-clone-1f2-h5-immunohistochemistry-immunoprecipitation-western-blot-elisa/102825>