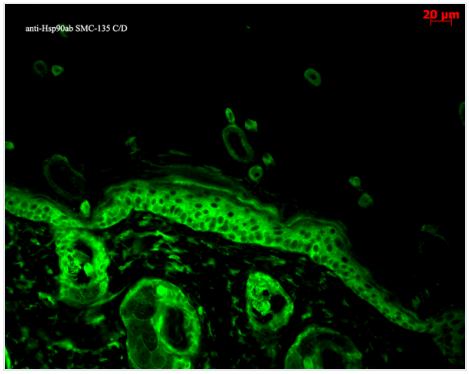
Hsp90 Alpha/Beta (HSP90AB1) Antibody – Mouse Monoclonal

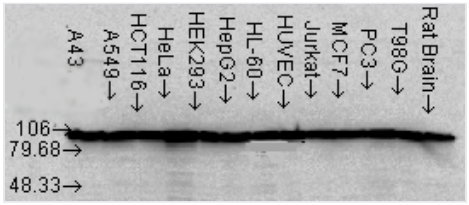
PRODUCT OVERVIEW

Product Name	Hsp90 alpha/beta (HSP90AB1), Monoclonal Antibody
Full Product Name	Hsp90 alpha/beta Antibody: Biotin
Product Gene Name	anti-HSP90AB1 antibody
Product Synonym Names	Hsp86; Hsp89A; Hsp90AA1; Hsp90Alpha; HspC1; HSPCA; HspCAL3; Hsp84; Hsp90B; HspC2; HspCB; D6S182; FLJ26985
Clonality	Monoclonal
Isotype	IgG2a
Clone Number	Hyb-K41220A
Host	Mouse
Species Reactivity	Human, Rat, S. cerevisiae, S. pombe. Limited or no reactivity to mice or P.caudatum
Form/Format	Protein G Purified
Concentration	1mg/mL (lot specific)
Preparation and Storage	-20 degree C
Matching Pairs	Unconjugated Antibody: Hsp90 alpha/beta Clone #Hyb-K41220A (MBS804099) Biotin Conjugated Antibody: Hsp90 alpha/beta Clone #Hyb-K41220A (MBS803665)
Molecular Weight	83,264 Da
OMIM	140572
3D Structure	ModBase 3D Structure for P08238
Conjugate	Biotin
Storage Buffer	PBS pH7.2, 50% glycerol, 0.09% sodium azide
Product Categories/Family for anti-HSP90AB1 antibody	Chaperones; Heat Shock; Organelle Markers; Trafficking
Applications Tested/Suitable for anti-HSP90AB1 antibody	Western Blot (WB), ELISA (EIA), Immunohistochemistry (IHC)
Application Notes for anti-HSP90AB1 antibody	1ug/ml was sufficient for detection of hsp90alphabeta by Western Blot in 20ug of HeLa lysate.

Related Product Information for anti-HSP90AB1 antibody	**Background Info:** Detects 90kD proteins corresponding to the molecular mass of hsp90 alpha or beta. **Scientific Background:** HSP90 is an abundantly and ubiquitously expressed heat shock protein. It is understood to exist in two principal forms alpha and beta, which share 85% sequence amino acid homology. The two isoforms of Hsp90 are expressed in the cytosolic compartment (1). Despite the similarities, HSP90alpha exists predominantly as a homodimer while HSP90beta exists mainly as a monomer.(2) From a functional perspective, hsp90 participates in the folding, assembly, maturation, and stabilization of specific proteins as an integral component of a chaperone complex. (3-6) Furthermore, Hsp90 is highly conserved between species; having 60% and 78% amino acid similarity between mammalian and the corresponding yeast and Drosophila proteins, respectively. Hsp90 is a highly conserved and essential stress protein that is expressed in all eukaryotic cells. Despite its label of being a heat-shock protein, hsp90 is one of the most highly expressed proteins in unstressed cells (1-2% of cytosolic protein). It carries out a number of housekeeping functions - including controlling the activity, turnover, and trafficking of a variety of proteins. Most of the hsp90-regulated proteins that have been discovered to date are involved in cell signaling (7-8). The number of proteins now know to interact with Hsp90 is about 100. Target proteins include the kinases v-Src, Wee1, and c-Raf, transcriptional regulators such as p53 and steroid receptors, and the polymerases of the hepatitis B virus and telomerase.5 When bound to ATP, Hsp90 interacts with co-chaperones Cdc37, p23, and an assortment of immunophilin-like proteins, forming a complex that stabilizes and protects target proteins from proteasomal degradation. In most cases, hsp90-interacting proteins have been shown to co-precipitate with hsp90 when carrying out immunoadsorption studies, and to exist in cytosolic heterocomplexes with it. In a number of cases, variations in hsp90 expression or hsp90 mutation has been shown to degrade signaling function via the protein or to impair a specific function of the protein (such as steroid binding, kinase activity) in vivo. Ansamycin antibiotics, such as geldanamycin and radicicol, inhibit hsp90 function (9).
Product References and Citations for anti-HSP90AB1 antibody	1. Nemoto, T. et al. (1997) J.Biol Chem. 272, 26179-26187. 2. Minami, Y, et al. (1991), J.Biol Chem. 266, 10099-10103. 3. Arlander SJH, et al. (2003) J Biol Chem 278, 52572-52577. 4. Pearl H, et al. (2001) Adv Protein Chem 59,157-186. 5. Neckers L, et al. (2002) Trends Mol Med 8:S55-S61. 6. Pratt W, Toft D. (2003) Exp Biol Med 228:111-133. 7. Pratt W, Toft D. (1997) Endocr Rev 18,306-360. 8. Pratt WB. (1998) Proc Soc Exptl Biol Med 217, 420-434. 9. Whitesell L, et al. (1994) Proc Natl Acad Sci USA 91, 8324-8328. 10. Kishimoto J, et al. (2005). Cell Stress and Chaperones. 10 (4), 296-311. 1. Horvat, N. K., et al. (2014). A mutation in the catalytic loop of Hsp90 specifically impairs ATPase stimulation by Aha1p, but not Hch1p. J Mol Biol. pii: S0022-2836(14)00176-4. doi: 10.1016/j.jmb.2014.04.002
Other Notes	Small volumes of anti-HSP90AB1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HSP90AB1 purchase	MBS803665 is an antibody targeting HSP90AB1. Also known as Hsp90 alpha/beta Antibody: Biotin. Reactive in Human, Rat, S. cerevisiae, S. pombe. Limited or no reactivity to mice or P.caudatum. Host: Mouse.



Immunohistochemistry (IHC) of anti-HSP90AB1 antibody
Immunohistochemistry analysis using Mouse Anti-Hsp90 alpha Monoclonal Antibody, Clone K41220A. Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Hsp90 alpha 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: Epidermis.



Western Blot (WB) of anti-HSP90AB1 antibody
Western Blot analysis of Human Cell lysates showing detection of Hsp90 alpha protein using Mouse Anti-Hsp90 alpha Monoclonal Antibody, Clone K41220A. Load: 15 ug. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp90 alpha Monoclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HSP90AB1. It may not necessarily be applicable to this product.

NCBI GI #	20149594

NCBI GeneID	3326
NCBI Accession #	NP_031381.2
NCBI Related Accession #	NP_001017963.2
UniProt Primary Accession #	P08238
UniProt Secondary Accession #	Q5T9W7; Q9NQW0; Q9NTK6; B2R5P0
UniProt Related Accession #	P08238
GenBank Nucleotide #	NM_007355.3
NCBI Official Full Name	heat shock protein HSP 90-beta isoform a
NCBI Official Synonym Full Names	heat shock protein 90kDa alpha (cytosolic), class B member 1
NCBI Official Symbol	HSP90AB1
NCBI Official Synonym Symbols	HSP84; HSPC2; HSPCB; D6S182; HSP90B
UniProt Protein Name	Heat shock protein HSP 90-beta
UniProt Synonym Protein Names	Heat shock 84 kDa; HSP 84; HSP84
Protein Family	Heat shock cognate protein
UniProt Gene Name	HSP90AB1
UniProt Synonym Gene Names	HSP90B; HSPC2; HSPCB; HSP 90; HSP 84; HSP84
UniProt Entry Name	HS90B_HUMAN
NCBI Protein Information	heat shock protein HSP 90-beta; HSP90-beta; heat shock 84 kDa; heat shock 90kD protein 1, beta
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