10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Hsp90 alpha Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52868

Product Information

Application	WB
Primary Accession	P07900
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	84660

Additional Information

Gene ID	3320
Other Names	Heat shock 86 kDa; Heat shock 90kDa protein 1 alpha; Heat shock protein 90kDa alpha (cytosolic) class A member 1; heat shock protein 90kDa alpha (cytosolic), class A member 2; Heat shock protein HSP 90-alpha; HS90A_HUMAN; HSP 86; HSP 86; HSP 86; HSP86; Hsp89; HSP89A; HSP90A; HSP90AA1; HSP90ALPHA; HSP90N; HSPC1; HSPCA; HSPCAL1; HSPCAL3; HSPCAL4; HSPN; LAP2; Renal carcinoma antigen NY REN 38; Renal carcinoma antigen NY-REN-38.
Dilution	WB~~1:1000
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	HSP90AA1 (HGNC:5253)
Synonyms	HSP90A, HSPC1, HSPCA
Function	Molecular chaperone that promotes the maturation, structural maintenance and proper regulation of specific target proteins involved for instance in cell cycle control and signal transduction. Undergoes a functional cycle that is linked to its ATPase activity which is essential for its chaperone activity. This cycle probably induces conformational changes in the client proteins, thereby causing their activation. Interacts dynamically with various co-chaperones that modulate its substrate recognition, ATPase cycle and chaperone function (PubMed:11274138, PubMed:12526792, PubMed:15577939,

PubMed:15937123, PubMed:27353360, PubMed:29127155). Engages with a range of client protein classes via its interaction with various co-chaperone proteins or complexes, that act as adapters, simultaneously able to interact with the specific client and the central chaperone itself (PubMed:29127155). Recruitment of ATP and co-chaperone followed by client protein forms a functional chaperone. After the completion of the chaperoning process, properly folded client protein and co- chaperone leave HSP90 in an ADP-bound partially open conformation and finally, ADP is released from HSP90 which acquires an open conformation for the next cycle (PubMed:26991466, PubMed:27295069). Plays a critical role in mitochondrial import, delivers preproteins to the mitochondrial import receptor TOMM70 (PubMed:12526792). Apart from its chaperone activity, it also plays a role in the regulation of the transcription machinery. HSP90 and its co-chaperones modulate transcription at least at three different levels (PubMed:25973397). In the first place, they alter the steady-state levels of certain transcription factors in response to various physiological cues (PubMed:25973397). Second, they modulate the activity of certain epigenetic modifiers, such as histone deacetylases or DNA methyl transferases, and thereby respond to the change in the environment (PubMed:25973397). Third, they participate in the eviction of histones from the promoter region of certain genes and thereby turn on gene expression (PubMed:25973397). Binds bacterial lipopolysaccharide (LPS) and mediates LPS-induced inflammatory response, including TNF secretion by monocytes (PubMed:11276205). Antagonizes STUB1-mediated inhibition of TGF-beta signaling via inhibition of STUB1-mediated SMAD3 ubiquitination and degradation (PubMed:24613385). Mediates the association of TOMM70 with IRF3 or TBK1 in mitochondrial outer membrane which promotes host antiviral response (PubMed:20628368, PubMed:25609812).

Cellular Location

Nucleus {ECO:0000250|UniProtKB:P07901}. Cytoplasm {ECO:0000250|UniProtKB:P07901}. Melanosome. Cell membrane. Mitochondrion. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

Background

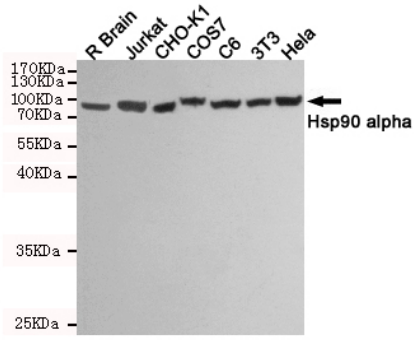
Molecular chaperone that promotes the maturation, structural maintenance and proper regulation of specific target proteins involved for instance in cell cycle control and signal transduction. Undergoes a functional cycle that is linked to its ATPase activity. This cycle probably induces conformational changes in the client proteins, thereby causing their activation. Interacts dynamically with various co-chaperones that modulate its substrate recognition, ATPase cycle and chaperone function. Binds bacterial lipopolysaccharide (LPS) et mediates LPS-induced inflammatory response, including TNF secretion by monocytes.

References

Soeda E.,et al.Nucleic Acids Res. 17:7108-7108(1989).
Yamazaki M.,et al.Agric. Biol. Chem. 54:3163-3170(1990).
Hickey E.,et al.Mol. Cell. Biol. 9:2615-2626(1989).
Chen B.,et al.Genomics 86:627-637(2005).
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images

Western blot detection of Hsp90 alpha in R Brain,Jurkat,CHO-K1,COS7,C6,3T3 and Hela cell lysates using Hsp90 alpha mouse mAb (1:1000 diluted).



Predicted band size:90KDa. Observed band size:90KDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.