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Recombinant Anti-HSP90 alpha/beta Rabbit mAb

Catalog # AP94936

Product Information

Application	WB, IHC, FC, IP, IF/IC
Primary Accession	P07900
Other Accession	P08238
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal
Calculated MW	84660

Additional Information

Gene ID	3320
Other Names	HSP90AA1; HSP90A; HSPC1; HSPCA; Heat shock protein HSP 90-alpha; Heat shock 86 kDa; HSP 86; HSP86; Renal carcinoma antigen NY-REN-38; HSP90AB1; HSP90B; HSPC2; HSPCB; Heat shock protein HSP 90-beta; HSP 90; Heat shock 84 kDa; HSP 84; HSP84
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human HSP90 alpha/beta protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IP~~N/A IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

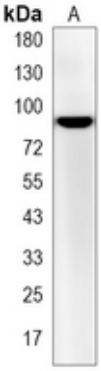
Name	HSP90AA1 (HGNC:5253)
Synonyms	HSP90A, HSPC1, HSPCA
Function	Molecular chaperone that promotes the maturation, structural maintenance and proper regulation of specific target proteins involved for instance in cell cycle control and signal transduction. Undergoes a functional cycle that is linked 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).

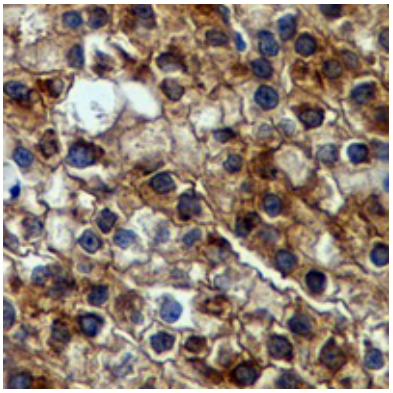
Cellular Location

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

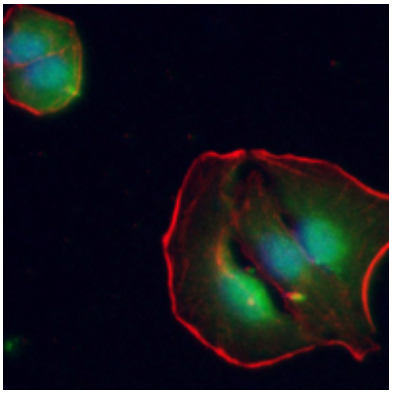
Images



Western blot analysis of HSP90 alpha/beta expression in Jurkat (A) whole cell lysates. (Predicted band size: 85, 83 kD; Observed band size: 90 kD)



Immunohistochemical analysis of HSP90 alpha/beta staining in human liver cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of HSP90 alpha/beta staining in Jurkat cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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