

Hsp90 alpha Rabbit mAb

Catalog # AP77425

Product Information

Application WB, IF, ICC, IP **Primary Accession** P07900

Reactivity Rat, Human, Mouse

Host Rabbit

Clonality Monoclonal Antibody

Isotype IgG

Conjugate Unconjugated

Immunogen A synthesized peptide derived from human Hsp90 alpha

Purification Affinity Chromatography

Calculated MW 84660

Additional Information

Gene ID 3320

Other Names HSP90AA1

Dilution WB~~1/500-1/1000 IF~~1/50-1/200 ICC~~N/A IP~~N/A

Format Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02%

sodium azide and 50% glycerol.

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,

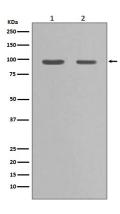
PubMed: 15937123, PubMed: 27353360, PubMed: 29127155). Engages with a range of client protein classes via its interaction with various co-chaperone proteins or complexes, that act as adapters, simultaneously able to interact with the specific client and the central chaperone itself (PubMed: 29127155).

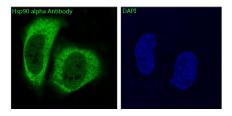
Recruitment of ATP and co-chaperone followed by client protein forms a functional chaperone. After the completion of the chaperoning process, properly folded client protein and co- chaperone leave HSP90 in an ADP-bound partially open conformation and finally, ADP is released from HSP90 which acquires 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:<u>25973397</u>). 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





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