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

HSP90 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11072

Specification

HSP90 Antibody - Product Information

Application	**WB, IHC, IP**
Primary Accession	P08238
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**83264**

HSP90 Antibody - Additional Information

Gene ID 3326

Application & Usage	**Western blotting (0.5-4 µg/ml), in immunoprecipitation (10-20 µg/ml) and Immunohistochemistry (frozen sections, 10-20 µg/ml). However, the optimal concentrations should be determined individually. The antibody recognizes Hsp90α and Hsp90β of human, mouse, and rat origins.**

Other Names
Heat shock 90 kDa protein 1A/1B, Heat shock 90 kDa protein 1/2, HSP90-1/HSP90-2, HSPA1A, HSPA1, HSPA1B

Target/Specificity
HSP90

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
200 µg (0.5 mg/ml) affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
HSP90 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

HSP90 Antibody - Protein Information

Name HSP90AB1 (HGNC:5258)

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 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 (PubMed:16478993, PubMed:19696785). 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. 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). 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. They first alter the steady-state levels of certain transcription factors in response to various physiological cues. 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. Third, they participate in the eviction of histones from the promoter region of certain genes and thereby turn on gene expression (PubMed:25973397). Antagonizes STUB1- mediated inhibition of TGF-beta signaling via inhibition of STUB1- mediated SMAD3 ubiquitination and degradation (PubMed:24613385). Promotes cell differentiation by chaperoning BIRC2 and thereby protecting from auto-ubiquitination and degradation by the proteasomal machinery (PubMed:18239673). Main chaperone involved in the phosphorylation/activation of the STAT1 by chaperoning both JAK2 and PRKCE under heat shock and in turn, activates its own transcription (PubMed:20353823). Involved in the translocation into ERGIC (endoplasmic reticulum-Golgi intermediate compartment) of leaderless cargos (lacking the secretion signal sequence) such as the interleukin 1/IL-1; the translocation process is mediated by the cargo receptor TMED10 (PubMed:32272059).

Cellular Location
Cytoplasm. Melanosome Nucleus. Secreted. Cell membrane. Dynein axonemal particle {ECO:0000250|UniProtKB:Q6AZV1}. Cell surface. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065) Translocates with BIRC2 from the nucleus to the cytoplasm during differentiation (PubMed:18239673). Secreted when associated with TGFB1 processed form (LAP) (PubMed:20599762).

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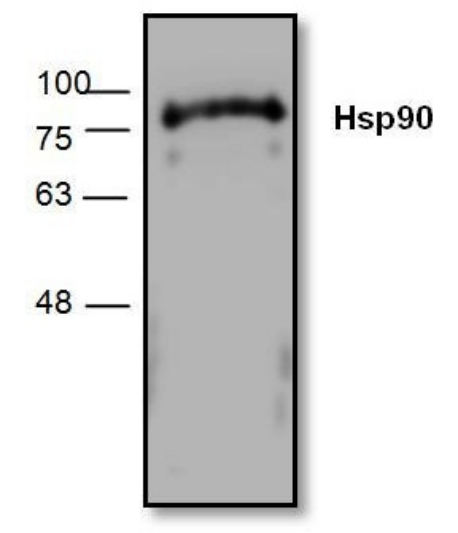
HSP90 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HSP90 Antibody - Images



Western blot analysis of Hsp90 expression in Jurkat cell lysate (Lane 1) and mouse small intestine tissue lysate (lane 2).

HSP90 Antibody - Background

Heat shock proteins (HSPs) are ubiquitously expressed in all organisms. A major function of HSP90 and other HSPs is to act as molecular chaperones. HSP90 forms a complex with glucocorticoid receptor (GR), rendering the non ligand-bound receptor transcriptionally inactive. HSP 90 binds the GR as a heterocomplex composed of either HSP56 or cyclophilin-40, forming an aporeceptor complex. HSP90 also exists as a dimer with other proteins such as p60/sti1 and p23, forming an aporeceptor complex with estrogen and androgen receptors.