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Product datasheet for AM03143PU-N

HSP90AA1 / HSP90 alpha Mouse Monoclonal Antibody [Clone ID: Hyb-K41009]

Product data:

Product Type:	Primary Antibodies
Clone Name:	Hyb-K41009
Applications:	ELISA, IHC, IP, WB
Recommended Dilution:	ELISA (Ref.10). Immunoprecipitation. Immunohistochemistry (Ref.10). Western blot (Ref.1): 1 µg/ml was sufficient for detection of HSP90-alpha in 20 µg of HeLa lysate.
Reactivity:	Human, Rat
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Recombinant Human HSP90 alpha.
Specificity:	Detects 90kD proteins corresponding to the molecular mass of HSP90alpha.
Formulation:	PBS pH 7.2 containing 50% Glycerol as stabilizer and 0.09% Sodium Azide as preservative. State: Purified State: Liquid purified Ig fraction.
Concentration:	lot specific
Purification:	Affinity Chromatography on Protein G.
Conjugation:	Unconjugated
Storage:	Store the antibody (in aliquots) at -20°C.
Stability:	Shelf life: one year from despatch.
Gene Name:	heat shock protein 90kDa alpha family class A member 1

View online »

Database Link: Entrez Gene 3320 Human
P07900

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, HSP90A exists predominantly as a homodimer while HSP90B 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-hhaperones 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).

Synonyms: HSP90A, HSPC1, HSPCA, Heat shock 86 kDa, HSP86, NY-REN-38, Heat shock protein HSP 90-alpha

Note: **Predicted molecular weight:** 95 kDa.