

Product Information



Hsp90 α Monoclonal Antibody (Clone D7 α)

Item No. 10011441

Contents:	This vial contains mouse IgG at a concentration of 1 mg/ml in PBS buffer, containing 0.09% sodium azide and 50% glycerol.
Synonym:	Heat Shock Protein 90 α
Antigen:	Full length protein purified from chicken brain
Host:	Mouse, clone D7 α
Cross Reactivity:	(+) Bovine, chicken, human, mouse, porcine, rat, and rabbit Hsp90; human Hsp90 α . Recognizes 90 kDa proteins corresponding to the molecular mass of Hsp90. Can be used to isolate complexes of Hsp90, Src kinase, and Cdc37. ¹⁻³
Stability:	≥ 1 year at -20°C
Applications:	Immunoprecipitation (IP) and western blot (WB). ¹⁻³ The recommended starting dilution for WB is 1:500; use 5 μ g with 20 μ l of Protein A beads for IP. Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

Hsp90 is a highly conserved and essential stress protein that is expressed in all eukaryotic cells. From a functional perspective, Hsp90 participates in the folding, assembly, maturation, and stabilization of specific proteins as an integral component of a chaperone complex.⁴⁻⁷ Despite its label of being a Hsp, 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.^{8,9} The number of proteins now known 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.⁶ When bound to ATP, Hsp90 interacts with co-chaperones 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 signalling 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 radical, inhibit Hsp90 function.¹⁰

References

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