bHeat Shock Protein 90, beta (HSP90b)

Catalog number

H1834-55R

Supplier

United States Biological

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 (1-4). 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 (5-6). 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-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 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 (7).

Applications:
Suitable for use in ELISA, Western Blot, Immunoprecipitation and Immunohistochemistry. Other applications not tested.

Recommended Dilution

Western Blot:1:20000-1:40000
Optimal dilutions to be determined by the researcher.

Storage and Stability

May be stored at 4°C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20°C. Aliquots are stable for at least 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

Immunogen

Purified recombinant human Hsp90beta.

Formulation

Supplied as a liquid.

Purity

Serum

Specificity

Recognizes human Hsp90beta. Specificity Hsp90beta, does not cross react with Hsp90alpha. Species Crossreactivity: rat, mouse.

Product Type

Pab

Source

human

Isotype

IgG

Grade

Serum

Applications

E IHC IP WB

Crossreactivity

Hu Mo Rt

Storage

-20°C

Reference

1. Arlander S.J.H., et al. (2003) J Biol Chem 278:52572-52577. 2. Pearl H., et al. (2001) Adv Protein Chem 59:157-186. 3. Neckers L., et al. (2002) Trends Mol Med 8:S55-S61. 4. Pratt W., Toft D. (2003) Exp Biol Med 228:111-133. 5. Pratt W., Toft D. (1997) Endocr Rev 18:306–360. 6. Pratt W.B. (1998) Proc Soc Exptl Biol Med 217:420–434. 7. Whitesell L., et al. (1994) Proc Natl Acad Sci USA 91:8324–8328.