

Hsp90 β Recombinant Protein

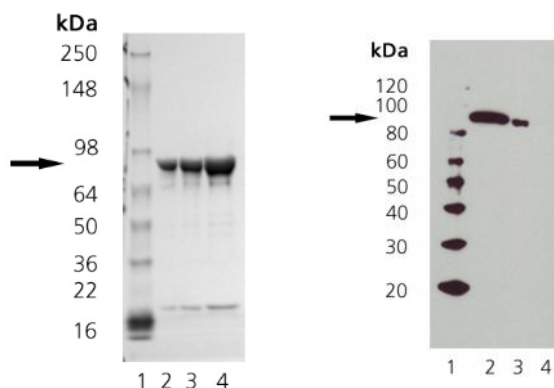
Product Specifications	
Catalog Number:	SPP-777
Product Description:	Purified Human Hsp90 Recombinant Protein
Format:	50mM potassium chloride, 25mM HEPES pH 7.4, 2mM DTT, 5% glycerol
Application:	WB Control: 100 ng of protein recommended (ECL) <i>The optimal dilution for a specific application must be determined by the investigator</i>
Purity:	>85% pure as determined by SDS-PAGE and Western blot analyses
Molecular Weight:	~ 90 kDa observed
Concentration:	See product label
Storage:	Store at -70°C <i>Shipping conditions may differ from the recommended storage temperature</i>
Related Products:	
SPA-843	Hsp90 β Monoclonal Antibody (K3701)
SPA-842	Hsp90 β Monoclonal Antibody (K3705)
SAB-100	Goat anti-Mouse IgG(Fab) Polyclonal Antibody, HRP Conjugate
SPP-770	Hsp90 Native Protein
SPP-776	Hsp90 α Recombinant Protein
SPA-895	Hsp90 α ELISA Kit

Background:

The 90 kDa molecular chaperone family includes 90 kDa heat shock protein Hsp90 and 94 kDa glucose-regulated protein grp94, both major molecular chaperones of the cytosol and the endoplasmic reticulum¹. Mammalian cells express inducible Hsp90 α and constitutive Hsp90 β isoforms that are encoded by separate genes. The amino acid sequences of human and yeast Hsp90 α are 85% and 90% homologous to those of Hsp90 β , respectively. All known members of the Hsp90 protein family are highly conserved, especially in the N-terminal and C-terminal regions containing independent chaperone sites with different substrate specificity^{2,3}. These ubiquitous and highly conserved proteins account for 1-2% of all cellular proteins in most cells. Hsp90 functions as part of the cell's powerful network of chaperones to fight the deleterious consequences of protein unfolding caused by non-physiological conditions. In the absence of stress, however, Hsp90 provides a necessary component of such fundamental cellular processes as hormone signaling and cell cycle control by serving as a chaperone for many key signaling molecules including steroid receptors, cell cycle kinases involved in signal transduction, and p53⁴. As many of these client proteins are known oncogenes, Hsp90 inhibitors such as 17-AAG, a geldanamycin analog, have been of benefit in the treatment of many cancers⁵

References:

1. Scheibel, T. and Buchner, J. (1997) Guidebook to Chaperones, Ed. Gething, M.J., Oxford Univ. Press, Oxford, 147-150.
2. Scheibel, T., et al. (1999) PNAS USA **96**, 1297-1302.
3. Scheibel, T. et al. (1998) J Biochem Pharmacol. **56**, 675-682.
4. Rutherford, S. L., et al. (1998) Nature **396**, 336-342.
5. Workman, P., et al. (2007) Ann NY Acad Sci. **1113**, 202-216.



SDS-PAGE Analysis: Lane 1: MWM, Lane 2: 1.0 μ g, Lane 3: 2.0 μ g, Lane 4: 5.0 μ g purified Hsp90 protein (SPP-777) stained with Coomassie blue

Western Blot Analysis: Lane 1: MWM, Lane 2: 100 ng purified Hsp90 β protein (SPP-777), Lane 3: 100 ng purified Hsp90 native protein (SPP-770), Lane 4: 100 ng purified Hsp90 α protein (SPP-776) probed with Anti-Hsp90 β monoclonal antibody (SPA-843)

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