

**HSP90 alpha/beta Antibody**  
**HSP90 alpha/beta Antibody, Clone Hyb-K41220A**  
**Catalog # ASM10049**

**Specification**

**HSP90 alpha/beta Antibody - Product Information**

Application	WB, IHC, ICC, E
Primary Accession	<a href="#">P08238</a> , <a href="#">P07900</a>
Other Accession	<a href="#">NP_031381.2</a> , <a href="#">NP_001017963.2</a>
Host	Mouse
Isotype	IgG2a
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal

**Description**

Mouse Anti-Human HSP90 alpha/beta Monoclonal IgG2a

**Target/Specificity**

Detects 90kDa. Will detect both alpha (inducible) and beta (constitutively-expressed) forms.

**Other Names**

HSP86 Antibody, HSP89A Antibody, HSP90AA1 Antibody, HSP90Alpha Antibody, HSPC1 Antibody, HSPCA Antibody, HSPCAL3 Antibody, HSP84 Antibody, HSP90B Antibody, HSPC2 Antibody, HSPCB Antibody, D6S182 Antibody, FLJ26985 Antibody

**Immunogen**

Recombinant human HSP90alpha; Specificity mapped to amino acids 291-304

**Purification**

Protein G Purified

Storage **-20°C**

**Storage Buffer**

PBS pH7.2, 50% glycerol, 0.09% sodium azide

Shipping Temperature **Blue Ice or 4°C**

**Certificate of Analysis**

1 µg/ml was sufficient for detection of HSP90 $\alpha\beta$  in 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Goat Anti-Mouse IgG:HRP as the secondary.

**Cellular Localization**

Cytoplasm | Melanosome

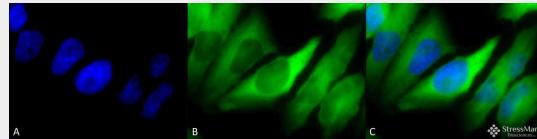
**HSP90 alpha/beta Antibody - Protocols**

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

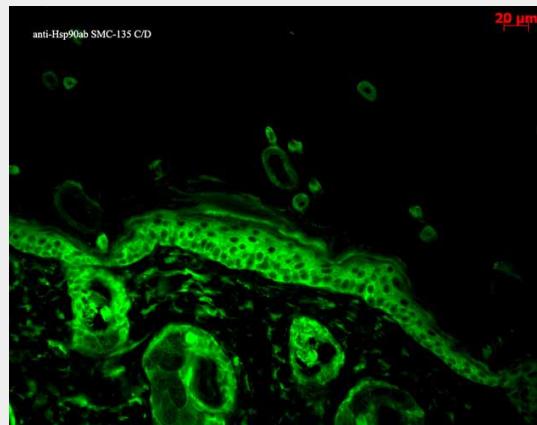
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

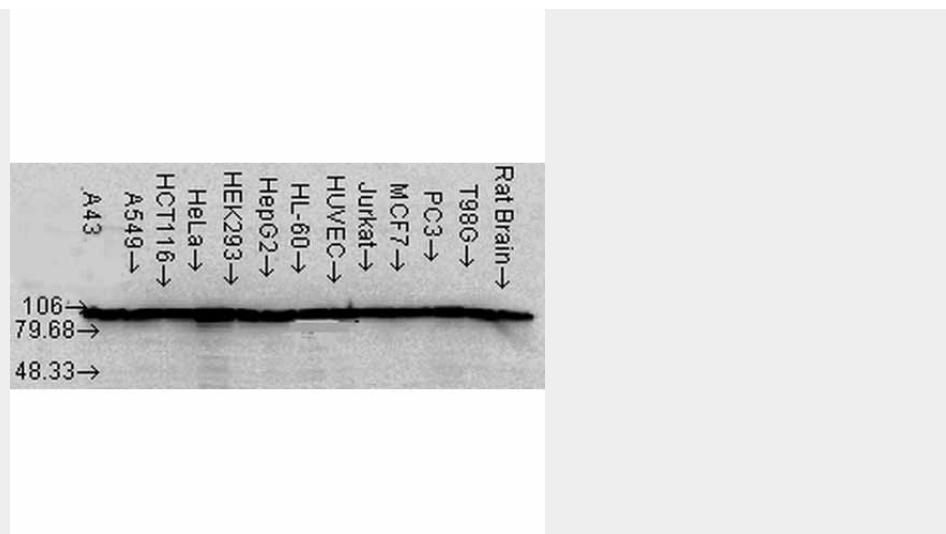
### HSP90 alpha/beta Antibody - Images



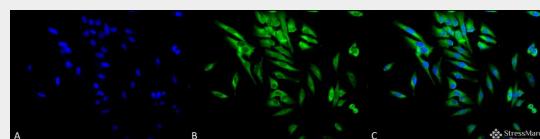
Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Hsp90 alpha/beta Monoclonal Antibody, Clone K41220A (ASM10049). Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Mouse Anti-Hsp90 alpha/beta Monoclonal Antibody (ASM10049) at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Cytoplasm. Melanosome. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-Hsp90 alpha/beta Antibody. (C) Composite.



Immunohistochemistry analysis using Mouse Anti-Hsp90 alpha Monoclonal Antibody, Clone K41220A (ASM10049). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Hsp90 alpha Monoclonal Antibody (ASM10049) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Epidermis.



Western Blot analysis of Human Cell lysates showing detection of Hsp90 alpha protein using Mouse Anti-Hsp90 alpha Monoclonal Antibody, Clone K41220A (ASM10049). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp90 alpha Monoclonal Antibody (ASM10049) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Hsp90 alpha/beta Monoclonal Antibody, Clone K41220A (ASM10049). Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Mouse Anti-Hsp90 alpha/beta Monoclonal Antibody (ASM10049) at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Cytoplasm. Melanosome. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-Hsp90 alpha/beta Antibody. (C) Composite.

### HSP90 alpha/beta Antibody - 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, HSP90 $\alpha$  exists predominantly as a homodimer while HSP90 $\beta$  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 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 (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 (9). For more information visit our HSP90 Scientific Resource Guide at <http://www.HSP90.ca>.

#### **HSP90 alpha/beta Antibody - References**

1. Nemoto, T. et al. (1997) *J.Biol Chem.* 272: 26179-26187.
2. Minami Y, et al. (1991), *J.Biol Chem.* 266: 10099-10103.
3. Arlander SJH, et al. (2003) *J Biol Chem* 278: 52572-52577.
4. Pearl H, et al. (2001) *Adv Protein Chem* 59: 157-186.
5. Neckers L, et al. (2002) *Trends Mol Med* 8: S55-S61.
6. Pratt W, Toft D. (2003) *Exp Biol Med* 228: 111-133.
7. Pratt W, Toft D. (1997) *Endocr Rev* 18: 306-360.
8. Pratt WB. (1998) *Proc Soc Exptl Biol Med* 217: 420-434.
9. Whitesell L, et al. (1994) *Proc Natl Acad Sci USA* 91: 8324-8328.
10. Kishimoto J, et al. (2005). *Cell Stress and Chaperones*. 10 (4): 296-311.