

**HSP90 Antibody**  
**HSP90 Antibody, Clone H9010**  
**Catalog # ASM10009****Specification****HSP90 Antibody - Product Information**

Application	WB, IHC, ICC, IP, E, AM
Primary Accession	<a href="#">P08238</a>
Other Accession	<a href="#">NP_031381.2</a>
Host	Mouse
Isotype	IgG2a
Reactivity	Human, Mouse, Rat, Rabbit, Chicken, Fish, Dog
Clonality	Monoclonal
Format	FITC
<b>Description</b>	Mouse Anti-Human HSP90 Monoclonal IgG2a

**Target/Specificity**

Detects 90kDa. Detects HSP90 beta in all reactive species except in Chicken, where it detects both alpha and beta isoforms.

**Other Names**

HSP84 Antibody, HSP90 Antibody, HSP90 beta Antibody, HSP90B Antibody, HSPC2 Antibody, HSPCB Antibody

**Immunogen**

Recombinant human HSP90beta

**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 of SMC-107 was sufficient for detection of HSP90beta in 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

**Cellular Localization**

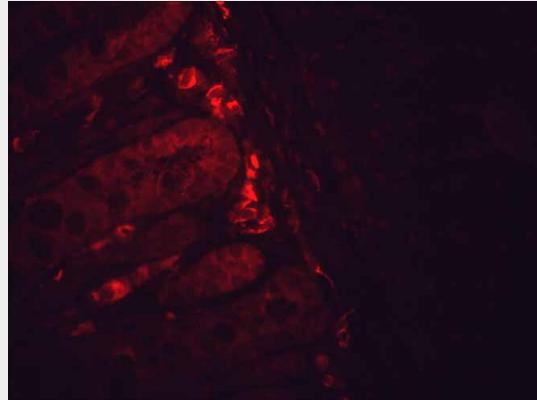
Cytoplasm | Melanosome

**HSP90 Antibody - Protocols**

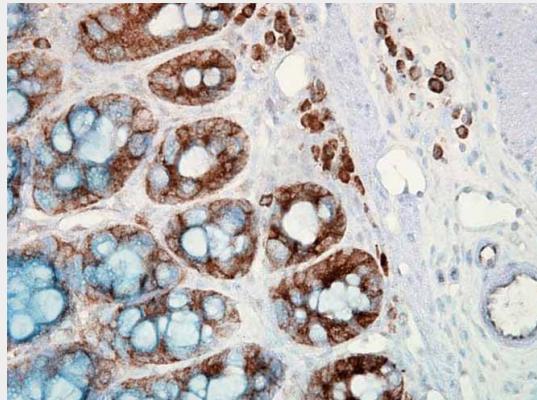
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

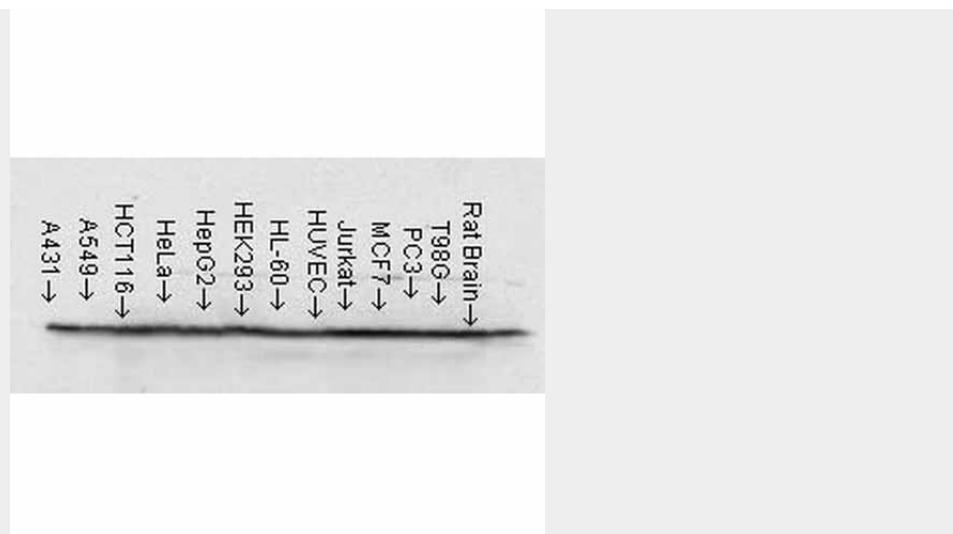
### HSP90 Antibody - Images



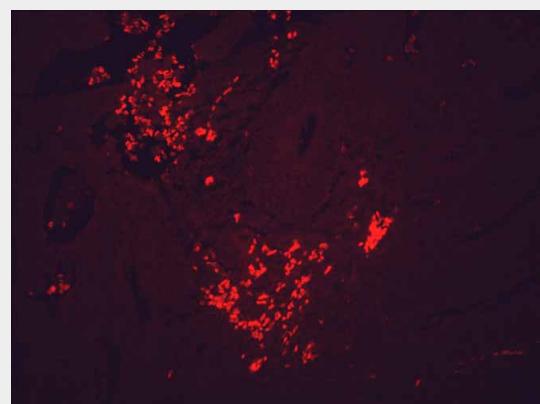
Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Alexa Fluor 555 Goat Anti-Mouse (red) at 1:5000 for 1 hour at RT. Localization: Inflammatory and epithelial mucosa. Magnification: 40x.



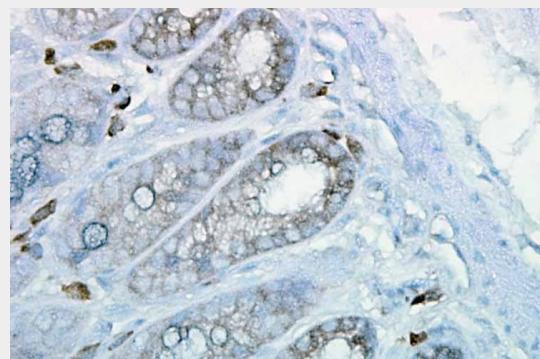
Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 200 µl for 2 minutes at RT. Localization: Inflammatory cells. Magnification: 40x.



Western Blot analysis of Human cell lysates from various cell lines showing detection of Hsp90 protein using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Load: 15  $\mu$ g. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

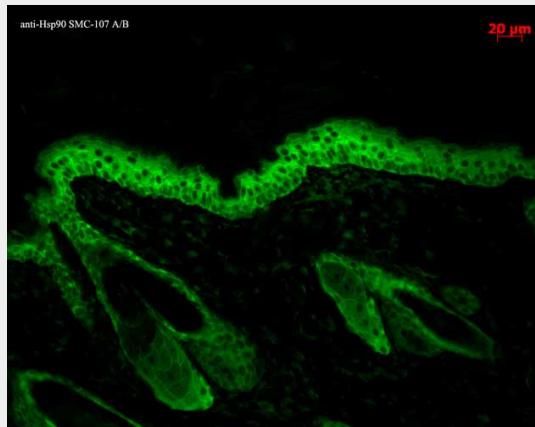


Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Alexa Fluor 555 Goat Anti-Mouse (red) at 1:5000 for 1 hour at RT. Magnification: 40x.

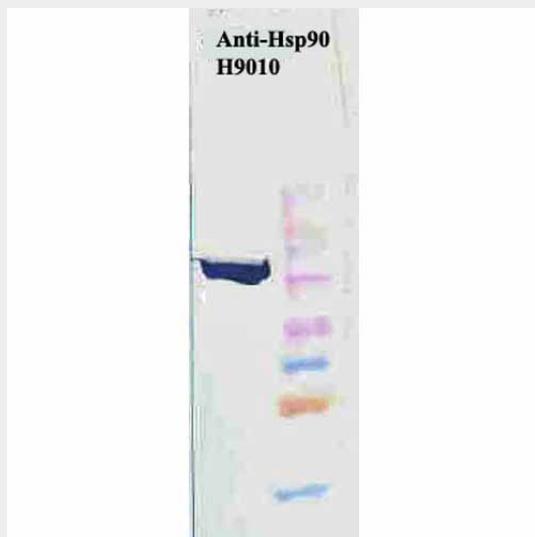


Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue)

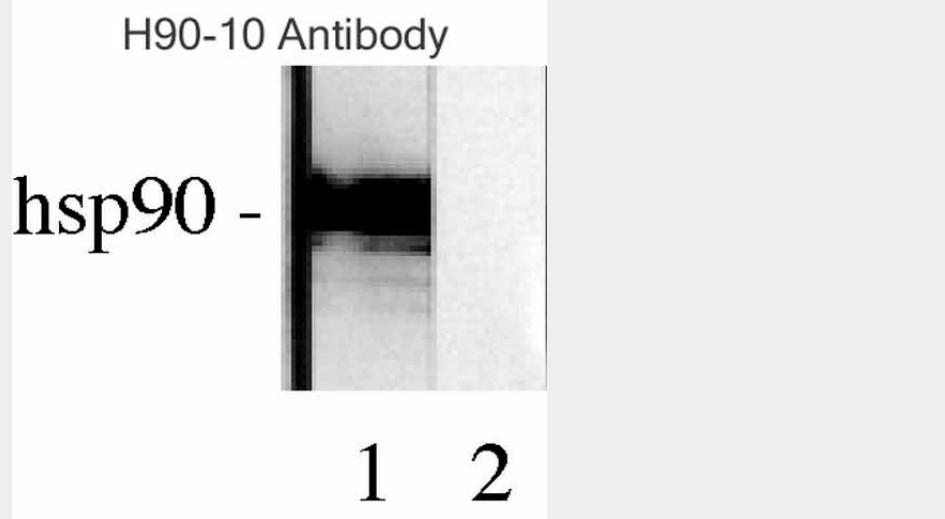
nuclear stain at 200  $\mu$ l for 2 minutes at RT. Localization: Inflammatory cells. Magnification: 40x.



Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) 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 HeLa cell lysates showing detection of Hsp90 protein using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:1000. Secondary Antibody: HRP Goat Anti-Mouse.



Western blot analysis of Human Lysates showing detection of Hsp90 protein using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:1000. Comparison of clone H9010 behavior with Hsp90 human beta (1) and Hsp90 human alpha (2). Courtesy of: David Toft, Mayo Clinic.

### **HSP90 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 Antibody - References**

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2. Minami Y., et al. (1991), J.Biol Chem. 266: 10099-10103.
3. Arlander S.J.H., 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.
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