

**HSP90 Antibody**  
**HSP90 Antibody, Clone H9010**  
**Catalog # ASM10009**

**Specification**

---

**HSP90 Antibody - Product Information**

Application	<b>IHC, WB</b>
Primary Accession	<a href="#">P08238</a>
Other Accession	<a href="#">NP_031381.2</a>
Host	<b>Mouse</b>
Isotype	<b>IgG2a</b>
Reactivity	<b>Human, Mouse, Rat, Rabbit, Chicken, Fish, Dog</b>
Clonality	<b>Monoclonal</b>
Format	<b>FITC</b>
<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**

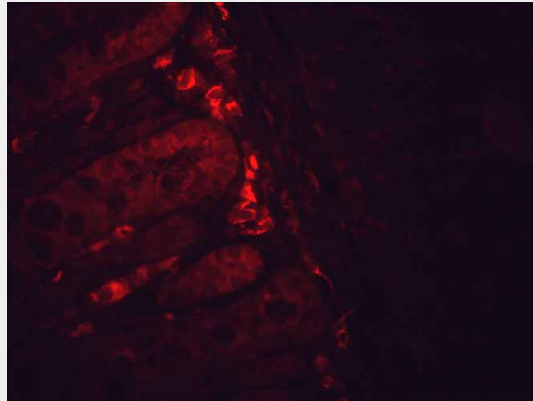
Cytoplasm | Melanosome

**HSP90 Antibody - Protocols**

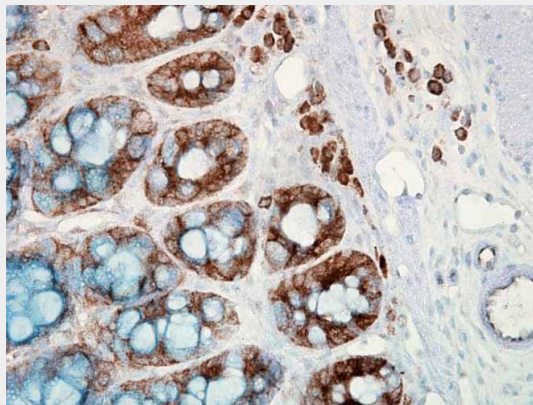
Provided below are standard protocols that you may find useful for product applications.

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

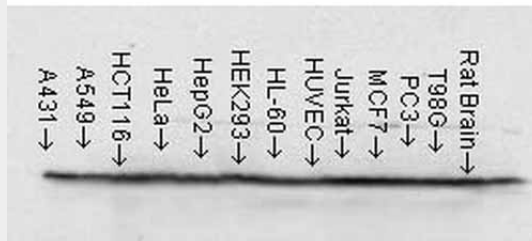
### HSP90 Antibody - Images



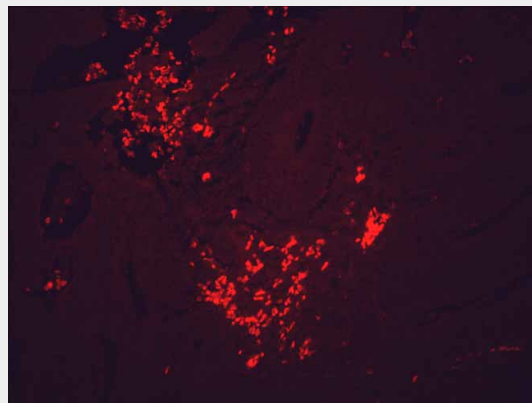
Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Alexa Fluor 555 Goat Anti-Mouse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



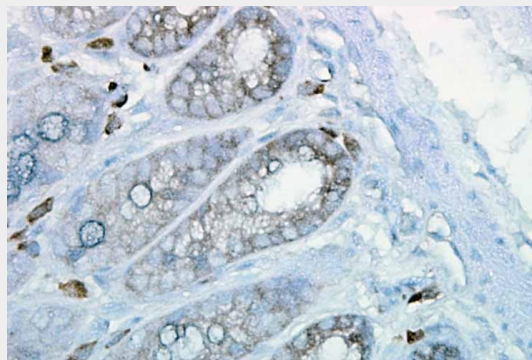
Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at 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.

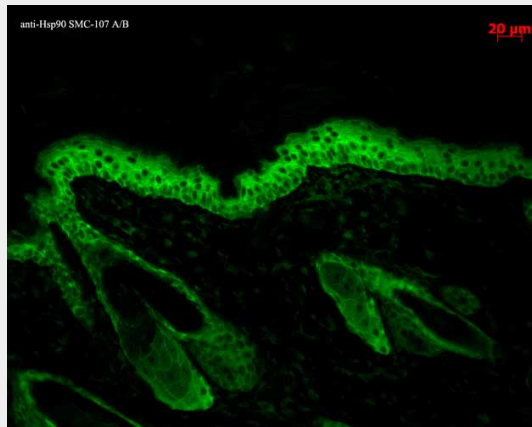


Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Alexa Fluor 555 Goat Anti-Mouse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

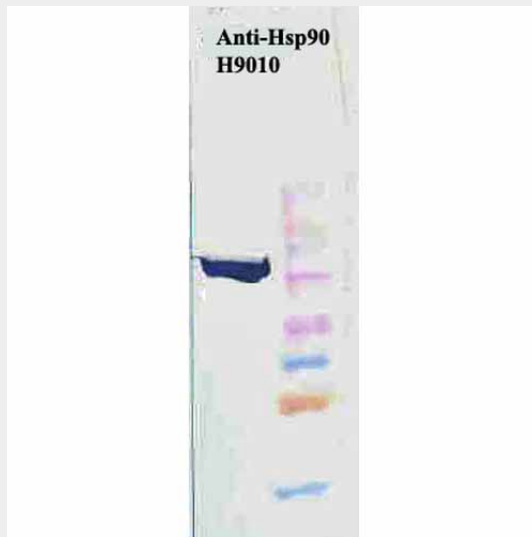


Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (ASM10009). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10009) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at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

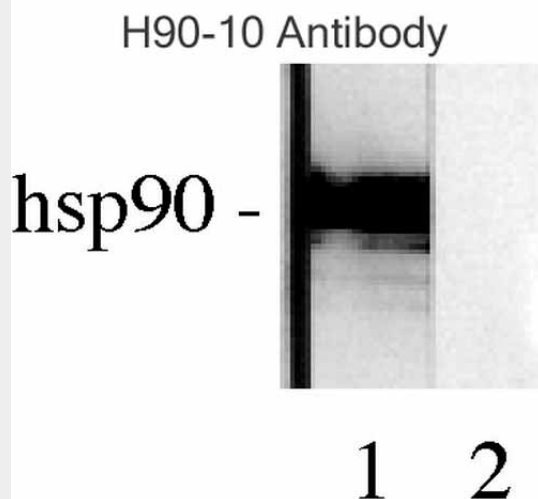
nuclear stain at 200  $\mu$ l for 2 minutes at RT. Localization: Inflammatory cells. Magnification: 40x.



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

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 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.
8. Pratt W.B. (1998) Proc Soc Exptl Biol Med 217: 420-434.
9. Whitesell L., et al. (1994) Proc Natl Acad Sci USA 91: 8324-8328.
10. Barent R. L. (1998) Mol. Endocrinol. 12: 342-354
11. Lo. M.A. (1998) EMBO J. 17: 6879-6887.