10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

HSP90 alpha Antibody
HSP90 alpha Antibody, Clone Hyb-K41009
Catalog # ASM10011

Specification

HSP90 alpha Antibody - Product Information

Application	**IHC, WB**
Primary Accession	P07900
Other Accession	NP_001017963.2
Host	**Mouse**
Isotype	**IgG2a**
Reactivity	**Human, Mouse, Rat**
Clonality	**Monoclonal**
Format	**HRP**

Description
Mouse Anti-Human HSP90 alpha Monoclonal IgG2a

Target/Specificity
Detects 90kDa. This is an alpha-specific product.

Other Names
HSP86 Antibody, HSP89A Antibody, HSP90A Antibody, HSP90AA1 Antibody, HSP90Alpha Antibody, HSPC1 Antibody, HSPCA Antibody, HSPCAL3 Antibody

Immunogen
Recombinant human HSP90alpha; Specificity mapped to amino acids 604-731

Purification
Protein G Purified

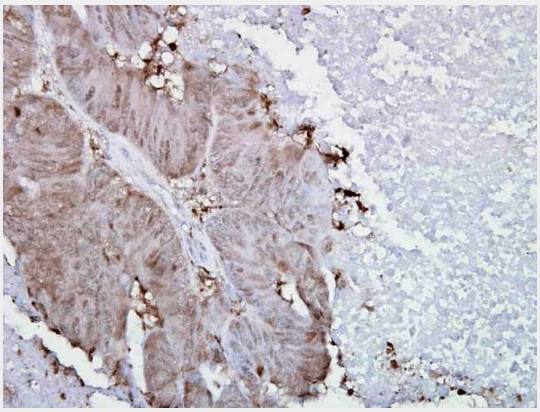
Storage	**-20ºC**

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

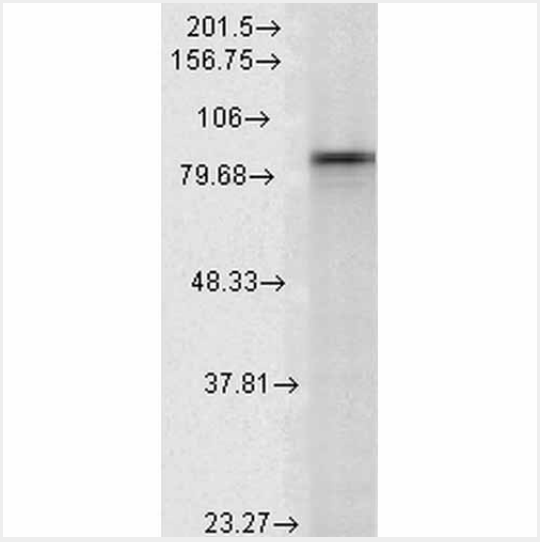
Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
1 µg/ml of SMC-108 was sufficient for detection of HSP90alpha 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



Immunohistochemistry analysis using Mouse Anti-Hsp90 alpha Monoclonal Antibody, Clone K41009 (ASM10011). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 alpha Monoclonal Antibody (ASM10011) at 1:5000 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.



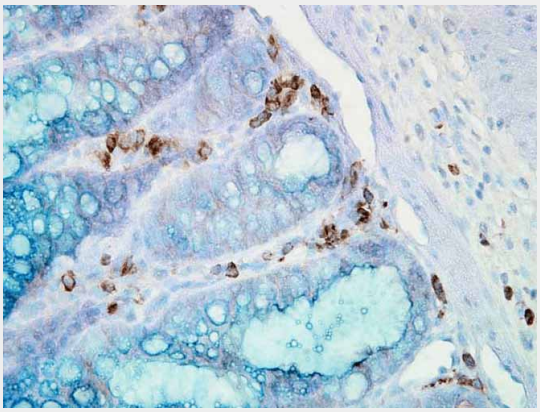
Western Blot analysis of Rat Lysates showing detection of Hsp90 alpha protein using Mouse

HSP90 alpha 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 Cytomety
- Cell Culture

Anti-Hsp90 alpha Monoclonal Antibody, Clone K41009 (ASM10011). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp90 alpha Monoclonal Antibody (ASM10011) 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 alpha Monoclonal Antibody, Clone K41009 (ASM10011). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 alpha Monoclonal Antibody (ASM10011) at 1:5000 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.

HSP90 alpha Antibody - Background

HSP90 is an abundantly and ubiquitously expressed heat shock protein. It is understood to exist in two principal forms α and β, which share 85% sequence amino acid homology. The two isoforms of HSP90, are expressed in the cytosolic compartment (1). Despite the similarities, HSP90α exists predominantly as a homodimer while HSP90β 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 it's 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 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 (9). For more information visit our HSP90 Scientific Resource Guide at http://www.HSP90.ca.

HSP90 alpha 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. Nemoto, T. (1997) Biochem and Mol. Bio Intl. 42 (5): 881-889.