10320 Camino Santa Fe, Suite A
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Tel: 858.875.1900 Fax: 858.875.1999

HSP90 (total) Antibody
HSP90 Antibody, Clone 4F3.E8
Catalog # ASM10069

Specification

HSP90 (total) Antibody - Product Information

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

Description
Mouse Anti-Human HSP90 (total) Monoclonal IgG2a

Target/Specificity
Detects ~90kDa. This antibody detects both α and β forms of HSP90 equally well.

Other Names
HSP84 Antibody, HSP86 Antibody, HSP90A Antibody, HSP90AA1 Antibody, HSP90AB1 Antibody, HSP90B Antibody, HSPC1 Antibody, HSPC2 Antibody, HSPCAL1 Antibody, HSPCAL4 Antibody

Immunogen
Recombinant Human HSP90 purified from E.coli

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
0.5 µg/ml of SMC-149 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

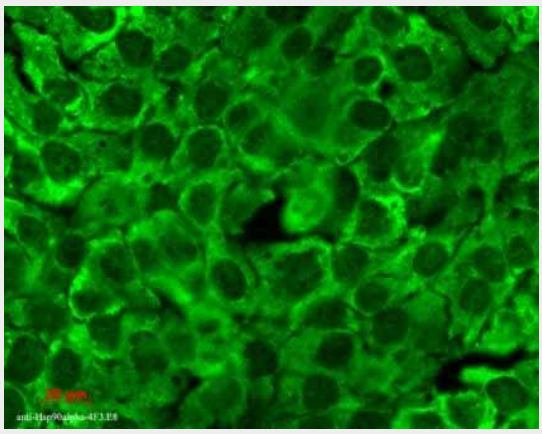
HSP90 (total) Antibody - Protocols

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

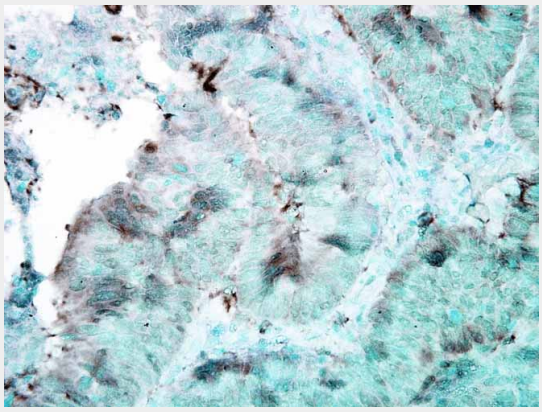
- Western Blot
- Blocking Peptides

- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HSP90 (total) Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone 4F3.E8 (ASM10069). Tissue: HaCaT cells. Species: Human. Fixation: Cold 100% methanol for 10 minutes at -20°C. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10069) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.



Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone 4F3.E8 (ASM10069). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10069) at 1:100000 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.

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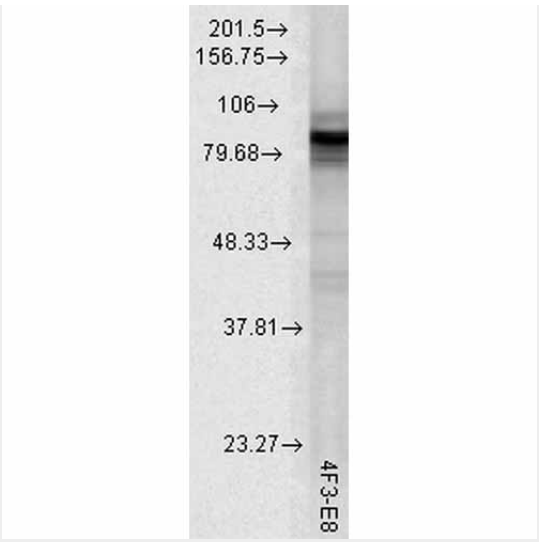
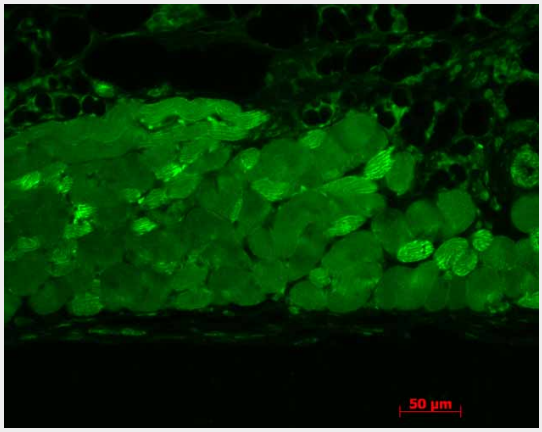
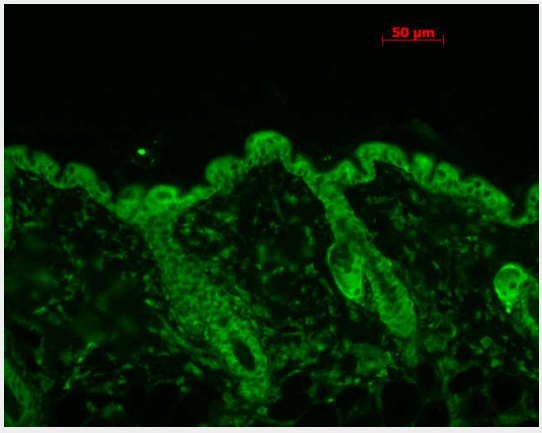


Western Blot analysis of Rat tissue lysate showing detection of Hsp90 protein using Mouse Anti-Hsp90 Monoclonal Antibody, Clone 4F3.E8 (ASM10069). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10069) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.



Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone 4F3.E8 (ASM10069). Tissue: muscle tissue. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10069) at 1:1000 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.



Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone 4F3.E8

(ASM10069). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (ASM10069) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.

HSP90 (total) 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 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 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 (total) Antibody - References

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4. Pearl H, et al. (2001) Adv Protein Chem 59: 157-186.
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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.
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