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## Produktinformation



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siehe unsere [Liefer- und Versandbedingungen](#)

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# Anti-HSP90 Alpha Antibody [2G5.G3]

Mouse Anti-Human HSP90 alpha Monoclonal IgG  
Catalog No. SMC-147



Discovery through partnership | Excellence through quality

## Overview

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### Product Name

HSP90 alpha Antibody

### Description

Mouse Anti-Human HSP90 alpha Monoclonal IgG

### Species Reactivity

Human, Mouse, Rat

### Applications

WB, IHC, ICC/IF, IP, ELISA

### Antibody Dilution

WB (1:2000), ICC/IF (1:100); optimal dilutions for assays should be determined by the user.

### Host Species

Mouse

### Immunogen Species

Human

### Immunogen

Human HSP90alpha

### Concentration

1 mg/ml

### Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

## Properties

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### Storage Buffer

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

### Storage Temperature

-20°C

### Shipping Temperature

Blue Ice or 4°C

### Purification

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Protein G Purified

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**Clonality**

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Monoclonal

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**Clone Number**

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2G5.G3

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**Isotype**

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IgG

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**Specificity**

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Detects ~90kDa. HSP90?-specific (>96% ?-specific by ELISA)

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**Cite This Product**

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Mouse Anti-Human HSP90 alpha Monoclonal, Clone 2G5.G3 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-147)

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**Certificate Of Analysis**

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0.5 µg/ml of SMC-147 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.

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**Biological Description**

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**Alternative Names**

HSP86 Antibody, HSP89A Antibody, HSP90AA1 Antibody, HSP90Alpha Antibody, HSPC1 Antibody, HSPCA Antibody, HSPCAL3 Antibody

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**Research Areas**

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Cancer, Heat Shock

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**Cellular Localization**

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Cytoplasm, Melanosome

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**Accession Number**

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NP\_001017963.2

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**Gene ID**

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3320

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**Swiss Prot**

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P07900

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**Scientific Background**

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HSP90 is an abundantly and ubiquitously expressed heat shock protein. It is understood to exist in two principal forms ? and ?, which share 85% sequence amino acid homology. The two isoforms of HSP90 are expressed in the cytosolic compartment (1). Despite the similarities, HSP90? exists predominantly as a homodimer while HSP90? 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 (12% 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.<sup>5</sup> 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). Looking for more information on HSP90? Visit our new HSP90 Scientific Resource Guide at <http://www.HSP90.ca>.

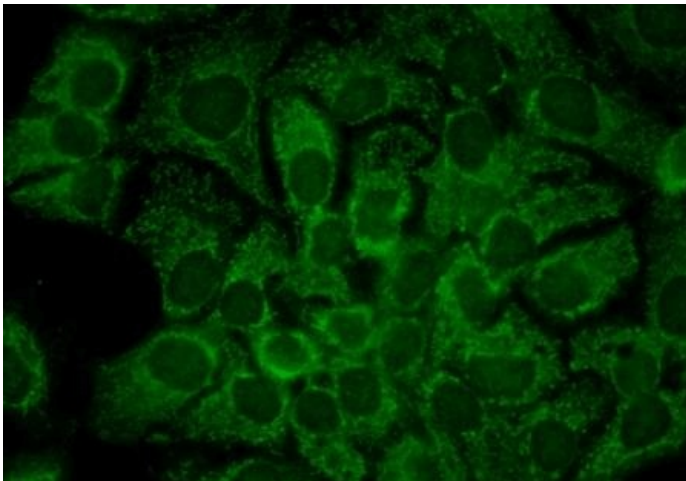
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## References

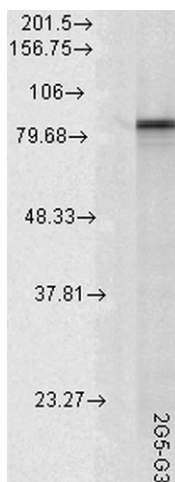
1. Nemoto T. et al. (1997) *J. Biol. Chem.* 272: 26179-26187.
2. Minami, Y, et al. (1991), *J. Biol. Chem.* 266: 10099-10103.
3. Arlander SJH, et al. (2003) *J Biol Chem* 278: 52572-52577.
4. Pearl H, et al. (2001) *Adv Protein Chem* 59: 157-186.
5. Neckers L, et al. (2002) *Trends Mol Med* 8: S55-S61.
6. Pratt W, Toft D. (2003) *Exp Biol Med* 228: 111-133.
7. Pratt W, Toft D. (1997) *Endocr Rev* 18: 306360.
8. Pratt WB. (1998) *Proc Soc Exptl Biol Med* 217: 420434.
9. Whitesell L, et al. (1994) *Proc Natl Acad Sci USA* 91: 83248328.
10. Nemoto, T. (1997) *Biochem and Mol. Bio Intl.* 42 (5): 881-889.

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## Product Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Hsp90 alpha Monoclonal Antibody, Clone 2G5.G3 (SMC-147). Tissue: HaCaT cells. Species: Human. Fixation: Cold 100% methanol for 10 minutes at -20°C. Primary Antibody: Mouse Anti-Hsp90 alpha Monoclonal Antibody (SMC-147) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.



Western Blot analysis of Rat tissue lysate showing detection of Hsp90 alpha protein using Mouse Anti-Hsp90 alpha Monoclonal Antibody, Clone 2G5.G3 (SMC-147). Load: 15 µg protein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp90 alpha Monoclonal Antibody (SMC-147) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

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## Product Citations (3)

Western Blot

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**Experimental Anti-Inflammatory Drug Semapimod Inhibits TLR Signaling by Targeting the TLR Chaperone gp96**

Wang, J., Grishin, A.V. and Ford, H.R. (2016) J Immunol. [Epub ahead of print]

**PubMed ID:** 27194788    **Reactivity:** Human    **Applications:** Western Blot

**Hsp90 Binds Directly to Fibronectin (FN) and Inhibition Reduces the Extracellular Fibronectin Matrix in Breast Cancer Cells.**

Hunter, M. C. et al. (2014) PLoS One. 9(1):e86842.

**PubMed ID:** 24466266    **Reactivity:** Human    **Applications:** Western Blot

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Immunohistochemistry

**17-AAG improves cognitive process and increases heat shock protein response in a model lesion with A $\beta$ 25-35.**

Ortega, L. et al. (2014) Neuropeptides. 48(4):221-32.

**PubMed ID:** 24819277    **Reactivity:** Rat    **Applications:** Immunohistochemistry

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Reviews

Based on validation through cited publications.



**StressMarq Biosciences**

June 14, 2016: