



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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# Anti-HSP90 Antibody [H9010]

Mouse Anti-Human HSP90 Monoclonal IgG2a  
Catalog No. SMC-107



Discovery through partnership | Excellence through quality

## Overview

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### Product Name

HSP90 Antibody

### Description

Mouse Anti-Human HSP90 Monoclonal IgG2a

### Species Reactivity

Dog, Human, Mouse, Rat, Chicken, Fish, Gummy Shark (*Mustelus antarcticus*), Rabbit, School Shark (*Galeorhinus galeus*), Shark, White Sucker Fish (*Catostomus commersonii*)

### Applications

WB, IHC, ICC/IF, IP, ELISA

### Antibody Dilution

WB (1:2500), IHC (1:100); optimal dilutions for assays should be determined by the user.

### Host Species

Mouse

### Immunogen Species

Human

### Immunogen

Recombinant human HSP90beta

### 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**

Monoclonal

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**Clone Number**

H9010

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**Isotype**

IgG2a

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**Specificity**

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

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**Cite This Product**

Mouse Anti-Human HSP90 Monoclonal, Clone H9010 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-107)

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**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.

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**Biological Description**

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**Alternative Names**

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

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**Research Areas**

Cancer, Heat Shock

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**Cellular Localization**

Cytoplasm, Melanosome

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**Accession Number**

NP\_031381.2

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**Gene ID**

3326

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**Swiss Prot**

P08238

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**Scientific 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 (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>.

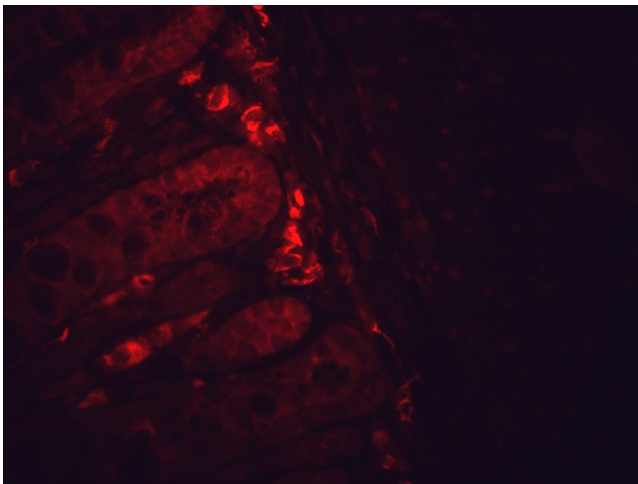
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## References

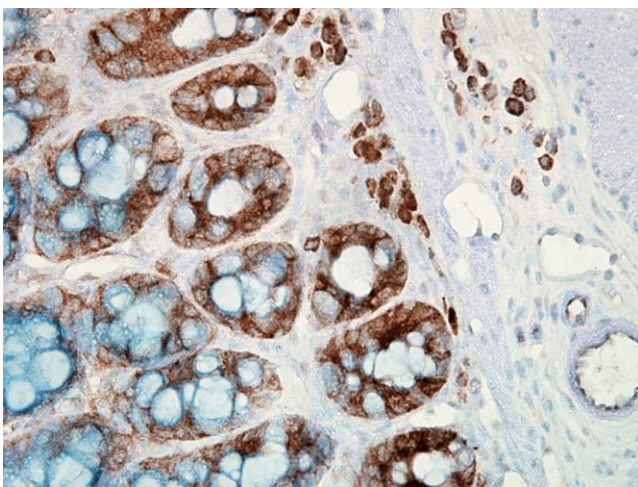
1. Nemoto T., et al. (1997) *J. Biol. Chem.* 272: 26179-26187.
2. Minami Y., et al. (1991), *J. Biol. Chem.* 266: 10099-10103.
3. Arlander S.J.H., et al. (2003) *J Biol Chem* 278: 52572-52577.
4. Pearl H., et al. (2001) *Adv Protein Chem* 59:157-186.
5. Neckers L., et al. (2002) *Trends Mol Med* 8:S55-S61.
6. Pratt W., Toft D. (2003) *Exp Biol Med* 228:111-133.
7. Pratt W., Toft D. (1997) *Endocr Rev* 18:306360.
8. Pratt W.B. (1998) *Proc Soc Exptl Biol Med* 217: 420434.
9. Whitesell L., et al. (1994) *Proc Natl Acad Sci USA* 91: 83248328.
10. Barent R. L. (1998) *Mol. Endocrinol.* 12: 342-354
11. Lo. M.A. (1998) *EMBO J.* 17: 6879-6887.

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## Product Images

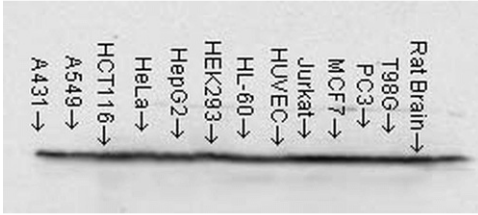


Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (SMC-107). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-107) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Alexa Fluor 555 Goat Anti-Mouse (red) at 1:5000 for 1 hour at RT. Localization: Inflammatory and epithelial mucosa. Magnification: 40x.

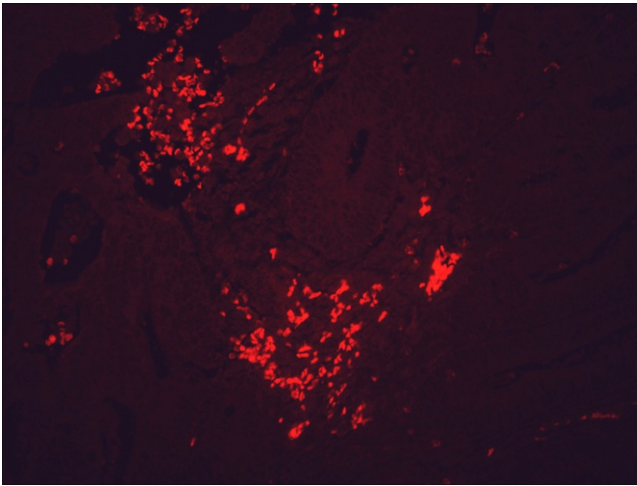


Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (SMC-107). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-107) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at 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.

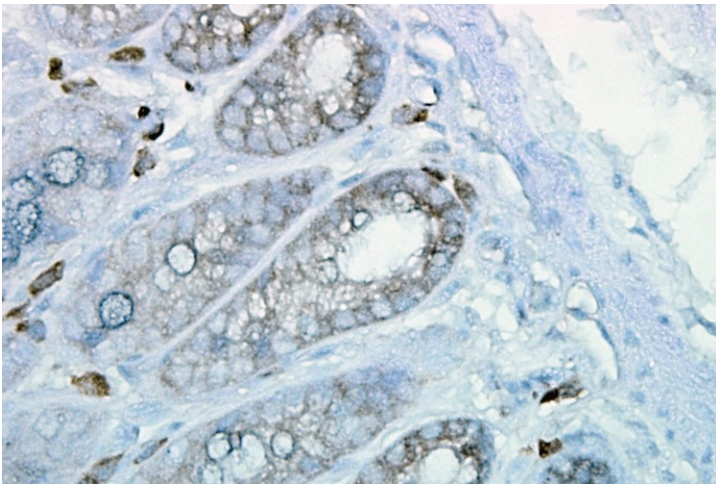
Western Blot analysis of Human cell lysates from various cell lines showing detection of Hsp90 protein using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (SMC-107). Load: 15 µg protein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-107) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

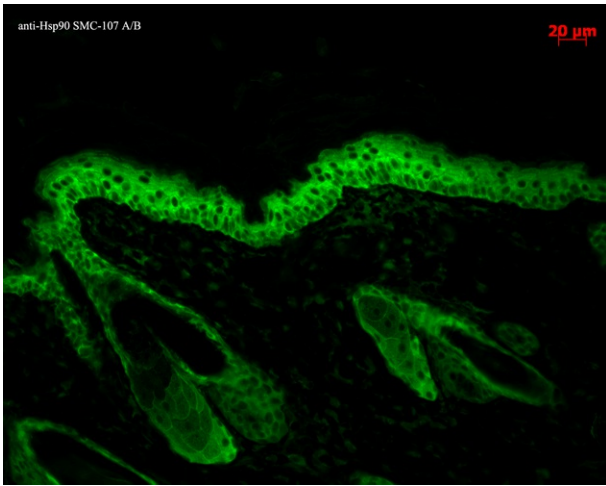


Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (SMC-107). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-107) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Alexa Fluor 555 Goat Anti-Mouse (red) at 1:5000 for 1 hour at RT. Magnification: 40x.



Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (SMC-107). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-107) 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.

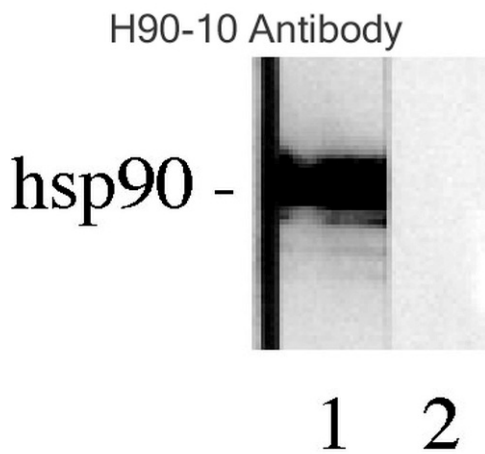




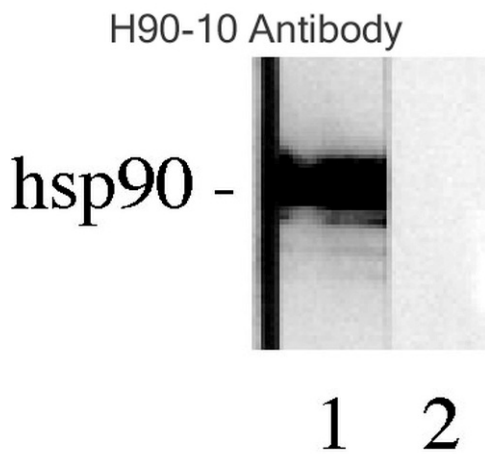
Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (SMC-107). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-107) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat 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 (SMC-107). Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-107) 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 (SMC-107). Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-107) at 1:1000. Comparison of clone H9010 behavior with Hsp90 human beta (1) and Hsp90 human alpha (2). Courtesy of: David Toft, Mayo Clinic.



Western blot analysis of Human Lysates showing detection of Hsp90 protein using Mouse Anti-Hsp90 Monoclonal Antibody, Clone H9010 (SMC-107). Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-107) at 1:1000. Comparison of clone H9010 behavior with Hsp90 human beta (1) and Hsp90 human alpha (2). Courtesy of: David Toft, Mayo Clinic.

## Product Citations (19)

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### Western Blot

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#### **The epichaperome is an integrated chaperome network that facilitates tumour survival.**

Rodina, A. et al. (2016) Nature. [Epub ahead of print].

**PubMed ID:** 27706135 **Reactivity:** Human **Applications:** Western Blot

#### **Physiological responses to hypersalinity correspond to nursery ground usage in two inshore shark species (*Mustelus antarcticus* & *Galeorhinus galeus*).**

Tunnah, L. et al. (2016) J Exp Biol. [Epub ahead of print].

**PubMed ID:** **Reactivity:** Shark **Applications:** Western Blot

#### **COMPOSITIONS AND METHODS FOR TREATING HIF-1a OVER-EXPRESSING CANCERS.**

Li, W. et al. (2016) United States Patent Application 20160053003

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

#### **Breast Cancer MDA-MB-231 Cells Use Secreted Heat Shock Protein-90alpha (Hsp90?) to Survive a Hostile Hypoxic Environment.**

Dong, H. et al. (2016) Sci Rep. 6:20605.

**PubMed ID:** 26846992 **Reactivity:** Human **Applications:** Western Blot

#### **Pharmacoproteomics identifies combinatorial therapy targets for diffuse large B cell lymphoma.**

Goldstein, R.L. et al. (2015) J Clin Invest. 2015. pii: 80714

**PubMed ID:** 26529251 **Reactivity:** Human **Applications:** Western Blot

#### **Cold acclimation increases levels of some heat shock protein and sirtuin isoforms in threespine stickleback.**

Teigen, L.E., Orczewska, J.I., McLaughlin, J. (2015) Comp Biochem Physiol A Mol Integr Physiol. 188:139-47.

**PubMed ID:** 26123780 **Reactivity:** *Gasterosteus aculeatus* (Three-spined stickleback) **Applications:** Western Blot

#### **Hsp90? and Hsp90? together operate a hypoxia and nutrient paucity stress-response mechanism during wound healing.**

Jayaprakash, P. et al. (2015) J Cell Sci. 128(8):1475-80.

**PubMed ID:** 25736295 **Reactivity:** Human **Applications:** Western Blot

#### **Cardiorespiratory toxicity of environmentally relevant zinc oxide nanoparticles in the freshwater fish *Catostomus commersonii*.**



Bessemer, R.A. et al. (2014) *Nanotoxicology*. 27:1-10.

**PubMed ID:** 25427894 **Reactivity:** *Catostomus commersonii* (fish) **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

**Paralog-selective Hsp90 inhibitors define tumor-specific regulation of HER 2.**

Patel, P.D. et al. (2013) *Nat Chem Biol*. 9(11):677-84.

**PubMed ID:** 23995768 **Reactivity:** Human **Applications:** Western Blot

**Uses of Labeled HSP90 Inhibitors.**

Chiosis, G. et al. (2014) United States Patent Application 20140294725 Kind Code: A1

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

**A Novel Neurotrophic Drug for Cognitive Enhancement and Alzheimer's Disease.**

Chen, Q. et al. (2011) *PLoS One*. 6 (12): e27865.

**PubMed ID:** 22194796 **Reactivity:** Rat **Applications:** Western Blot

**Design, synthesis, and evaluation of small molecule Hsp90 probes.**

Taldone, T. et al. (2011) *Bioorg Med Chem*. 19 (8): 2603-2614.

**PubMed ID:** 21459002 **Reactivity:** Human **Applications:** Western Blot

**Key motifs in EBV (Epstein-Barr virus)-encoded protein kinase for phosphorylation activity and nuclear localization.**

Gershburg, S., Murphy, L., Marschall, M. and Gershburg, E. (2010) *Biochem J*. 431 (2): 227-235.

**PubMed ID:** 20704565 **Reactivity:** Human **Applications:** Western Blot

## Immunocytochemistry/Immunofluorescence

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**The epichaperome is an integrated chaperome network that facilitates tumour survival.**

Rodina, A. et al. (2016) *Nature*. [Epub ahead of print].

**PubMed ID:** 27706135 **Reactivity:** Human **Applications:** Immunocytochemistry/Immunofluorescence

**Breast Cancer MDA-MB-231 Cells Use Secreted Heat Shock Protein-90alpha (Hsp90?) to Survive a Hostile Hypoxic Environment.**

Dong, H. et al. (2016) *Sci Rep*. 6:20605.

**PubMed ID:** 26846992 **Reactivity:** Human **Applications:** Immunocytochemistry/Immunofluorescence

## Other Citations

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**Biomarker Analysis with Grating Coupled Surface Plasmon Coupled Fluorescence.**

Mendoza, A., Dias, J.A., Zeltner, T. and Lawrence, D.A. (2014) *J Adv Bio & Biotech*. 1(1): 1-22.

**PubMed ID:** **Reactivity:** Human **Applications:** Antibody Microarray

**Biomarker Analysis with Grating Coupled Surface Plasmon Coupled Fluorescence.**

Mendoza, A., Dias, J.A., Zeltner, T. and Lawrence, D.A. (2014) *J Adv Bio & Biotech*. 1(1): 1-22.

**PubMed ID:** **Reactivity:** Mouse **Applications:** Antibody Microarray

**HDAC6 Regulates Glucocorticoid Receptor Signaling in Serotonin Pathways with Critical Impact on Stress Resilience.**

Espallergues, J. et al. (2012) *J Neurosci*. 32 (13): 4400-4416.



## Reviews

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Based on validation through cited publications.



**StressMarq Biosciences**

June 14, 2016: