



Anti-HSP90 Antibody [AC-16]

Mouse Anti-Water Mold HSP90
Monoclonal IgG2b
Catalog No. SMC-112



Product Name	HSP90 Antibody
Description	Mouse Anti-Water Mold HSP90 Monoclonal IgG2b
Species Reactivity	Chicken, Fall Armyworm (Spodoptera frugiperda), Fungi, Human, Insect, Mouse, Plant, Rabbit, Rat, Water Mold (Achlya), Wheat (Triticum spp.)
Applications	WB, IHC, AM
Antibody Dilution	WB (1:1000), IHC (1:2000); optimal dilutions for assays should be determined by the user.
Host Species	Mouse
Immunogen Species	Water Mold
Immunogen	Heat shock protein 90 from the water mold Achlya ambisexualis
Concentration	1 mg/ml
Conjugates	APC, ATTO 390, ATTO 488, ATTO 594, Biotin, FITC, HRP, PerCP, RPE, Unconjugated
Field Of Use	Not for use in humans. Not for use in diagnostics or therapeutics. For in vitro research use only.

Properties

Storage Buffer	PBS pH7.4, 50% glycerol, 0.09% sodium azide *Storage buffer may change when conjugated
Storage Temperature	-20°C, Conjugated antibodies should be stored according to the product label
Shipping Temperature	Blue Ice or 4°C
Purification	Protein G Purified
Clonality	Monoclonal
Clone Number	AC-16
Isotype	IgG2b
Specificity	Detects 90kDa. This antibody is reactive with both the constitutive and the inducible form of HSP90. It does not bind to the native form and does not recognize HSP90 from E.coli or yeast.
Cite This Product	HSP90 Antibody (StressMarq Biosciences Victoria, BC CANADA, Catalog# SMC-112, RRID: AB_904523)
Certificate Of Analysis	1 µg/ml of SMC-112 was sufficient for detection of HSP90 in 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody

Biological Description

Alternative Names	HSP90, HSP90AB1, HSP90-beta, HSPCB, HSPC2, Heat shock protein HSP 90-beta, Heat shock 84 kDa protein, HSP84, HSP90B
Research Areas	Cancer, Cell Signaling, Chaperone Proteins, Heat Shock, Protein Trafficking, Tumor Biomarkers
Cellular Localization	Cytoplasm, Melanosome
Accession Number	AAM90675.1
Gene ID	4768
Swiss Prot	Q8LLI5
Scientific Background	HSP90 is a highly conserved and abundantly expressed molecular chaperone that plays a central role in maintaining protein homeostasis, particularly in the nervous system. Present in all eukaryotic cells, HSP90 exists in two major cytosolic isoforms—HSP90α and HSP90β—which share 85% sequence identity but differ in oligomeric state and regulatory function.

Despite its classification as a heat shock protein, HSP90 is constitutively expressed at high levels, comprising up to 2% of total cytosolic protein in unstressed cells. It is essential for the folding, maturation, and stabilization of a wide range of client proteins, many of which are involved in neuronal signaling, synaptic plasticity, and stress response. These include kinases (e.g., c-Raf), transcription factors (e.g., p53), and steroid hormone receptors.

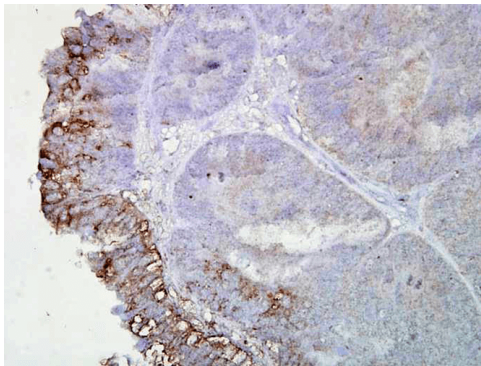
In neurodegenerative diseases such as Alzheimer's, Parkinson's, and Huntington's, HSP90 is implicated in both protective and pathological processes. It stabilizes misfolded proteins and prevents aggregation, but can also shield aberrant proteins from degradation, contributing to disease progression. HSP90's interaction with co-chaperones like Cdc37 and p23 forms complexes that regulate the fate of client proteins, making it a key node in proteostasis networks.

Pharmacological inhibition of HSP90—using compounds like geldanamycin—has shown promise in modulating protein quality control pathways and reducing toxic protein accumulation in neurodegenerative models.

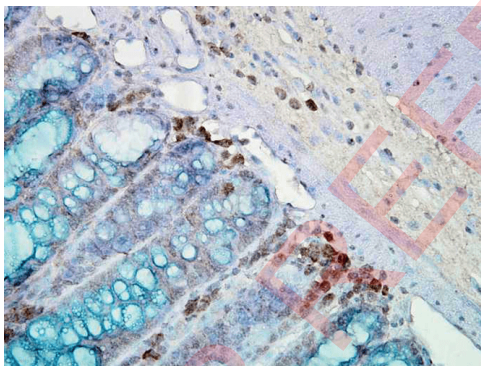
References

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Product Images



Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone AC-16 (SMC-112). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-112) at 1:2000 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. Inflammatory cells. This image was produced using an amplifying IHC wash buffer. The antibody has therefore been diluted more than is recommended for other applications.



Immunohistochemistry analysis using Mouse Anti-Hsp90 Monoclonal Antibody, Clone AC-16 (SMC-112). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp90 Monoclonal Antibody (SMC-112) at 1:2000 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. Mostly inflammatory cells, some mucosa. This image was produced using an amplifying IHC wash buffer. The antibody has therefore been diluted more than is recommended for other applications.