

HSP 90 (AC-16): sc-101494

BACKGROUND

The heat shock response was first described for *Drosophila* salivary gland cells and morphologically consists of a change in their polytene chromosome puffing patterns that involves *de novo* synthesis of a few proteins. Similar heat shock proteins were later discovered in bacterial, chicken and mammalian cells, and have been subsequently studied in other organisms. A series of proteins, including HSP 90, HSP 70, HSP 20-30 and ubiquitin, are induced by insults such as temperature shock, chemicals and other environmental stress. A major function of HSP 90 and other HSPs is to act as molecular chaperones. HSP 90 forms a complex with glucocorticoid receptor (GR), rendering the non ligand-bound receptor transcriptionally inactive. HSP 90 binds the GR as a heterocomplex composed of either HSP 56 or Cyclophilin D, forming an aporeceptor complex. HSP 90 also exists as a dimer with other proteins such as p60/ST11 and p23, forming an apo-receptor complex with estrogen and androgen receptors.

REFERENCES

1. Wu, J.M., et al. 2003. PKC ϵ is a unique regulator for HSP 90 β gene in heat shock response. *J. Biol. Chem.* 278: 51143-51149.
2. Whitesell, L., et al. 2005. HSP 90 and the chaperoning of cancer. *Nat. Rev. Cancer* 5: 761-772.

SOURCE

HSP 90 (AC-16) is a mouse monoclonal antibody raised against purified full length native HSP 90 of *Achlya ambisexualis* origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HSP 90 (AC-16) is available conjugated to agarose (sc-101494 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101494 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101494 PE), fluorescein (sc-101494 FITC), Alexa Fluor[®] 488 (sc-101494 AF488), Alexa Fluor[®] 546 (sc-101494 AF546), Alexa Fluor[®] 594 (sc-101494 AF594) or Alexa Fluor[®] 647 (sc-101494 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-101494 AF680) or Alexa Fluor[®] 790 (sc-101494 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HSP 90 (AC-16) is recommended for detection of the constitutive and inducible forms of HSP90 of mouse, rat, human, avian and rabbit origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with the native form of HSP 90 or *E. coli* and yeast HSP 90.

Suitable for use as control antibody for HSP 90 α / β siRNA (h): sc-35608, HSP 90 α / β siRNA (m): sc-35610, HSP 90 α / β shRNA Plasmid (h): sc-35608-SH, HSP 90 α / β shRNA Plasmid (m): sc-35610-SH, HSP 90 α / β shRNA (h) Lentiviral Particles: sc-35608-V, HSP 90 α / β shRNA (m) Lentiviral Particles: sc-35610-V.

Positive Controls: HeLa whole cell lysate: sc-2200.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

SELECT PRODUCT CITATIONS

1. Wang, S.A., et al. 2009. Heat shock protein 90 is important for Sp1 stability during mitosis. *J. Mol. Biol.* 387: 1106-1119.
2. Woischnik, M., et al. 2010. A non-BRICHOS surfactant protein c mutation disrupts epithelial cell function and intercellular signaling. *BMC Cell Biol.* 11: 88.
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4. Cecarini, V., et al. 2012. Crosstalk between the ubiquitin-proteasome system and autophagy in a human cellular model of Alzheimer's disease. *Biochim. Biophys. Acta* 1822: 1741-1751.
5. Bisicchia, E., et al. 2013. Activation of type-2 cannabinoid receptor inhibits neuroprotective and antiinflammatory actions of glucocorticoid receptor α : when one is better than two. *Cell. Mol. Life Sci.* 70: 2191-2204.
6. Rajagopal, A., et al. 2015. Proteome of the Insulin-secreting Min6 cell porosome complex: involvement of HSP 90 in its assembly and function. *J. Proteomics* 114: 83-92.
7. Jager, J., et al. 2016. The nuclear receptor Rev-erb α regulates adipose tissue-specific FGF21 signaling. *J. Biol. Chem.* 291: 10867-10875.
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9. Karatug Kacar, A. and Bolkent, S. 2018. Necrotic cell death occur via JNK pathway with the activity of transcription factor c-Jun by 4-MC in INS-1 cell line. *J. Cell. Biochem.* 119: 2048-2060.
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13. Choi, Y.M., et al. 2020. A telomerase-derived peptide exerts an anti-hepatitis B virus effect via mitochondrial DNA stress-dependent type I interferon production. *Front. Immunol.* 11: 652.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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