

HSP 90 (4F10): sc-69703

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/sti1 and p23, forming an apo-receptor complex with estrogen and androgen receptors.

CHROMOSOMAL LOCATION

Genetic locus: HSP90AA1 (human) mapping to 14q32.31.

SOURCE

HSP 90 (4F10) is a mouse monoclonal antibody raised against full length recombinant HSP 90 of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2b} in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HSP 90 (4F10) is recommended for detection of HSP 90 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of HSP 90: 90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or HSP 90 (h): 293T Lysate: sc-114003.

STORAGE

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

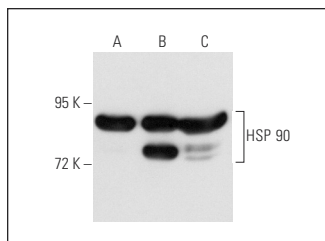
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

RESEARCH USE

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

DATA



HSP 90 (4F10): sc-69703. Western blot analysis of HSP 90 expression in non-transfected 293T: sc-117752 (A), human HSP 90 transfected 293T: sc-114003 (B) and HeLa (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Schachter, K.A., et al. 2006. Dynamic positive feedback phosphorylation of mixed lineage kinase 3 by JNK reversibly regulates its distribution to Triton-soluble domains. *J. Biol. Chem.* 281: 19134-19144.
- Lau, E., et al. 2012. PKCε promotes oncogenic functions of ATF2 in the nucleus while blocking its apoptotic function at mitochondria. *Cell* 148: 543-555.
- Caligiuri, I., et al. 2013. pRb controls estrogen receptor alpha protein stability and activity. *Oncotarget* 4: 875-883.
- Han, M., et al. 2014. Biogenesis of non-structural protein 1 (nsp1) and nsp1-mediated type I interferon modulation in arteriviruses. *Virology* 458/459: 136-150.
- Baquero-Pérez, B. and Whitehouse, A. 2015. Hsp70 isoforms are essential for the formation of Kaposi's sarcoma-associated herpesvirus replication and transcription compartments. *PLoS Pathog.* 11: e1005274.
- Liu, X., et al. 2016. Androgen ablation elicits PP1-dependence for AR stabilization and transactivation in prostate cancer. *Prostate* 76: 649-661.
- Kaisari, S., et al. 2017. Role of CCT chaperonin in the disassembly of mitotic checkpoint complexes. *Proc. Natl. Acad. Sci. USA* 114: 956-961.
- Miloudi, H., et al. 2018. STAT6 is a cargo of exportin 1: Biological relevance in primary mediastinal B-cell lymphoma. *Cell. Signal.* 46: 76-82.
- Lee, Y.M., et al. 2019. Thymoquinone selectively kills hypoxic renal cancer cells by suppressing HIF-1α-mediated glycolysis. *Int. J. Mol. Sci.* 20: 1092.
- Wang, Y.L., et al. 2020. Buxus alkaloid compound destabilizes mutant p53 through inhibition of the HSF1 chaperone axis. *Phytomedicine* 68: 153187.

CONJUGATES

See **HSP 90α/β (F-8): sc-13119** for HSP 90α/β antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.