

# HSP 90 $\alpha$ / $\beta$ (S88): sc-59578

## 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.

## REFERENCES

1. Wu, J.M., et al. 2003. PKC  $\epsilon$  is a unique regulator for HSP 90 $\beta$  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.
3. Cowen, L.E., et al. 2005. HSP 90 potentiates the rapid evolution of new traits: drug resistance in diverse fungi. *Science* 309: 2185-2189.

## SOURCE

HSP 90 $\alpha$ / $\beta$  (S88) is a mouse monoclonal antibody raised against purified full length native HSP 90 of *Achlya ambisexualis* origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

HSP 90 $\alpha$ / $\beta$  (S88) is recommended for detection of HSP 90 $\alpha$  and HSP 90 $\beta$  of mouse, rat, human, *Achlya ambisexualis*, bovine, porcine and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HSP 90 $\alpha$ / $\beta$  siRNA (h): sc-35608, HSP 90 $\alpha$ / $\beta$  siRNA (m): sc-35610, HSP 90 $\alpha$ / $\beta$  siRNA (r): sc-156099, HSP 90 $\alpha$ / $\beta$  shRNA Plasmid (h): sc-35608-SH, HSP 90 $\alpha$ / $\beta$  shRNA Plasmid (m): sc-35610-SH, HSP 90 $\alpha$ / $\beta$  shRNA Plasmid (r): sc-156099-SH, HSP 90 $\alpha$ / $\beta$  shRNA (h) Lentiviral Particles: sc-35608-V, HSP 90 $\alpha$ / $\beta$  shRNA (m) Lentiviral Particles: sc-35610-V and HSP 90 $\alpha$ / $\beta$  shRNA (r) Lentiviral Particles: sc-156099-V.

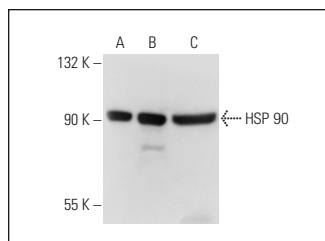
Molecular Weight of HSP 90 $\alpha$ / $\beta$ : 90 kDa.

Positive Controls: HSP 90 (h): 293T Lysate: sc-114003, Y79 cell lysate: sc-2240 or NIH/3T3 whole cell lysate: sc-2210.

## STORAGE

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

## DATA



HSP 90 $\alpha$ / $\beta$  (S88): sc-59578. Western blot analysis of HSP 90 expression in non-transfected 293T: sc-117752 (A), human HSP 90 transfected 293T: sc-114003 (B) and NIH/3T3 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Kamanga-Sollo, E., et al. 2011. Effects of heat stress on proliferation, protein turnover, and levels of heat shock protein mRNA in cultured porcine muscle satellite cells. *J. Anim. Sci.* 89: 3473-3480.
2. Ronzitti, G., et al. 2014. Exogenous  $\alpha$ -synuclein decreases raft partitioning of Ca<sub>v</sub>2.2 channels inducing dopamine release. *J. Neurosci.* 34: 10603-10615.
3. Vashist, S., et al. 2015. Molecular chaperone Hsp90 is a therapeutic target for noroviruses. *J. Virol.* 89: 6352-6363.
4. Chang, H.Y., et al. 2017. Selective serotonin reuptake inhibitor, fluoxetine, impairs E-cadherin-mediated cell adhesion and alters calcium homeostasis in pancreatic  $\beta$  cells. *Sci. Rep.* 7: 3515.
5. Ma, L., et al. 2019. Heat stress induces proteomic changes in the liver and mammary tissue of dairy cows independent of feed intake: an iTRAQ study. *PLoS ONE* 14: e0209182.
6. Gao, L.P., et al. 2020. Enhanced mitophagy activity in prion infected cultured cells and prion infected experimental mice via Pink1/Parkin dependent mitophagy pathway. *ACS Chem. Neurosci.* 11: 814-829.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.