SANTA CRUZ BIOTECHNOLOGY, INC.

HSP 90α/β (AC88): sc-59577

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 apo-receptor comiplex. 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 ε is a unique regulator for HSP 90β 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 90α/β (AC88) is a mouse monoclonal antibody raised against HSP 90 of *Achlya ambisexualis* origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.1% stabilizer protein.

APPLICATIONS

HSP 90α/β (AC88) is recommended for detection of HSP 90α and HSP 90β of mouse, rat, human, *Achlya ambisexualis, C. elegans* and bovine 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

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

Molecular Weight of HSP 90α/β: 90 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or Y79 cell lysate: sc-2240.

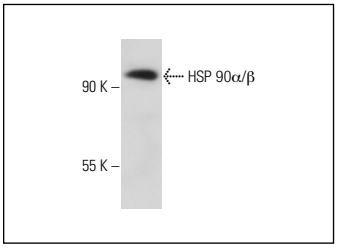
RESEARCH USE

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

STORAGE

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

DATA



HSP 90α/β (AC88): sc-59577. Western blot analysis of HSP 90α/β expression in NIH/3T3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Gomes, R.S., et al. 2013. Efficient pro-survival/angiogenic miRNA delivery by an MRI-detectable nanomaterial. ACS Nano 7: 3362-3372.
2. Maruyama, A., et al. 2014. Non-coding RNA derived from the region adjacent to the human HO-1 E2 enhancer selectively regulates HO-1 gene induction by modulating Pol II binding. Nucleic Acids Res. 42: 13599-13614.
3. Granato, M., et al. 2015. Capsaicin triggers immunogenic PEL cell death, stimulates DCs and reverts PEL-induced immune suppression. Oncotarget 6: 29543-29554.
4. Pourcet, B., et al. 2016. The nuclear receptor LXR modulates interleukin-18 levels in macrophages through multiple mechanisms. Sci. Rep. 6: 25481.
5. Debruyne, D.N., et al. 2016. ALK inhibitor resistance in ALK^{F1174L}-driven neuroblastoma is associated with AXL activation and induction of EMT. Oncogene 35: 3681-3691.
6. Milanesi, S., et al. 2019. Indoxyl sulfate induces renal fibroblast activation through a targetable heat shock protein 90-dependent pathway. Oxid. Med. Cell. Longev. 2019: 2050183.
7. Mimura, J., et al. 2019. Concomitant Nrf2- and ATF4-activation by carnosic acid cooperatively induces expression of cytoprotective genes. Int. J. Mol. Sci. 20: 1706.
8. Barone, R., et al. 2021. Morphological alterations and stress protein variations in lung biopsies obtained from autopsies of COVID-19 subjects. Cells 10: 3136.
9. Sukumaran, S., et al. 2023. Rational design, synthesis and structural characterization of peptides and peptidomimetics to target Hsp90/Cdc37 interaction for treating hepatocellular carcinoma. Comput. Struct. Biotechnol. J. 21: 3159-3172.

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.