

HSP 90 α / β (F-8): sc-13119

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

- Wu, J.M., et al. 2003. PKC epsilon is a unique regulator for HSP 90 β gene in heat shock response. *J. Biol. Chem.* 278: 51143-51149.
- Whitesell, L., et al. 2005. HSP 90 and the chaperoning of cancer. *Nat. Rev. Cancer* 5: 761-772.
- 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 α / β (F-8) is a mouse monoclonal antibody raised against amino acids 610-723 of HSP 90 α / β of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-13119 X, 200 μ g/0.1 ml.

HSP 90 α / β (F-8) is available conjugated to agarose (sc-13119 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13119 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13119 PE), fluorescein (sc-13119 FITC), Alexa Fluor[®] 488 (sc-13119 AF488), Alexa Fluor[®] 546 (sc-13119 AF546), Alexa Fluor[®] 594 (sc-13119 AF594) or Alexa Fluor[®] 647 (sc-13119 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-13119 AF680) or Alexa Fluor[®] 790 (sc-13119 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

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 for detailed protocols and support products.

APPLICATIONS

HSP 90 α / β (F-8) is recommended for detection of HSP 90 α and HSP 90 β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

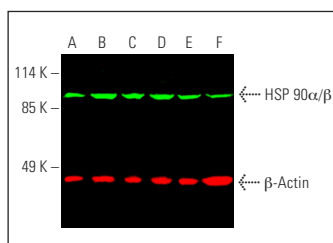
Suitable for use as control antibody for HSP 90 α / β siRNA (h): sc-35608, HSP 90 α / β siRNA (m): sc-35610, HSP 90 α / β siRNA (r): sc-156099, HSP 90 α / β shRNA Plasmid (h): sc-35608-SH, HSP 90 α / β shRNA, Plasmid (m): sc-35610-SH, HSP 90 α / β shRNA Plasmid (r): sc-156099-SH, HSP 90 α / β shRNA (h)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

HSP 90 α / β (F-8) X TransCruz antibody is recommended for ChIP assays.

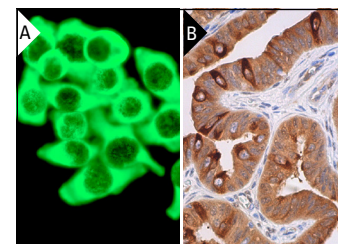
Molecular Weight of HSP 90 α / β : 90 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

DATA



Simultaneous direct near-infrared western blot analysis of HSP 90 α / β expression, detected with HSP 90 α / β (F-8) Alexa Fluor[®] 680: sc-13119 AF680 and β -Actin expression, detected with β -Actin (C4) Alexa Fluor[®] 790: sc-47778 AF790 in Hep G2 (A), A-431 (B), K-562 (C), IMR-32 (D), EOC 20 (E) and C6 (F) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214.



HSP 90 α / β (F-8): sc-13119. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (A). Immunoperoxidase detection of HSP 90 α / β in formalin fixed, paraffin-embedded human fallopian tube tissue, showing cytoplasmic staining of glandular cells. Detection reagent used: m-IgG κ BP-HRP: sc-516102 (B).

SELECT PRODUCT CITATIONS

- Morelli, C., et al. 2003. Estrogen receptor- α regulates the degradation of Insulin receptor substrates 1 and 2 in breast cancer cells. *Oncogene* 22: 4007-4016.
- Wang, C., et al. 2019. Inducing and exploiting vulnerabilities for the treatment of liver cancer. *Nature* 574: 268-272.
- Kasiri, S., et al. 2020. Stromal Hedgehog pathway activation by IHH suppresses lung adenocarcinoma growth and metastasis by limiting reactive oxygen species. *Oncogene* 39: 3258-3275.

RESEARCH USE

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