

HSP 90 (h2): 293T Lysate: sc-117081

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 hetero-complex 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/STT1 and p23, forming a thumper complex with estrogen and androgen receptors.

REFERENCES

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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.
4. Aoyagi, S., et al. 2005. Modulating molecular chaperone HSP 90 functions through reversible acetylation. *Trends Cell Biol.* 15: 565-567.
5. Chen, B., et al. 2005. The HSP 90 family of genes in the human genome: insights into their divergence and evolution. *Genomics* 86: 627-637.
6. Zhao, R., et al. 2005. HSP 90: a chaperone for protein folding and gene regulation. *Biochem. Cell Biol.* 83: 703-710.
7. Wegele, H., et al. 2005. Substrate transfer from the chaperone HSP 70 to HSP 90. *J. Mol. Biol.* 356: 802-811.
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9. Allan, R.K., et al. 2006. The carboxy-terminal domain of HSP 90: modulation of chaperone function and cochaperone interaction by novobiocin. Evidence that coumarin antibiotics disrupt HSP 90 dimerization. *J. Biol. Chem.* 281: 7161-7171.

PRODUCT

HSP 90 (h2): 293T Lysate represents a lysate of human HSP 90 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

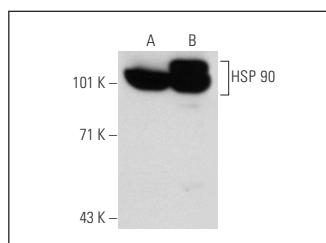
APPLICATIONS

HSP 90 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive HSP 90 antibodies. Recommended use: 10-20 μ l per lane.

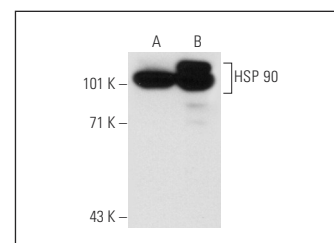
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GRP 94 (2H3): sc-53929 is recommended as a positive control antibody for Western Blot analysis of enhanced human HSP 90 expression in HSP 90 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



GRP 94 (2H3): sc-53929. Western blot analysis of HSP 90 expression in non-transfected: sc-117752 (A) and human HSP 90 transfected: sc-117081 (B) 293T whole cell lysates.



GRP 94 (SPM249): sc-56399. Western blot analysis of HSP 90 expression in non-transfected: sc-117752 (A) and human HSP 90 transfected: sc-117081 (B) 293T whole cell lysates.

RESEARCH USE

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