SANTA CRUZ BIOTECHNOLOGY, INC.

p-HSP 90 (Ser 254): sc-101701

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 aporeceptor complex with estrogen and androgen receptors.

REFERENCES

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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.
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8. Yang, K., et al. 2006. HSP 90 regulates activation of IRF-3 and TBK1 stabilization in Sendai virus-infected cells. Mol. Biol. Cell 17: 1461-1471.
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.

CHROMOSOMAL LOCATION

Genetic locus: HSP90AB1 (human) mapping to 6p21.1; Hsp90ab1 (mouse) mapping to 17 B3.

SOURCE

p-HSP 90 (Ser 254) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 254 of HSP 90 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-HSP 90 (Ser 254) is recommended for detection of Ser 254 phosphorylated HSP 90 of human and mouse origin and correspondingly phosphorylated Ser 255 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)].

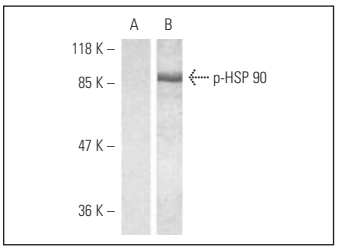
Molecular Weight of p-HSP 90: 90 kDa.

Positive Controls: HT-29 whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Western blot analysis of phosphorylated HSP 90 expression in HT-29 whole cell lysate (**A**,**B**). Blots were probed with p-HSP 90 (Ser 254): sc-101701 preincubated with its cognate phosphorylated peptide (**A**) and p-HSP 90 (Ser 254): sc-101701 (**B**).

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.