SANTA CRUZ BIOTECHNOLOGY, INC.

HspBP1 (E-3): sc-398319

BACKGROUND

Hsp70-interacting protein (HspBP1) belongs to a family of eukaryotic proteins identified as nucleotide exchange factors for Hsp70, which exhibit varying degrees of compartment and species specificity. HspBP1 interferes with the CHIP-induced degradation of immature forms of the cystic fibrosis transmembrane conductance regulator (CFTR) and stimulates CFTR maturation. HspBP1 binds to Hsp70, inhibits its activity and promotes dissociation of nucleotides from the Hsp70 ATPase domain. It is a protein mainly expressed in heart and skeletal muscle.

REFERENCES

1. Raynes, D.A., et al. 2000. Isolation and characterization of isoforms of HspBP1, inhibitors of Hsp70. Biochim. Biophys. Acta 1490: 203-207.
2. Kabani, M., et al. 2002. HspBP1, a homologue of the yeast Fes1 and Sls1 proteins, is an Hsc70 nucleotide exchange factor. FEBS Lett. 531: 339-342.
3. McLellan, C.A., et al. 2003. HspBP1, an Hsp70 cochaperone, has two structural domains and is capable of altering the conformation of the Hsp70 ATPase domain. J. Biol. Chem. 278: 19017-19022.
4. Raynes, D.A., et al. 2003. Increased expression of the Hsp70 cochaperone HspBP1 in tumors. Tumour Biol. 24: 281-285.
5. Tanimura, S., et al. 2004. Heat shock protein 70 binding protein 1 induces enhanced apoptotic response against anticancer drugs in tumor cells. Nippon Rinsho 62: 1291-1296.
6. Alberti, S., et al. 2004. The cochaperone HspBP1 inhibits the CHIP ubiquitin ligase and stimulates the maturation of the cystic fibrosis transmembrane conductance regulator. Mol. Biol. Cell 15: 4003-4010.
7. Shomura, Y., et al. 2005. Regulation of Hsp70 function by HspBP1: structural analysis reveals an alternate mechanism for Hsp70 nucleotide exchange. Mol. Cell 17: 367-379.
8. Papp, D., et al. 2005. Development of a sensitive assay for the measurement of antibodies against heat shock protein binding protein 1 (HspBP1): increased levels of anti-HspBP1 IgG are prevalent in HIV infected subjects. J. Med. Virol. 76: 464-469.
9. Gottwald, E., et al. 2006. Expression of the cochaperone HspBP1 is not coordinately regulated with Hsp70 expression. Cell Biol. Int. 30: 553-558.

CHROMOSOMAL LOCATION

Genetic locus: HSPBP1 (human) mapping to 19q13.42; Hspbp1 (mouse) mapping to 7 A1.

SOURCE

HspBP1 (E-3) is a mouse monoclonal antibody raised against amino acids 63-241 mapping within an internal region of HspBP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HspBP1 (E-3) is recommended for detection of HspBP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HspBP1 siRNA (h): sc-45314, HspBP1 siRNA (m): sc-45315, HspBP1 shRNA Plasmid (h): sc-45314-SH, HspBP1 shRNA Plasmid (m): sc-45315-SH, HspBP1 shRNA (h) Lentiviral Particles: sc-45314-V and HspBP1 shRNA (m) Lentiviral Particles: sc-45315-V.

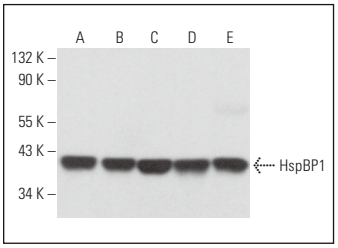
Molecular Weight of HspBP1: 45 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

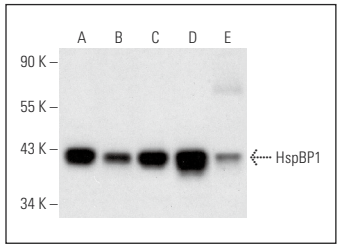
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HspBP1 (E-3): sc-398319. Western blot analysis of HspBP1 expression in A-431 (**A**), NIH/3T3 (**B**), RAW 264.7 (**C**) and PC-12 (**D**) whole cell lysates and rat testis tissue extract (**E**).



HspBP1 (E-3): sc-398319. Western blot analysis of HspBP1 expression in HeLa (**A**), A549 (**B**), MCF7 (**C**) and Jurkat (**D**) whole cell lysates and human heart tissue extract (**E**).

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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