SANTA CRUZ BIOTECHNOLOGY, INC.

HSP 75 (42): sc-135944

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The heat shock proteins (HSPs) comprise a group of highly conserved, abundantly expressed proteins with diverse functions, including the assembly and sequestering of multiprotein complexes, transportation of nascent polypeptide chains across cellular membranes and regulation of protein folding. Heat shock protein 75 mitochondrial precursor (HSP 75), also called tumor necrosis factor type 1 receptor-associated protein (TRAP1), is a 704 amino acid member of the heat shock protein 90 family. HSP 75 localizes to the mitochondrion and is expressed in a variety of tissues, including skeletal muscle, liver, heart, brain, pancreas, lung and placenta, functioning as a chaperone that expresses an ATPase activity.

REFERENCES

1. Heinen, R.C., et al. 2006. Identification of the divergent calmodulin binding motif in yeast SSB-1/HSP 75 protein and in other HSP 70 family members. Braz. J. Med. Biol. Res. 39: 1399-1408.
2. Blank, M., et al. 2006. Stress protein response in two sibling species of *Marenzelleria* (Polychaeta: Spionidae): is there an influence of acclimation salinity? Comp. Biochem. Physiol. B Biochem. Mol. Biol. 144: 451-462.
3. Im, C.N., et al. 2007. Iron chelation study in a normal human hepatocyte cell line suggests that tumor necrosis factor receptor-associated protein 1 (TRAP1) regulates production of reactive oxygen species. J. Cell. Biochem. 100: 474-486.
4. Tokalov, S.V., et al. 2007. Varying responses of human cells with discrepant p53 activity to ionizing radiation and heat shock exposure. Cell Prolif. 40: 24-37.
5. Stasyk, T., et al. 2007. Identification of endosomal epidermal growth factor receptor signaling targets by functional organelle proteomics. Mol. Cell. Proteomics 6: 908-922.
6. Hua, G., et al. 2007. Heat shock protein 75 (TRAP1) antagonizes reactive oxygen species generation and protects cells from granzyme M-mediated apoptosis. J. Biol. Chem. 282: 20553-20560.

CHROMOSOMAL LOCATION

Genetic locus: TRAP1 (human) mapping to 16p13.3; Trap1 (mouse) mapping to 16 A1.

SOURCE

HSP 75 (42) is a mouse monoclonal antibody raised against amino acids 253-464 of HSP 75 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 500 µl of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

STORAGE

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

APPLICATIONS

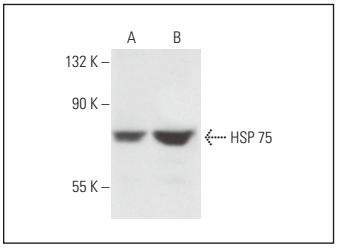
HSP 75 (42) is recommended for detection of HSP 75 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for HSP 75 siRNA (h): sc-72191, HSP 75 siRNA (m): sc-72192, HSP 75 shRNA Plasmid (h): sc-72191-SH, HSP 75 shRNA Plasmid (m): sc-72192-SH, HSP 75 shRNA (h) Lentiviral Particles: sc-72191-V and HSP 75 shRNA (m) Lentiviral Particles: sc-72192-V.

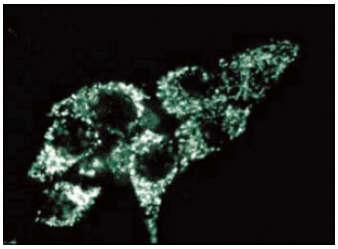
Molecular Weight of HSP 75: 75 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HL-60 whole cell lysate: sc-2209 or K-562 whole cell lysate: sc-2203.

DATA



HSP 75 (42): sc-135944. Western blot analysis of HSP 75 expression in HL-60 (**A**) and K-562 (**B**) whole cell lysates.



HSP 75 (42): sc-135944. Immunofluorescence staining of HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Campos-Martorell, M., et al. 2014. Brain proteomics identifies potential simvastatin targets in acute phase of stroke in a rat embolic model. J. Neurochem. 130: 301-312.
2. Schönenberger, M.J. and Kovacs, W.J. 2017. Isolation of peroxisomes from mouse brain using a continuous nycodenz gradient: a comparison to the isolation of liver and kidney peroxisomes. Methods Mol. Biol. 1595: 13-26.

RESEARCH USE

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

PROTOCOLS

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