SANTA CRUZ BIOTECHNOLOGY, INC.

HSP 10 (FL-102): sc-20958

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 poly-peptide chains across cellular membranes and regulation of protein folding. Heat shock proteins (also known as molecular chaperones) fall into six general families: HSP 90, HSP 70, HSP 60, the low molecular weight HSPs, the immunophilins and the HSP 110 family. The low molecular weight family includes HSP 10, HSP 20, HSP 27, HSP 32 and HSP 40. HSP 10, a 102 amino acid protein, forms a heptameric ring of 7 identical subunits. This ring binds at either end of HSP 60 to form a functional heterodimer.

REFERENCES

1. Schlesinger, M.J., et al. 1982. Heat Shock: From Bacteria to Man. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory.
2. Zeilstra-Ryalls, J., et al. 1991. The universally conserved GroE (Hsp60) chaperonins. Annu. Rev. Microbiol. 45: 301-325.

CHROMOSOMAL LOCATION

Genetic locus: HSPE1 (human) mapping to 2q33.1; Hspe1 (mouse) mapping to 1 C1.2.

SOURCE

HSP 10 (FL-102) is a rabbit polyclonal antibody raised against amino acids 1-102 representing full length HSP 10 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HSP 10 (FL-102) is recommended for detection of HSP 10 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)], 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HSP 10 (FL-102) is also recommended for detection of HSP 10 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for HSP 10 siRNA (h): sc-40654, HSP 10 siRNA (m): sc-40655, HSP 10 shRNA Plasmid (h): sc-40654-SH, HSP 10 shRNA Plasmid (m): sc-40655-SH, HSP 10 shRNA (h) Lentiviral Particles: sc-40654-V and HSP 10 shRNA (m) Lentiviral Particles: sc-40655-V.

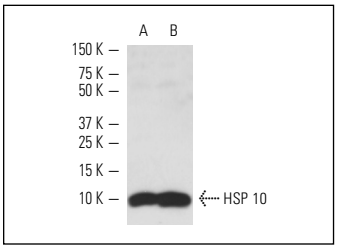
Molecular Weight of HSP 10: 10 kDa.

Positive Controls: LADMAC whole cell lysate: sc-364189 or MES-SA/Dx5 cell lysate: sc-2284.

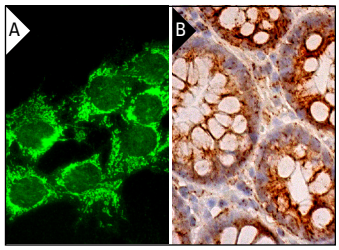
STORAGE

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

DATA



HSP 10 (FL-102): sc-20958. Western blot analysis of HSP 10 expression in LADMAC (**A**) and MES-SA/Dx5 (**B**) whole cell lysates.



HSP 10 (FL-102): sc-20958. Immunofluorescence staining of formalin-fixed HepG2 cells showing mitochondrial localization. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Shamaei-Tousi, A., et al. 2007. Differential regulation of circulating levels of molecular chaperones in patients undergoing treatment for periodontal disease. PLoS ONE 2: e1198.
2. Têtu, B., et al. 2008. Immunohistochemical analysis of possible chemoresistance markers identified by micro-arrays on serous ovarian carcinomas. Mod. Pathol. 21: 1002-1010.
3. Cappello, F., et al. 2011. Convergent sets of data from *in vivo* and *in vitro* methods point to an active role of Hsp60 in chronic obstructive pulmonary disease pathogenesis. PLoS ONE 6: e28200.

RESEARCH USE

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

PROTOCOLS

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