SANTA CRUZ BIOTECHNOLOGY, INC.

HSP 105 (21): sc-135942

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 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 HSP 110 family (also known as the HSP 105 family) is composed of HSP 105, Apg-1 and Apg-2. HSP 105 is a testis-specific and HSP 90-related protein. Research indicates that HSP 105 is specifically localized in the germ cells and may translocate into the nucleus after heat shock. It is suggested that HSP 105 may contribute to the stabilization of p53 proteins in the cytoplasm of the germ cells, preventing the potential induction of apoptosis by p53.

REFERENCES

1. Schlesinger, M.J., et al. 1982. Heat Shock: from Bacteria to Man. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory.
2. Hatayama, T., et al. 1992. Effects of low culture temperature on the induction of HSP 70 mRNA and the accumulation of HSP 70 and HSP 105 in mouse FM3A cells. J. Biochem. 111: 484-490.
3. Georgopoulos, C. and Welch, W.J. 1993. Role of the major heat shock proteins as molecular chaperones. Annu. Rev. Cell Biol. 9: 601-634.
4. Todd, M.J., et al. 1994. Dynamics of the chaperonin ATPase cycle: implications for facilitated protein folding. Science 265: 659-666.
5. Yasuda, K., et al. 1995. Cloning and expression of murine high molecular mass heat shock proteins, HSP 105. J. Biol. Chem. 270: 29718-29723.
6. Xue, J.H., et al. 1998. Induction of Apg-1, a member of the HSP 110 family, following transient forebrain ischemia in the rat brain. Biochem. Biophys. Res. Commun. 247: 796-801.
7. Kumagai, J., et al. 2000. Germ cell-specific heat shock protein 105 binds to p53 in a temperature-sensitive manner in rat testis. Eur. J. Biochem. 267: 3073-3078.

CHROMOSOMAL LOCATION

Genetic locus: HSPH1 (human) mapping to 13q12.3; Hsph1 (mouse) mapping to 5 G3.

SOURCE

HSP 105 (21) is a mouse monoclonal antibody raised against amino acids 703-858 of HSP105 of hamster origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml 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

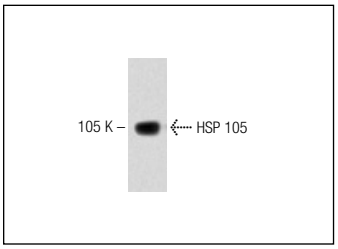
HSP 105 (21) is recommended for detection of HSP105 of mouse, rat, human and hamster origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunoprecipitation.

Suitable for use as control antibody for HSP 105 siRNA (h): sc-35597, HSP 105 siRNA (m): sc-35596, HSP 105 shRNA Plasmid (h): sc-35597-SH, HSP 105 shRNA Plasmid (m): sc-35596-SH, HSP 105 shRNA (h) Lentiviral Particles: sc-35597-V and HSP 105 shRNA (m) Lentiviral Particles: sc-35596-V.

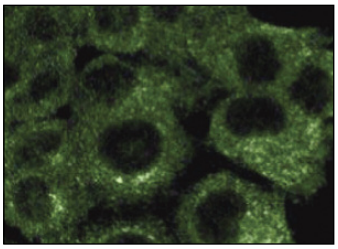
Molecular Weight of HSP 105: 105 kDa.

Positive Controls: rat brain extract: sc-2392 or A-431 whole cell lysate: sc-2201.

DATA



HSP 105 (21): sc-135942. Western blot analysis of HSP 105 expression in rat cerebrum tissue extract.



HSP 105 (21): sc-135942. Immunofluorescence staining of A-431 cells showing cytoplasmic staining.

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.