

HSP 105 (D-19): sc-1805

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. 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.
2. Georgopoulos, C. and Welch, W.J. 1993. Role of the major heat shock proteins as molecular chaperones. *Annu. Rev. Cell Biol.* 9: 601-634.

CHROMOSOMAL LOCATION

Genetic locus: HSPH1 (human) mapping to 13q12.3, HSPA4 (human) mapping to 5q31.1; Hsp1 (mouse) mapping to 5 G3, Hspa4 (mouse) mapping to 11 B1.3.

SOURCE

HSP 105 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of HSP 105 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1805 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HSP 105 (D-19) is recommended for detection of HSP 105 and Apg-2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HSP 105 (D-19) is also recommended for detection of HSP 105 and Apg-2 in additional species, including equine, canine, bovine, porcine and avian.

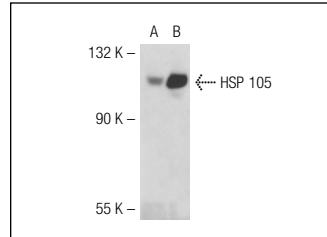
Molecular Weight of HSP 105: 105 kDa.

Positive Controls: HSP 105 (h): 293T Lysate: sc-114818, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

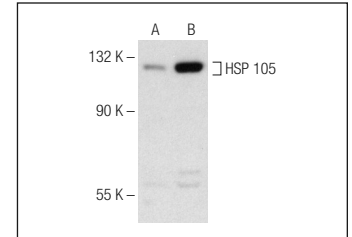
STORAGE

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

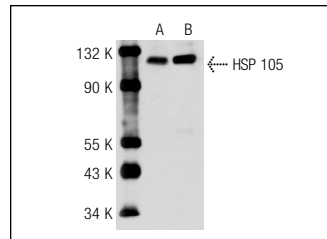
DATA



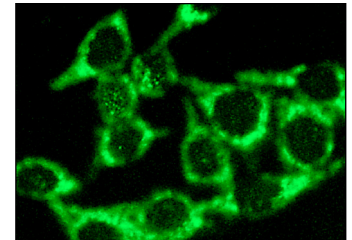
HSP 105 (D-19): sc-1805. Western blot analysis of HSP 105 expression in non-transfected: sc-117752 (A) and human HSP 105 transfected: sc-114818 (B) 293T whole cell lysates.



HSP 105 (D-19): sc-1805. Western blot analysis of HSP 105 expression in untreated (A) and Lactacystin (sc-3575) treated (B) C6 whole cell lysates. Note upregulation of HSP 105 expression in lane B.



HSP 105 (D-19): sc-1805. Western blot analysis of HSP 105 expression in HeLa (A) and NIH/3T3 (B) whole cell lysates.



HSP 105 (D-19): sc-1805. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Jana, N.R., et al. 2000. Polyglutamine length-dependent interaction of HSP 40 and HSP 70 family chaperones with truncated N-terminal Huntingtin: their role in suppression of aggregation and cellular toxicity. *Hum. Mol. Genet.* 9: 2009-2018.

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.


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Try **HSP 105 (B-7): sc-74550** or **HSP 105 (21): sc-135942**, our highly recommended monoclonal alternatives to HSP 105 (D-19).