SANTA CRUZ BIOTECHNOLOGY, INC.

HSP 105 (N-187): sc-74550

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 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.

CHROMOSOMAL LOCATION

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

SOURCE

HSP 105 (B-7) is a mouse monoclonal antibody raised against amino acids 187-512 of HSP 105 of mouse 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.

HSP 105 (B-7) is available conjugated to agarose (sc-74550 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-74550 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74550 PE), fluorescein (sc-74550 FITC), Alexa Fluor® 488 (sc-74550 AF488), Alexa Fluor® 546 (sc-74550 AF546), Alexa Fluor® 594 (sc-74550 AF594) or Alexa Fluor® 647 (sc-74550 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74550 AF680) or Alexa Fluor® 790 (sc-74550 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HSP 105 (B-7) is recommended for detection of HSP 105 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 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.

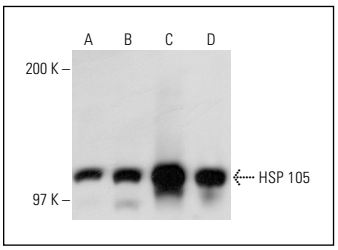
Molecular Weight of HSP 105: 105 kDa.

Positive Controls: NIH/3T3 + heat shock cell lysate: sc-2217, HeLa + heat shock cell lysate: sc-2272 or HeLa whole cell lysate: sc-2200.

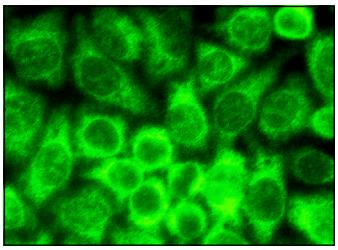
STORAGE

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

DATA



HSP 105 (B-7): sc-74550. Western blot analysis of HSP 105 expression in untreated HeLa (**A**), heat shock-treated HeLa (**B**), untreated NIH/3T3 (**C**) and heat shock-treated NIH/3T3 (**D**) whole cell lysates.



HSP 105 (B-7): sc-74550. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Kern, F., et al. 2013. Nogo-A couples with Apg-1 through interaction and coordinate expression under hypoxic and oxidative stress. Biochem. J. 455: 217-227.
2. Borgo, C., et al. 2018. Dependence of HSP 27 cellular level on protein kinase CK2 discloses novel therapeutic strategies. Biochim. Biophys. Acta Gen. Subj. 1862: 2902-2910.
3. Padmanabhan, A., et al. 2019. Zinc oxide nanoparticles induce oxidative and proteotoxic stress in ovarian cancer cells and trigger apoptosis Independent of p53-mutation status. Appl. Surf. Sci. 487: 807-818.
4. Sim, H., et al. 2020. Quantitative proteomic analysis of primitive neural stem cells from LRRK2 G2019S-associated Parkinson's disease patient-derived iPSCs. Life 10: 331.
5. Chaumonnot, K., et al. 2021. The HSP GRP94 interacts with macrophage intracellular complement C3 and impacts M2 profile during ER stress. Cell Death Dis. 12: 114.
6. D'Amore, C., et al. 2022. KDM2A and KDM3B as potential targets for the rescue of F508del-CFTR. Int. J. Mol. Sci. 23: 9612.
7. Matsumoto, T., et al. 2022. Chemical structures and induction of cell death via heat shock protein inhibition of the prenylated phloroglucinol derivatives isolated from *Hypericum erectum*. Fitoterapia 156: 105097.
8. Matsumoto, T., et al. 2023. Azaphilones produced by *Penicillium maximae* with their cell death-inducing activity on Adriamycin-treated cancer cell. Genes Environ. 45: 5.
9. Durand, M., et al. 2024. A first-in-class inhibitor of HSP110 to potentiate XPO1-targeted therapy in primary mediastinal B-cell lymphoma and classical Hodgkin lymphoma. J. Exp. Clin. Cancer Res. 43: 148.

RESEARCH USE

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