

HSPA1L (C-6): sc-393297

BACKGROUND

The heat shock proteins (HSPs) comprise a group of highly conserved, abundantly expressed proteins with diverse functions, including the assembly and sequestering of multi-protein complexes, the transportation of nascent poly-peptide chains across cellular membranes and the regulation of protein folding. HSPA1L (heat shock 70 kDa protein 1L), also known as HSP70T, is a 641 amino acid protein that belongs to the HSP 70 family and, like other HSP proteins, mediates protein folding within the cytosol, as well as within other organelles throughout the cell. HSP proteins, such as HSPA1L, together with chaperones, bind extended peptide segments with a net hydrophobic character exposed during protein translation, membrane translocation or after stress-induced damage. HSPA1L has been found to be expressed in spermatids and is not induced by heat shock.

REFERENCES

- Voellmy, R., et al. 1985. Isolation and functional analysis of a human 70 kDa heat shock protein gene segment. *Proc. Natl. Acad. Sci. USA* 82: 4949-4953.
- Leung, T.K., et al. 1990. The human heat-shock protein family. Expression of a novel heat-inducible HSP 70 (HSP70B') and isolation of its cDNA and genomic DNA. *Biochem. J.* 267: 125-132.
- Milner, C.M. and Campbell, R.D. 1990. Structure and expression of the three MHC-linked HSP 70 genes. *Immunogenetics* 32: 242-251.
- Milner, C.M. and Campbell, R.D. 1992. Polymorphic analysis of the three MHC-linked HSP 70 genes. *Immunogenetics* 36: 357-362.
- Ito, Y., et al. 1998. Genomic structure of the spermatid-specific HSP 70 homolog gene located in the class III region of the major histocompatibility complex of mouse and man. *J. Biochem.* 124: 347-353.

CHROMOSOMAL LOCATION

Genetic locus: HSPA1L (human) mapping to 6p21.33; Hspa1l (mouse) mapping to 17 B1.

SOURCE

HSPA1L (C-6) is a mouse monoclonal antibody raised against amino acids 572-637 mapping near the C-terminus of HSPA1L of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HSPA1L (C-6) is available conjugated to agarose (sc-393297 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393297 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393297 PE), fluorescein (sc-393297 FITC), Alexa Fluor® 488 (sc-393297 AF488), Alexa Fluor® 546 (sc-393297 AF546), Alexa Fluor® 594 (sc-393297 AF594) or Alexa Fluor® 647 (sc-393297 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393297 AF680) or Alexa Fluor® 790 (sc-393297 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HSPA1L (C-6) is recommended for detection of HSPA1L 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 HSPA1L siRNA (h): sc-95199, HSPA1L siRNA (m): sc-146098, HSPA1L shRNA Plasmid (h): sc-95199-SH, HSPA1L shRNA Plasmid (m): sc-146098-SH, HSPA1L shRNA (h) Lentiviral Particles: sc-95199-V and HSPA1L shRNA (m) Lentiviral Particles: sc-146098-V.

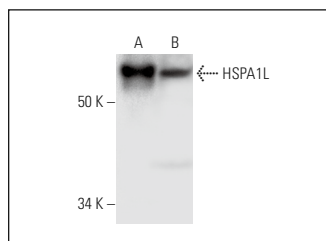
Molecular Weight of HSPA1L: 70 kDa.

Positive Controls: mouse testis extract: sc-2405 or Hs 181 Tes whole cell lysate: sc-364779.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HSPA1L (C-6): sc-393297. Western blot analysis of HSPA1L expression in mouse testis tissue extract (A) and Hs 181 Tes whole cell lysate (B).

SELECT PRODUCT CITATIONS

- Williams, P.A., et al. 2019. MAPKAP kinase 2-mediated phosphorylation of HSPA1L protects male germ cells from heat stress-induced apoptosis. *Cell Stress Chaperones* 24: 1127-1136.

STORAGE

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

RESEARCH USE

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