

HSPA2 (JJ-3): sc-100760

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, the transportation of nascent polypeptide chains across cellular membranes and the regulation of protein folding. HSPA2 (heat shock 70 kDa protein 2), also known as HSP70-2 or HSP70-3, is a 639 amino acid member of the heat shock 70 (HSP 70) family of proteins and is widely expressed with highest levels detected in testis and skeletal muscle. Like other members of the HSP 70 family, HSPA2 cooperates with chaperone proteins to both prevent protein aggregation and mediate the folding of newly expressed polypeptides in the cytosol. Through its ability to chaperone and regulate protein folding, HSPA2 is thought to be crucial for proper sperm maturation and function. Overexpression of HSPA2 is associated with breast cancer, suggesting a possible role for HSPA2 in tumor formation.

REFERENCES

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4. Lim, M.C., et al. 2003. gp120 neurotoxicity fails to induce heat shock defenses, while the over expression of HSP 70 protects against gp120. *Brain Res. Bull.* 61: 183-188.
5. Deblor, J., et al. 2003. Heat-shock protein HSP70-2 genotypes in patients with Crohn's disease: a more severe clinical course with intestinal complications in presence of the PstI-polymorphism. *Eur. J. Med. Res.* 8: 120-124.
6. Lima, S.B., et al. 2006. Expression of the HSPA2 gene in ejaculated spermatozoa from adolescents with and without varicocele. *Fertil. Steril.* 86: 1659-1663.
7. Cedenho, A.P., et al. 2006. Oligozoospermia and heat-shock protein expression in ejaculated spermatozoa. *Hum. Reprod.* 21: 1791-1794.

CHROMOSOMAL LOCATION

Genetic locus: HSPA2 (human) mapping to 14q23.3.

SOURCE

HSPA2 (JJ-3) is a mouse monoclonal antibody raised against recombinant HSPA2 of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HSPA2 (JJ-3) is recommended for detection of HSPA2 of 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).

Suitable for use as control antibody for HSPA2 siRNA (h): sc-92302, HSPA2 shRNA Plasmid (h): sc-92302-SH and HSPA2 shRNA (h) Lentiviral Particles: sc-92302-V.

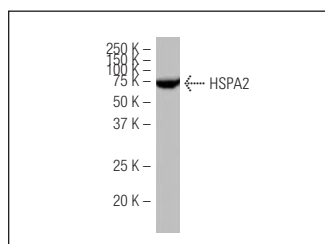
Molecular Weight of HSPA2: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

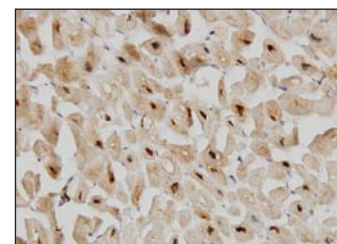
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA



HSPA2 (JJ-3): sc-100760. Western blot analysis of HSPA2 expression in HeLa whole cell lysate.



HSPA2 (JJ-3): sc-100760. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human heart tissue showing cytoplasmic localization.

RESEARCH USE

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