SANTA CRUZ BIOTECHNOLOGY, INC.

HSPA6 (C-17): sc-104320



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 polypeptide chains across cellular membranes and the regulation of protein folding. HSPA6 (heat shock 70 kDa protein 6), also known as HSP 70B, is a 643 amino acid protein that belongs to the HSP family and, like other HSP proteins, mediates protein folding within the cytosol, as well as within other organelles throughout the cell. The gene encoding HSPA6 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

- Voellmy, R., Ahmed, A., Schiller, P., Bromley, P. and Rungger, D. 1985. Isolation and functional analysis of a human 70,000-dalton heat shock protein gene segment. Proc. Natl. Acad. Sci. USA 82: 4949-4953.
- Schiller, P., Amin, J., Ananthan, J., Brown, M.E., Scott, W.A. and Voellmy, R. 1988. *Cis*-acting elements involved in the regulated expression of a human HSP 70 gene. J. Mol. Biol. 203: 97-105.
- Leung, T.K., Rajendran, M.Y., Monfries, C., Hall, C. and Lim, L. 1990. The human heat-shock protein family. Expression of a novel heat-inducible HSP 70 (HSP 70B') and isolation of its cDNA and genomic DNA. Biochem. J. 267: 125-132.
- 4. Leung, T.K., Hall, C., Rajendran, M., Spurr, N.K. and Lim, L. 1992. The human heat-shock genes HSPA6 and HSPA7 are both expressed and localize to chromosome 1. Genomics 12: 74-79.
- Grosz, M.D., Womack, J.E. and Skow, L.C. 1992. Syntenic conservation of HSP70 genes in cattle and humans. Genomics 14: 863-868.
- Brzustowicz, L.M., Hayter, J.E., Hodgkinson, K.A., Chow, E.W. and Bassett, A.S. 2002. Fine mapping of the schizophrenia susceptibility locus on chromosome 1q22. Hum. Hered. 54: 199-209.
- 7. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 140555. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Liu, Y., Li, N., You, L., Liu, X., Li, H. and Wang, X. 2008. HSP 70 is associated with endothelial activation in placental vascular diseases. Mol. Med. 14: 561-566.

CHROMOSOMAL LOCATION

Genetic locus: HSPA6 (human) mapping to 1q23.3.

SOURCE

HSPA6 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HSPA6 of human 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-104320 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

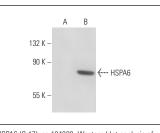
HSPA6 (C-17) is recommended for detection of HSPA6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other HSPA family members.

Suitable for use as control antibody for HSPA6 siRNA (h): sc-88826, HSPA6 shRNA Plasmid (h): sc-88826-SH and HSPA6 shRNA (h) Lentiviral Particles: sc-88826-V.

Molecular Weight of HSPA6: 70 kDa.

Positive Controls: HSPA6 (h3): 293T Lysate: sc-173854.

DATA



HSPA6 (C-17): sc-104320. Western blot analysis of HSPA6 expression in non-transfected: sc-117752 (A) and human HSPA6 transfected: sc-173854 (B) 2937 whole cell lysates.

STORAGE

Store at 4° C, **D0 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfation Guaranteed Try HSPA6 (G-9): sc-374589 or HSPA6 (B-8): sc-376193, our highly recommended monoclonal alternatives to HSPA6 (C-17).