

HSPA6 (h3): 293T Lysate: sc-173854

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. HSPA6 (heat shock 70 kDa protein 6), also known as HSP70B, 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 HSP70 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 HSP70 (HSP70B') and isolation of its cDNA and genomic DNA. *Biochem. J.* 267: 125-132.
- 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.
- 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. HSP70 is associated with endothelial activation in placental vascular diseases. *Mol. Med.* 14: 561-566.

CHROMOSOMAL LOCATION

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

PRODUCT

HSPA6 (h3): 293T Lysate represents a lysate of human HSPA6 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

HSPA6 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive HSPA6 antibodies. Recommended use: 10-20 µl per lane.

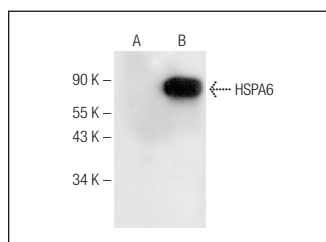
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HSPA6 (G-9): sc-374589 is recommended as a positive control antibody for Western Blot analysis of enhanced human HSPA6 expression in HSPA6 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

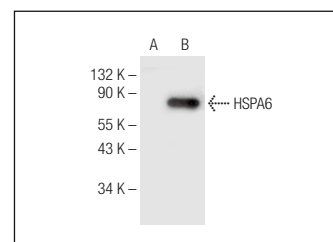
RECOMMENDED SUPPORT REAGENTS

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.

DATA



HSPA6 (G-9): sc-374589. Western blot analysis of HSPA6 expression in non-transfected: sc-117752 (A) and human HSPA6 transfected: sc-173854 (B) 293T whole cell lysates.



HSPA6 (B-8): sc-376193. Western blot analysis of HSPA6 expression in non-transfected: sc-117752 (A) and human HSPA6 transfected: sc-173854 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.