

HSPA12B (h): 293T Lysate: sc-112052

BACKGROUND

Heat shock proteins (HSPs) are associated with stress responses and are abundant in cells. HSP 70 is the largest family of HSPs that function as molecular chaperones. HSP 70s are involved in many processes including protein synthesis, folding, assembly, trafficking between cellular compartments and degradation. HSPA12B (heat shock 70 kDa protein 12B) is a 686 amino acid protein that is abundantly expressed in the endothelial cells of muscle and heart, and is also expressed in liver and kidney. HSPA12B belongs to the heat shock protein 70 family because it contains a heat shock protein 70 (HSP 70) ATPase domain. HSPA12B is thought to be involved in angiogenesis, and as such is involved in stress signaling responses concerning wounds. HSPA12B is upregulated in atherosclerotic lesions, which suggests involvement in atherogenesis. However, increased expression of HSPA12B also increases HSP 70 concentrations, suggesting that HSPA12B could be involved in an attempt to protect cells from atherosclerotic damage.

REFERENCES

1. Han, Z., et al. 2003. Two HSP 70 family members expressed in atherosclerotic lesions. *Proc. Natl. Acad. Sci. USA* 100: 1256-1261.
2. Steagall, R.J., et al. 2006. HSPA12B is predominantly expressed in endothelial cells and required for angiogenesis. *Arterioscler. Thromb. Vasc. Biol.* 26: 2012-2018.
3. Hu, G., et al. 2006. A novel endothelial-specific heat shock protein HSPA12B is required in both zebrafish development and endothelial functions *in vitro*. *J. Cell Sci.* 119: 4117-4126.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610702. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Howarth, J.L., et al. 2009. HSP 70 interacting protein prevents the accumulation of inclusions in polyglutamine disease. *J. Neurochem.* 108: 945-951.
6. Bao, X.Q. and Liu, G.T. 2009. Induction of heat shock protein 27 and 70 overexpression by bicyclol attenuates concanavalin A-induced liver injury through suppression of NFκB in mice. *Mol. Pharmacol.* 75: 1180-1188.

CHROMOSOMAL LOCATION

Genetic locus: HSPA12B (human) mapping to 20p13.

PRODUCT

HSPA12B (h): 293T Lysate represents a lysate of human HSPA12B transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

HSPA12B (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HSPA12B antibodies. Recommended use: 10-20 µl per lane.

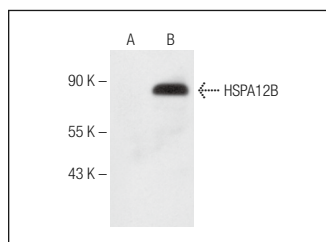
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HSPA12B (A-12): sc-376020 is recommended as a positive control antibody for Western Blot analysis of enhanced human HSPA12B expression in HSPA12B transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

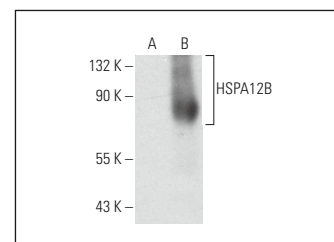
RECOMMENDED SUPPORT REAGENTS

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



HSPA12B (A-12): sc-376020. Western blot analysis of HSPA12B expression in non-transfected: sc-117752 (A) and human HSPA12B transfected: sc-112052 (B) 293T whole cell lysates.



HSPA12B (C-4): sc-393635. Western blot analysis of HSPA12B expression in non-transfected: sc-117752 (A) and human HSPA12B transfected: sc-112052 (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.