



HACS1 (h): 293T Lysate: sc-113689

BACKGROUND

HACS1 (hematopoietic adaptor containing SH3 and SAM domains 1) is a 373 amino acid protein encoded by the human gene SAMS1. HACS1 is a family member of a novel group of putative adaptors and scaffold proteins containing SH3 and SAM (sterile α motif) domains. SH3 and SAM domains are protein interaction motifs that are predominantly seen in signaling molecules, adaptors and scaffold proteins. HACS1 is upregulated by IL-4, IL-13, anti-IgM, and anti-CD40 in human peripheral blood B cells. In murine spleen B cells, HACS1 can also be upregulated by lipopolysaccharide, but not IL-13. Induction of HACS1 by IL-4 is dependent on Stat6 signaling and can also be impaired by inhibitors of phosphatidylinositol 3-kinase, protein kinase C (PKC) and NF κ B. HACS1 associates with tyrosine-phosphorylated proteins after B cell activation and binds *in vitro* to the inhibitory molecule paired Ig-like receptor B. HACS1 is preferentially expressed in normal hematopoietic tissues and malignancies, including myeloid leukemia, lymphoma and myeloma.

REFERENCES

1. Mitelman, F., Mertens, F. and Johansson, B. 1997. A breakpoint map of recurrent chromosomal rearrangements in human neoplasia. *Nat. Genet.* 15: 417-474.
2. Claudio, J.O., Zhu, Y.X., Benn, S.J., Shukla, A.H., McGlade, C.J., Falcioni, N. and Stewart, A.K. 2001. HACS1 encodes a novel SH3-SAM adaptor protein differentially expressed in normal and malignant hematopoietic cells. *Oncogene* 20: 5373-5377.
3. Cheon, M.S., Bajo, M., Kim, S.H., Claudio, J.O., Stewart, A.K., Patterson, D., Kruger, W.D., Kondoh, H. and Lubec, G. 2003. Protein levels of genes encoded on chromosomes in fetal Down syndrome brain: challenging the gene dosage effect hypothesis (Part II). *Amino Acids* 24: 119-125.
4. Zeller, C., Hinzmann, B., Seitz, S., Prokoph, H., Burkhard-Goettges, E., Fischer, J., Jandrig, B., Schwarz, L.E., Rosenthal, A. and Scherneck, S. 2003. SASH1: a candidate tumor suppressor gene on chromosome 6q24.3 is downregulated in breast cancer. *Oncogene* 22: 2972-2983.
5. Zhu, Y.X., Benn, S., Li, Z.H., Wei, E., Masih-Khan, E., Trieu, Y., Bali, M., McGlade, C.J., Claudio, J.O. and Stewart, A.K. 2004. The SH3-SAM adaptor HACS1 is upregulated in B cell activation signaling cascades. *J. Exp. Med.* 200: 737-747.
6. Rimkus, C., Martini, M., Friederichs, J., Rosenberg, R., Doll, D., Siewert, J.R., Holzmann, B. and Janssen, K.P. 2006. Prognostic significance of down-regulated expression of the candidate tumour suppressor gene SASH1 in colon cancer. *Br. J. Cancer* 95: 1419-1423.

CHROMOSOMAL LOCATION

Genetic locus: SAMS1 (human) mapping to 21q11.2.

PRODUCT

HACS1 (h): 293T Lysate represents a lysate of human HACS1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

HACS1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HACS1 antibodies. Recommended use: 10-20 μ l per lane.

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

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.

PROTOCOLS

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