SANTA CRUZ BIOTECHNOLOGY, INC.

HACS1 (R-18): sc-66387

BACKGROUND

HACS1 (hematopoietic adaptor containing SH3 and SAM domains 1) is a 373 amino acid protein encoded by the human gene SAMSN1. 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 and NFκB. 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

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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.
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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.
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CHROMOSOMAL LOCATION

Genetic locus: (rat) mapping to 11p11.

SOURCE

HACS1 (R-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HACS1 of rat origin.

RESEARCH USE

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

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-66387 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

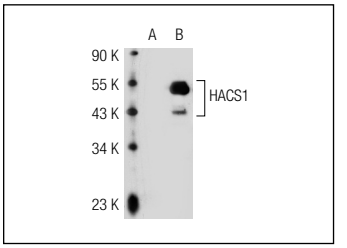
HACS1 (R-18) is recommended for detection of HACS1 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of HACS1: 42 kDa.

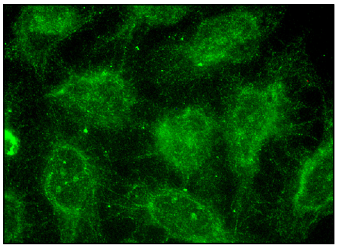
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HACS1 (R-18): sc-66387. Western blot analysis of HACS1 expression in non-transfected: sc-117752 (**A**) and human HACS1 transfected: sc-113689 (**B**) 293T whole cell lysates.



HACS1 (R-18): sc-66387. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

STORAGE

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

PROTOCOLS

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