SANTA CRUZ BIOTECHNOLOGY, INC.

SASH1 (X1): sc-517001

BACKGROUND

SASH1 (SAM and SH3 domain-containing protein 1), also known as PEPE1 (proline-glutamate repeat-containing protein), is a 1,247 amino acid protein that is significantly downregulated in the majority of primary breast tumor tissues, breast cancer cell lines, lung and thyroid tumors, as well as in certain colon carcinomas. It has been hypothesized that its expression is suppressed not due to mutation of the SASH1 gene, but instead via other mechanisms, such as promoter methylation. As a member of the SH3-domain containing expressed in lymphocytes (SLY1) gene family, SASH1 contains two sterile α modules (SAMs) and one Src homology-3 (SH3) domain, motifs that are predominantly found in adaptors, scaffold proteins and signaling molecules. Downregulation of SASH1 expression correlates with the formation of distant metastasis and is considered a negative prognostic parameter for patient survival.

REFERENCES

1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro.* DNA Res. 5: 277-286.
2. Zeller, C., et al. 2003. SASH1: a candidate tumor suppressor gene on chromosome 6q24.3 is downregulated in breast cancer. Oncogene 22: 2972-2983.
3. Lindvall, J.M., et al. 2005. Differential expression and molecular characterisation of Lmo7, Myo1e, Sash1, and Mcoln2 genes in Btk-defective B-cells. Cell. Immunol. 235: 46-55.
4. Rimkus, C., et al. 2006. Prognostic significance of downregulated expression of the candidate tumour suppressor gene SASH1 in colon cancer. Br. J. Cancer 95: 1419-1423.
5. Olsen, J.V., et al. 2006. Global, *in vivo,* and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 607955. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Dubois, F., et al. 2009. Differential 14-3-3 affinity capture reveals new downstream targets of phosphatidylinositol 3-kinase signaling. Mol. Cell. Proteomics 8: 2487-2499.

CHROMOSOMAL LOCATION

Genetic locus: SASH1 (human) mapping to 6q24.3.

SOURCE

SASH1 (X1) is a mouse monoclonal antibody raised against amino acids 1066-1175 representing partial length SASH1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SASH1 (X1) is recommended for detection of SASH1 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

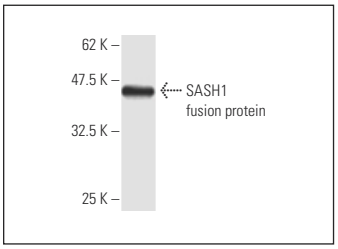
Suitable for use as control antibody for SASH1 siRNA (h): sc-95258, SASH1 shRNA Plasmid (h): sc-95258-SH and SASH1 shRNA (h) Lentiviral Particles: sc-95258-V.

Molecular Weight of SASH1: 140 kDa.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



SASH1 (X1): sc-517001. Western blot analysis of human recombinant SASH1 fusion protein.

SELECT PRODUCT CITATIONS

1. Xie, S., et al. 2021. MiR-1307 promotes hepatocarcinogenesis by CALR-OSTC-endoplasmic reticulum protein folding pathway. iScience 24: 103271.

STORAGE

Store at 4° C, **DO 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 for detailed protocols and support products.