

SH2D1A (C-18): sc-8639

BACKGROUND

SH2D1A, also SH2 domain protein 1A, SAP and CD150/SLAM (signaling lymphocyte activation molecule)-associated protein, influences signaling pathways involving SLAM molecules at the interface between T and B cells. SH2D1A modulates SLAM by blocking the recruitment of tyrosine phosphatase SHP2 to the phosphorylated cytoplasmic domain of SLAM. SLAM activation mediates expansion of activated T cells during immune responses, induces production of interferon- γ and changes the functional profile of subsets of T cells. SH2D1A is a hydrophilic, 128 amino acid protein that is 96% homologous to the mouse protein in both SH2 and tail domains. SH2D1A is present in all major subsets of T cells, including CD4⁺, CD45RO⁺, CD45RA⁺ and CD8⁺, but not in B cells. SH2D1A can interact via an SH2 domain with a motif (TIYXXV) present in the cytoplasmic tail of cell-surface receptors SLAM (CD150), CD84, CD229 (LY9) and CD244 (2B4).

REFERENCES

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3. Morra, M., et al. 2001. Characterization of SH2D1A missense mutations identified in X-linked lymphoproliferative disease patients. *J. Biol. Chem.* 276: 36809-36816.
4. Mikhalap, S.V., et al. 2004. The adaptor protein SH2D1A regulates signaling through CD150 (SLAM) in B cells. *Blood* 104: 4063-4070.
5. Hron, J.D., et al. 2004. SH2D1A regulates T-dependent humoral autoimmunity. *J. Exp. Med.* 200: 261-266.
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7. Gao, N., et al. 2006. B cell induction of IL-13 expression in NK cells: role of CD244 and SLAM-associated protein. *J. Immunol.* 176: 2758-2764.
8. Bhat, R., et al. 2006. Fine-tuning of immune responses by SLAM-related receptors. *J. Leukoc. Biol.* 79: 417-424.

CHROMOSOMAL LOCATION

Genetic locus: SH2D1A (human) mapping to Xq25.

SOURCE

SH2D1A (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SH2D1A of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8639 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SH2D1A (C-18) is recommended for detection of SH2D1A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SH2D1A (C-18) is also recommended for detection of SH2D1A in additional species, including equine and porcine.

Suitable for use as control antibody for SH2D1A siRNA (h): sc-40819, SH2D1A shRNA Plasmid (h): sc-40819-SH and SH2D1A shRNA (h) Lentiviral Particles: sc-40819-V.

Molecular Weight of SH2D1A: 16 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) 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.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **SH2D1A (A-8): sc-398118** or **SH2D1A (1D12): sc-53859**, our highly recommended monoclonal alternatives to SH2D1A (C-18).