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SH2D1A Blocking Peptide (C-term)

Synthetic peptide
Catalog # BP19972b

Specification

SH2D1A Blocking Peptide (C-term) - Product Information

Primary Accession	O60880
Other Accession	NP_002342.1

SH2D1A Blocking Peptide (C-term) - Additional Information

Gene ID 4068

Other Names
SH2 domain-containing protein 1A, Duncan disease SH2-protein, Signaling lymphocytic activation molecule-associated protein, SLAM-associated protein, T-cell signal transduction molecule SAP, SH2D1A, DSHP, SAP

Target/Specificity
The synthetic peptide sequence is selected from aa 100-114 of HUMAN SH2D1A

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SH2D1A Blocking Peptide (C-term) - Protein Information

Name SH2D1A

Synonyms DSHP, SAP

SH2D1A Blocking Peptide (C-term) - Background

This gene encodes a protein that plays a major role in the bidirectional stimulation of T and B cells. This protein contains an SH2 domain and a short tail. It associates with the signaling lymphocyte-activation molecule, thereby acting as an inhibitor of this transmembrane protein by blocking the recruitment of the SH2-domain-containing signal-transduction molecule SHP-2 to its docking site. This protein can also bind to other related surface molecules that are expressed on activated T, B and NK cells, thereby modifying signal transduction pathways in these cells. Mutations in this gene cause lymphoproliferative syndrome X-linked type 1 or Duncan disease, a rare immunodeficiency characterized by extreme susceptibility to infection with Epstein-Barr virus, with symptoms including severe mononucleosis and malignant lymphoma. Multiple transcript variants encoding different isoforms have been found for this gene.

SH2D1A Blocking Peptide (C-term) - References

Ameratunga, R., et al. N. Z. Med. J. 122(1304):46-53(2009)
Snow, A.L., et al. J. Clin. Invest. 119(10):2976-2989(2009)
Nagy, N., et al. Proc. Natl. Acad. Sci. U.S.A. 106(29):11966-11971(2009)
Ostrakhovitch, E.A., et al. Cell. Signal. 21(4):540-550(2009)
Schwartzberg, P.L., et al. Nat. Rev. Immunol. 9(1):39-46(2009)

Function
Cytoplasmic adapter regulating receptors of the signaling lymphocytic activation molecule (SLAM) family such as SLAMF1, CD244, LY9, CD84, SLAMF6 and SLAMF7. In SLAM signaling seems to cooperate with SH2D1B/EAT-2. Initially it has been proposed that association with SLAMF1 prevents SLAMF1 binding to inhibitory effectors including INPP5D/SHIP1 and PTPN11/SHP-2 (PubMed:11806999). However, by simultaneous interactions, recruits FYN which subsequently phosphorylates and activates SLAMF1 (PubMed:12458214). Positively regulates CD244/2B4- and CD84-mediated natural killer (NK) cell functions. Can also promote CD48-, SLAMF6-, LY9-, and SLAMF7-mediated NK cell activation. In the context of NK cell-mediated cytotoxicity enhances conjugate formation with target cells (By similarity). May also regulate the activity of the neurotrophin receptors NTRK1, NTRK2 and NTRK3.

Cellular Location
Cytoplasm.

Tissue Location
Expressed at a high level in thymus and lung, with a lower level of expression in spleen and liver. Expressed in peripheral blood leukocytes, including T-lymphocytes. Tends to be expressed at lower levels in peripheral blood leukocytes in patients with rheumatoid arthritis.

SH2D1A Blocking Peptide (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides