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SH2D1A Rabbit pAb

Catalog # AP97606

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O60880
Other Accession	O60880
Predicted	Rat, Pig, Human, Mouse, Rabbit, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	14187
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SH2D1A/SAP
Epitope Specificity	1-100/128
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 SH2 domain.
SUBUNIT	Interacts with NTRK1, NTRK2 and NTRK3 (By similarity). Interacts with CD84, CD244, LY9, SLAMF1 and FYN.
DISEASE	Defects in SH2D1A are a cause of lymphoproliferative syndrome X-linked type 1 (XLP1) [MIM:308240]; also known as X-linked lymphoproliferative disease (XLPD) or Duncan disease. XLP is a rare immunodeficiency characterized by extreme susceptibility to infection with Epstein-Barr virus (EBV). Symptoms include severe or fatal mononucleosis, acquired hypogammaglobulinemia, pancytopenia and malignant lymphoma.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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-?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).

Additional Information

Gene ID	4068
Other Names	DSHP; EBVS; IMD5; LYP; MTCP1; SAP; SAP/SH2D1A; XLP; XLPD; XLPD1; Gm686;

	RGD1562408; SH21A_HUMAN; SH2D1A; Duncan disease SH2-protein; Signaling lymphocytic activation molecule-associated protein (SLAM-associated protein); T-cell signal transduction molecule SAP; SH21A_MOUSE; SH21A_RAT; SH2 domain containing 1A; lymphoproliferative syndrome; SH2 domain protein 1A; Duncan's disease
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SH2D1A
Synonyms	DSHP, SAP
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.

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