10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-SLAMF1(Y281) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3541a

Product Information

Application	DB, E
Primary Accession	Q13291
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15251
Calculated MW	37231

Additional Information

Gene ID	6504
Other Names	Signaling lymphocytic activation molecule, CDw150, IPO-3, CD150, SLAMF1, SLAM
Target/Specificity	This SLAMF1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y281 of human SLAMF1.
Dilution	DB~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-SLAMF1(Y281) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLAMF1
Synonyms	SLAM
Function	Self-ligand receptor of the signaling lymphocytic activation molecule (SLAM) family. SLAM receptors triggered by homo- or heterotypic cell-cell interactions are modulating the activation and differentiation of a wide variety of immune

cells and thus are involved in the regulation and interconnection of both innate and adaptive immune response. Activities are controlled by presence or absence of small cytoplasmic adapter proteins, SH2D1A/SAP and/or SH2D1B/EAT-2. SLAMF1-induced signal-transduction events in T-lymphocytes are different from those in B-cells. Two modes of SLAMF1 signaling seem to exist: one depending on SH2D1A (and perhaps SH2D1B) and another in which protein-tyrosine phosphatase 2C (PTPN11)-dependent signal transduction operates. Initially it has been proposed that association with SH2D1A prevents binding to inhibitory effectors including INPP5D/SHIP1 and PTPN11/SHP-2 (PubMed:11806999). However, signaling is also regulated by SH2D1A which can simultaneously interact with and recruit FYN which subsequently phosphorylates and activates SLAMF1 (PubMed:12458214). Mediates IL-2-independent proliferation of activated T-cells during immune responses and induces IFN-gamma production (By similarity). Downstreaming signaling involves INPP5D, DOK1 and DOK2 leading to inhibited IFN-gamma production in T-cells, and PRKCQ, BCL10 and NFKB1 leading to increased T-cell activation and Th2 cytokine production (By similarity). Promotes T-cell receptor-induced IL-4 secretion by CD4(+) cells (By similarity). Inhibits antigen receptor- mediated production of IFN-gamma, but not IL-2, in CD4(-)/CD8(-) T-cells (By similarity). Required for IL-4 production by germinal centers T follicular helper (T(Fh))cells (By similarity). May inhibit CD40- induced signal transduction in monocyte-derived dendritic cells (PubMed:16317102). May play a role in allergic responses and may regulate allergen-induced Th2 cytokine and Th1 cytokine secretion (By similarity). In conjunction with SLAMF6 controls the transition between positive selection and the subsequent expansion and differentiation of the thymocytic natural killer T (NKT) cell lineage. Involved in the peripheral differentiation of indifferent natural killer T (iNKT) cells toward a regulatory NKT2 type (By similarity). In macrophages involved in down-regulation of IL-12, TNF and nitric oxide in response to lipopolysaccharide (LPS) (By similarity). In B-cells activates the ERK signaling pathway independently of SH2D1A but implicating both, SYK and INPP5D, and activates Akt signaling dependent on SYK and SH2D1A (By similarity). In B-cells also activates p38 MAPK and JNK1 and JNK2 (PubMed:20231852). In conjunction with CD84/SLAMF5 and SLAMF6 may be a negative regulator of the humoral immune response (By similarity). Involved in innate immune response against Gram-negative bacteria in macrophages; probably recognizes OmpC and/or OmpF on the bacterial surface, regulates phagosome maturation and recruitment of the PI3K complex II (PI3KC3-C2) leading to accumulation of PdtIns(3)P and NOX2 activity in the phagosomes (PubMed:20818396).

Cellular Location

Cell membrane; Single-pass type I membrane protein. Note=Present on the surface of B- cells and T-cells. Located at the plasma membrane contacts between neighboring T-cells (PubMed:11806999). [Isoform 4]: Cell membrane. Note=Overexpressed isoform 4 is detected on the cell surface. In glioma cell lines endogenous isoform 4 is detected predominantly in the cytoplasm and colocalized with endoplasmic reticulum and Golgi markers.

Tissue Location

Constitutively expressed on peripheral blood memory T-cells, T-cell clones, immature thymocytes and a proportion of B- cells, and is rapidly induced on naive T-cells after activation (PubMed:7617038). Activated B-cells express isoform 1, isoform 3 and a cytoplasmic isoform (PubMed:9091591). Isoform 4 is expressed in B- cells, primary T-cells, dendritic cells and macrophages. Isoform 4 is expressed in tumors of the central nervous system (PubMed:25710480)

Background

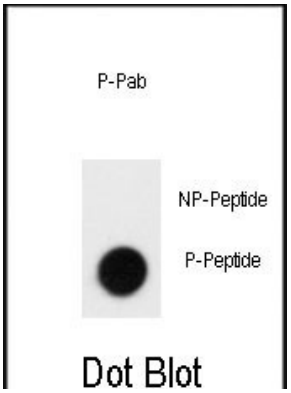
SLAMF1 is a high-affinity self-ligand important in bidirectional T-cell to B-cell stimulation. SLAM-induced

signal-transduction events in T-lymphocytes are different from those in B-cells. Two modes of SLAM signaling are likely to exist: one in which the inhibitor SH2D1A acts as a negative regulator and another in which protein-tyrosine phosphatase 2C (PTPN11)-dependent signal transduction operates.

References

Mehrle,S., Mol. Immunol. 45 (3), 796-804 (2008)
Howie,D., Blood 99 (3), 957-965 (2002)

Images



Dot blot analysis of anti-Phospho-SLAMF1-pY281 Antibody (Cat.#AP3541a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.