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Phospho-SLAMF1(Y307) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3673a

Specification

Phospho-SLAMF1(Y307) Antibody Blocking peptide - Product Information

Primary Accession Q13291

Phospho-SLAMF1(Y307) Antibody Blocking peptide - Additional Information

Gene ID 6504

Other Names
Signaling lymphocytic activation molecule, CDw150, IPO-3, CD150, SLAMF1, SLAM

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3673a was selected from the region of human Phospho-SLAMF1-pY307. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

Phospho-SLAMF1(Y307) Antibody Blocking peptide - 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:<a

href="http://www.uniprot.org/citations/11806999" target="_blank">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-alpha 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 endogenuous isoform 4 is detetced 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)

Phospho-SLAMF1(Y307) Antibody Blocking peptide - Protocols

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

- Blocking Peptides

Phospho-SLAMF1(Y307) Antibody Blocking peptide - Images

Phospho-SLAMF1(Y307) Antibody Blocking peptide - Background

SLAMF1 is 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.

Phospho-SLAMF1(Y307) Antibody Blocking peptide - References

Davila,S., et.al., Genes Immun. (2010) In pressFerreira,C.S., et.al., J. Virol. 84 (6), 3033-3042 (2010)