abcam

ab183269

Anti-SLAM / CD150 antibody [IPO-3] - BSA and Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.6
Form	Liquid
Clonality	Monoclonal
Carrier free	Yes
Clone number	IPO-3
Purification technique	Affinity purification Protein A
Specificity	This antibody is specific for SLAM.
Epitope	The exact epitope recognised by this antibody has not been mapped.
Light chain type	unknown
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ELISA

Expected

Species	Human

Dilution info	1/750
Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	1/750
Notes	-

Target data

See full target information SLAMF1

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). (Microbial infection) Acts as a receptor for Measles virus; also including isoform 4.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

A novel glycoprotein of 70kDa, designated SLAM (Signaling Lymphocyte Activation Molecule) / CDw150, that belongs to the immunoglobulin gene superfamily and is involved in T-cell stimulation. SLAM is 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. Activated B cells express the membrane-bound form of SLAM and the soluble and cytoplasmic isoforms of SLAM, and that the expression levels of membrane-bound SLAM on B cells are rapidly regulated after activation in vitro. It is suggested that signaling through homophilic SLAM-SLAM binding during B-B and B-T cell interactions enhances the expansion and differentiation of activated B cells.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	SLAM also known as CD150 is a cell surface glycoprotein with a molecular weight of approximately 70 kDa. It is mainly expressed on immune cells such as T cells B cells dendritic cells and macrophages. SLAM/CD150 serves as a receptor that plays an important role in cellular communication by transmitting signals across the cell

	membrane. These signals influence various immune responses and cellular functions.
Biological function summary	SLAM/CD150 acts as a co-stimulatory molecule that augments the activation and proliferation of T and B cells. It participates in forming signaling complexes through interactions with SLAM-associated protein (SAP). As part of these complexes SLAM/CD150 regulates cytokine production and modulates immune cell interactions and responses. Furthermore SLAM/CD150 engagement impacts the stability and formation of immunological synapses.
Pathways	SLAM/CD150 plays a significant role in the immune signaling cascade. It is involved in the SLAM receptor signaling pathway and interacts closely with proteins like SAP and SH2D1A. These interactions enable signal transduction that modulates downstream effects in T and B cell activation within the immune system. SLAM/CD150's activity affects lymphocyte development and adaptive immune responses.
Associated diseases and disorders	SLAM/CD150 is connected to autoimmune disorders and infectious diseases. Its altered signaling contributes to disorders such as X-linked lymphoproliferative disease where interactions with the SAP protein are disrupted. Additionally SLAM/CD150 serves as a receptor for certain viruses including measles virus implicating it in viral pathogenesis and immune evasion mechanisms. Understanding these associations helps elucidate potential therapeutic targets for managing these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

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