Human LILRB3/CD85a/ILT5 Antibody

Monoclonal Mouse IgG_1 Clone # 1057017

Catalog Number: MAB18061

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LILRB3/CD85a/ILT5 in direct ELISA.
Source	Monoclonal Mouse IgG_1 Clone # 1057017
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell, HEK293-derived human LILRB3/CD85a/ILT5 Gly24-Glu443 Accession # O75022
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

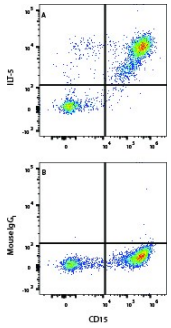
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10^6 cells	Human neutrophils with CD15 costain and PBMCs with CD14 costain

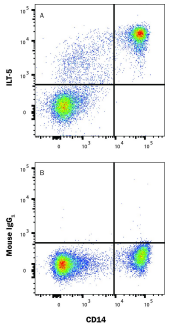
DATA

Flow Cytometry



Detection of LILRB3/CD85a/ILT5 in human neutrophils with CD15 costain cells by Flow Cytometry. Human neutrophils with CD15 costain cells were stained with Mouse Anti-Human/Mouse SSEA-1 PE-conjugated Monoclonal Antibody (Catalog # FAB2155P) and either (A) Mouse Anti-Human LILRB3/CD85a/ILT5 Monoclonal Antibody (Catalog # MAB18061) or (B) Mouse IgG_1 Isotype Control (Catalog # MAB002) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). View our protocol for Staining Membrane-associated Proteins.

Flow Cytometry



Detection of LILRB3/CD85a/ILT5 in PBMC with CD14 costain cells by Flow Cytometry. PBMC with CD14 costain were stained with either (A) Mouse Anti-Human LILRB3/CD85a/ILT5 Monoclonal Antibody (Catalog # MAB18061) or (B) Mouse IgG_1 Isotype Control (Catalog # MAB002). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Leukocyte immunoglobulin-like receptor subfamily B (LILRB3), also known as ILT5, LIR3, and CD85a, is an immunoglobulin superfamily member that is involved in immune regulation. Subfamily B members have cytoplasmic immunoreceptor tyrosine-based inhibitory motifs (ITIMs) that inhibit signaling events via phosphatase SHP-1. Subfamily A members are activating receptors that lack ITIMs and signal through association with FcRγ (1, 2). Mature LILRB3 is a highly polymorphic 85-95 kDa glycoprotein that consists of a 420 amino acid (aa) extracellular domain (ECD) with four Ig-like domains, a 21 aa transmembrane segment, and a 167 aa cytoplasmic domain with three ITIMs (3). Alternative splicing generates an isoform with a 17 aa insertion in the juxtamembrane ECD. In mouse and rat, the LILRB3 gene encodes the PIR-B protein which has six Ig-like domains. Rodent PIR-B and human LILRB3 share 55% aa sequence identity within common regions of their ECDs. LILRB3 is expressed on the surface of peripheral monocytes, neutrophils, eosinophils, basophils, and mast cell progenitors (4-6). Triggering of LILRB3 inhibits the activation of macrophages, mast cells, neutrophils, basophils, and B cells (5, 7). On osteoclast precursors, LILRB3 ligation inhibits RANK L/TRANCE or M-CSF induced differentiation (8). LILRB3 can also bind to ligands exposed on necrotic tumor cells (9). Both PIR-B and LILRB3 are receptors for S. aureus, and activation of these receptors by bacteria influences the innate immune response triggered by TLRs (3). R&D Systems in-house testing indicates that LILRB3 binds to Angiopoietin-like 7, consistent with the demonstrated functional interactions between other members of these protein families (10). In the mouse CNS, PIR-B functions as a receptor for the myelin proteins Nogo, MAG, and OMgp and mediates their inhibitory action on neurite outgrowth and axon regeneration (11). Upon binding to MAG, PIR-B associates with TrkB and NGF R/p75 in cerebellar granule neurons (12).

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