Human LILRB3/CD85a/ILT5 Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 1057017

Catalog Number: FAB18061R

100 µg

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
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was PBMCs with CD14 costain.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

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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