Human KIR3DL1 PE-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # DX9

Catalog Number: FAB1225P

100 TESTS, 25 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human KIR3DL1. Did not cross-react with other KIR family members when tested against a series of KIR-expressing BaF/3 tansfectants (KIR2DL1, KIR2DL2, KIR2DL3, KIR2DL4, KIR2DS1, KIR2DS2, KIR2DS3, KIR2DS4, and KIR3DL2; Bakker, A.B.H. *et al.* (1998) J. Immunol. **160**:5239).
Source	Monoclonal Mouse IgG_1 Clone # DX9
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human KIR3DL1-expressing NK cell clone
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

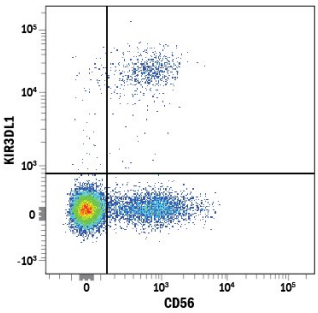
APPLICATIONS

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.*

	Recommended Concentration	Sample
Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of KIR3DL1 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) were stained with Mouse Anti-Human KIR3DL1 PE-conjugated Monoclonal Antibody (Catalog # FAB1225P) and Mouse Anti-Human NCAM-1/CD56 APC-conjugated Monoclonal Antibody (Catalog # FAB2408A). Quadrant markers were set based on control antibody staining (Catalog # IC002P). View our protocol for Staining Membrane-associated Proteins.

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.

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BACKGROUND

KIR3DL1 (3DL1, previously called NKB1 or NKAT3, designated CD158e) is a 70 kDa type I transmembrane glycoprotein that belongs to the killer cell Ig-like receptor (KIR) family. KIRs are expressed on $CD56^{dim}$ NK cells and T cell subsets where they regulate effector functions in the innate immune system (1–3). KIRs are named for the number of Ig-like domains (2D or 3D) in the extracellular domain (ECD), and whether they have long or short (L, S) cytoplasmic tails. Like other inhibiting KIRs, KIR3DL1 has two ITIM domains within its long tail (2). The 319 amino acid (aa) ECD of KIR3DL1 shows 97% aa identity with an activating KIR, KIR3DS1, and the two segregate as alleles (3, 4). KIR3DL1 binds to HLA antigens. This includes HLA-A and -B molecules. Among the HLA-B variants, only the Bw4 epitope, which is present within only one third of all HLA-B alleles, is recognized by KIR3DL1 (4). An NK cell expressing KIR3DL1 is prevented from killing a cell expressing the Bw4 epitope on its surface. However, if the epitope is downregulated on the cell surface due to viral infection, the NK cell is released from inhibition and now kills the infected cell. KIR genes are highly polymorphic, and specific KIR3DL1 alleles vary in surface expression and activity. For example, the allele KIR3DL1*004 is associated with slow progression to AIDS in HIV infected individuals that also express Bw4 (6). Unlike most alleles that are surface-expressed, this allele is mainly retained within the cell (7). KIR3DL1/S1 is the only KIR receptor to have an ortholog in non-primates, including selected mouse strains in which it is also called KIRL1 (KIR-like 1). Although the ECD of human KIR3DL1 shares 40–48% aa identity with mouse, rat and bovine KIR3DL1, the transmembrane and cytoplasmic regions in the non-primate species show no obvious activating or inhibiting motifs (8, 9).

References:

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