Human KIR2DL4/CD158d Alexa Fluor® 750-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 181703

Catalog Number: FAB2238S

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Stains human KIR2DL4/CD158d transfected BaF/3 cells. It does not recognize transfectants that express KIR2DL1, 2DL2, 2DL3, 2DL5, 2DS1, 2DS2, 2DS4, 3DL1, 3DL2, or 3DS1.
Source	Monoclonal Mouse IgG_{2A} Clone # 181703
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	BaF3 mouse pro-B cell line transfected with human KIR2DL4/CD158d Accession # Q99706
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL 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	0.25-1 µg/10^6 cells	NK92 human natural killer lymphoma cell line

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

KIR2DL4 (also known as 2DL4, p49, CD158d, KIR103) is a type I transmembrane protein of the killer cell Ig-like receptor (KIR) family expressed on NK and subsets of γδT and memory/effector αβT cells. KIR2DL4 is a unique KIR (1-3); alleles are not clonally restricted but are expressed codominantly (4) in all activated NK cells and constitutively on $CD56^{hi}$ NK cells. KIR members with two Ig-like domains (2D) usually express domains D1 and D2, but KIR2DL4 expresses D0 and D2. Other long-tailed (L) KIR have two cytoplasmic inhibitory signaling domains (ITIM), but KIR2DL4 has one ITIM and also exhibits characteristics of activating KIR (2). An arginine within the transmembrane sequence of KIR2DL4 interacts with the signaling molecule FcεRI-γ, while in activating KIR, a transmembrane lysine interacts with DAP12 (1, 5). The KIR2DL4 gene is highly polymorphic. Seven splice variants missing one or more exons have been identified, but it is not clear whether these are expressed. Several of the nine alleles identified encode a frameshift creating a prematurely truncated protein. It is estimated that up to 25% of humans do not express KIR2DL4 capable of reaching the cell surface (1, 7, 10). Human KIR2DL4 is 65-83% amino acid identical to other primates. KIR receptors have no structural orthologs in non-primates, although mouse Ly49 proteins are functional orthologs. Cross-linking of KIR2DL4 induces NK cells to produce IFN-γ (6, 7); stimulation with IL-2 upregulates cell surface expression on $CD56^{dim}$ cells and allows cytotoxicity (7). Although a role in immune privilege of the fetus has been suggested due to reported recognition of fetal trophoblast HLA-G by KIR2DL4 in the maternal decidua (11), subsequent data have not supported this recognition (1, 9).

References:

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PRODUCT SPECIFIC NOTICES

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