EXBIO Antibodies

PRODUCT DATA SHEET

1A-609-T100

Monoclonal Antibody to CD158d / KIR2DL4 Allophycocyanin (APC) conjugated (100 tests)

Clone: mAb#33

Isotype: Mouse IgG1

Specificity: The mouse monoclonal antibody mAb#33 (also known as mAb 33 or 33) recognizes extracellular portion of CD158d / KIR2DL4, a 45 kDa NK cell marker. Cell surface expression and function of CD158d / KIR2DL4 depends on genotype of particular individuals.

Regulatory Status: RUO

Immunogen: NK3.3 cells and KIR2DL4-Ig fusion protein

Species Reactivity: Human

Preparation: The purified antibody is conjugated with cross-linked Allophycocyanin (APC) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.

Storage Buffer: The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.

Storage / Stability: Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.

Usage: The reagent is designed for Flow Cytometry analysis of human blood cells using 10 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension.
The content of a vial (1 ml) is sufficient for 100 tests.

Expiration: See vial label

Lot Number: See vial label

Background: CD158d / KIR2DL4 is a KIR family member that shares structural features with both activating and inhibitory receptors and may mediate different functions under different circumstances. It contains cytoplasmic ITIM, suggesting inhibitory function, but also transmembrane domain similar to those of activating KIRs. It has been reported that CD158d serves as an inhibitory receptor for peripheral and uterine NK cells, but its ligation with soluble mAbs (unlike immobilized mAbs) results in activation of IFN-γ secretion. CD158d also binds both membrane form and soluble form of its ligand HLA-G.

References:

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*Goodridge JP, Witt CS, Christiansen FT, Warren HS: KIR2DL4 (CD158d) genotype influences expression and function in NK cells. J Immunol. 2003 Aug 15;171(4):1768-74.
*Rajagopalan S, Bryceson YT, Kuppusamy SP, Geraghty DE, van der Meer A, Joosten I, Long EO. Activation of NK cells by an endocytosed receptor for soluble HLA-G. PLoS Biol. 2006 Jan;4(1):e9.
*Yan WH, Fan LA: Residues Met76 and Gln79 in HLA-G alpha1 domain involve in KIR2DL4 recognition. Cell Res. 2005 Mar;15(3):176-82.
*LeMaoult J, Zafaranloo K, Le Danff C, Carosella ED: HLA-G up-regulates ILT2, ILT3, ILT4, and KIR2DL4 in antigen presenting cells, NK cells, and T cells. FASEB J. 2005 Apr;19(6):662-4.

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