Human MICB APC-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 236511

Catalog Number: FAB1599A

100 TESTS, 25 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MICB in direct ELISAs and Western blots. Does not cross-react with recombinant human MICA.
Source	Monoclonal Mouse IgG_{2B} Clone # 236511
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MICB Ala23-Gly298 Accession # CAI18747
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 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.

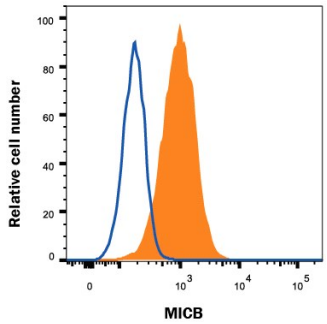
APPLICATIONS

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 MICB in K562 Human Cell Line by Flow Cytometry. K562 human chronic myelogenous leukemia cell line was stained with Mouse Anti-Human MICB APC-conjugated Monoclonal Antibody (Catalog # FAB1599A, filled histogram) or isotype control antibody (Catalog # IC0041A, open histogram). 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.

BACKGROUND

MICB (MHC class I chain-related gene B) is a transmembrane glycoprotein that functions as a ligand for NKG2D. A closely related protein, MICA, shares 85% amino acid identity with MICB. These 2 proteins are distantly related to the MHC class I proteins. MICA and MICB (MICA/B) possess three extracellular immunoglobulin-like domains, but have no capacity to bind peptide or interact with β2-microglobulin. The genes encoding MICA/B are found within the major histocompatibility complex on human chromosome 6. The MICB locus is polymorphic with more than 15 recognized human alleles. MICA/B are minimally expressed on normal cells, but are frequently expressed on epithelial tumors and can be induced by bacterial and viral infections. MICA/B are ligands for NKG2D, an activating receptor expressed on NK cells, NKT cells, γδ T cells, and $CD8^+$ αβ T cells. Recognition of MICA/B by NKG2D results in the activation of cytolytic activity and/or cytokine production by these effector cells. MICA/B recognition is involved in tumor surveillance, viral infections, and autoimmune diseases. The release of soluble forms of MICA/B from tumors down-regulates NKG2D surface expression on effector cells resulting in the impairment of anti-tumor immune response (1-7).

References:

1. Groh, V. *et al.* (2001) Nature Immunol. **2**:255.
2. Stephens, H. (2001) Trends Immunol. **22**:378.
3. Bauer, S. *et al.* (1999) Science **285**:727.
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5. Steinle, A. *et al.* (2001) Immunogenetics **53**:279.
6. Pende, D. *et al.* (2002) Cancer Res. **62**:6178.
7. Salih, H. *et al.* (2003) Blood **102**:1389.

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