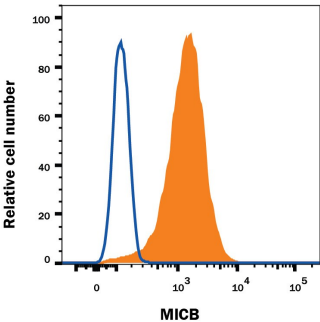
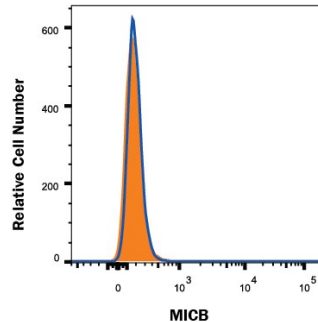


DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human MICB in direct ELISAs and Western blots. Does not cross-react with recombinant human MICA.
Source	Monoclonal Mouse IgG _{2B} Clone # 236511
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MICB Ala23-Gly298 Accession # CAI18747
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS		
<i>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.</i>		
	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human MICB Fc Chimera, aa 23-298 (Catalog # 1599-MB)
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
Human MICB Sandwich Immunoassay		Reagent
ELISA Capture	2-8 µg/mL	Human MICB Antibody (Catalog # MAB1599)
ELISA Detection	0.1-0.4 µg/mL	Human MICB Biotinylated Antibody (Catalog # BAF1599)
Standard		Recombinant Human MICB Fc Chimera (Catalog # 1599-MB)
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Knockout Validated	MICB is specifically detected in K562 myelogenous leukemia parental cell line but is not detectable in MICB knockout K562 cell line.	

DATA	
<p>Flow Cytometry</p>  <p>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 Monoclonal Antibody (Catalog # MAB1599, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).</p>	<p>Knockout Validated</p>  <p>MICB Specificity is Shown by Flow Cytometry in Knockout Cell Line. MICB knockout K562 human myelogenous leukemia cell line was stained with Mouse Anti-Human MICB Monoclonal Antibody (Catalog # MAB1599, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram) followed by anti-Mouse IgG PE-conjugated secondary antibody (Catalog # F0102B). No staining in the MICB knockout K562 cell line was observed. View our protocol for Staining Membrane-associated Proteins.</p>

PREPARATION AND STORAGE	
Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 β 2-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, $\gamma\delta$ T cells, and CD8⁺ $\alpha\beta$ 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:

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