ARG42355
anti-MICA + MICB antibody [6D4] (Biotin)

Package: 50 µg
Store at: 4°C

Summary

Product Description	Biotin-conjugated Mouse Monoclonal antibody [6D4] recognizes MICA + MICB
Tested Reactivity	Hu
Tested Application	FACS, ICC/IF, IP
Specificity	The mouse monoclonal antibody 6D4 recognizes a common extracellular epitope on MICA and MICB glycoproteins, transmembrane ligands of NKG2D, and is able to block NKG2D-mediated activation of NK cells and cytotoxic T cells.
Host	Mouse
Clonality	Monoclonal
Clone	6D4
Isotype	IgG2a
Target Name	MICA + MICB
Species	Human
Immunogen	Transfected C1R cells expressing MICA.
Conjugation	Biotin
Alternate Names	MICA: MHC class I polypeptide-related sequence A; PERB11.1; MIC-A MICB: PERB11.2

Application Instructions

Application table

Application	Dilution
FACS	1 - 12 µg/ml
ICC/IF	Assay-dependent
IP	Assay-dependent

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Purified
Buffer	PBS and 15 mM Sodium azide.
Preservative	15 mM Sodium azide
Concentration	1 mg/ml
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be

	gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	MICA; MICB
Gene Full Name	MHC class I polypeptide-related sequence A MHC class I polypeptide-related sequence B
Background	MICA: This gene encodes the highly polymorphic major histocompatability complex class I chain-related protein A. The protein product is expressed on the cell surface, although unlike canonical class I molecules it does not seem to associate with beta-2-microglobulin. It is a ligand for the NKG2-D type II integral membrane protein receptor. The protein functions as a stress-induced antigen that is broadly recognized by intestinal epithelial gamma delta T cells. Variations in this gene have been associated with susceptibility to psoriasis 1 and psoriatic arthritis, and the shedding of MICA-related antibodies and ligands is involved in the progression from monoclonal gammopathy of undetermined significance to multiple myeloma. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Jan 2014] MICB: This gene encodes a heavily glycosylated protein which is a ligand for the NKG2D type II receptor. Binding of the ligand activates the cytolytic response of natural killer (NK) cells, CD8 alphabeta T cells, and gammadelta T cells which express the receptor. This protein is stress-induced and is similar to MHC class I molecules; however, it does not associate with beta-2-microglobulin or bind peptides. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2014]
Function	MICA: Seems to have no role in antigen presentation. Acts as a stress-induced self-antigen that is recognized by gamma delta T-cells. Ligand for the KLRK1/NKG2D receptor. Binding to KLRK1 leads to cell lysis. [UniProt] MICB: Seems to have no role in antigen presentation. Acts as a stress-induced self-antigen that is recognized by gamma delta T cells. Ligand for the KLRK1/NKG2D receptor. Binding to KLRK1 leads to cell lysis. [UniProt]
Calculated Mw	43 kDa
PTM	MICA: N-glycosylated. Glycosylation is not essential for interaction with KLRK1/NKG2D but enhances complex formation. Proteolytically cleaved and released from the cell surface of tumor cells which impairs KLRK1/NKG2D expression and T-cell activation. [UniProt] MICB: Proteolytically cleaved and released from the cell surface of tumor cells. [UniProt]
Cellular Localization	MICA: Cell membrane. Cytoplasm. Note=Expressed on the cell surface in gastric epithelium, endothelial cells and fibroblasts and in the cytoplasm in keratinocytes and monocytes. Infection with human adenovirus 5 suppresses cell surface expression due to the adenoviral E3-19K protein which causes retention in the endoplasmic reticulum. [UniProt] MICB: Cell membrane. Note=Binding to human cytomegalovirus glycoprotein UL16 causes sequestration in the endoplasmic reticulum. [UniProt]