Anti-Human MICA/MICB-174Yb

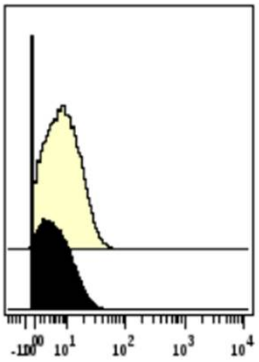
Catalog: 3174016B
Package Size: 100 tests
Storage: Store product at 4°C. Do not freeze.
Reactivity: Human

Clone: 6D4
Isotype: IgG2a
Formulation: Antibody stabilizer with 0.05% Sodium Azide

Technical Information

Validation: Each lot of conjugated antibody is quality control tested by CyTOF® analysis of stained cells using the appropriate positive and negative cell staining and/or activation controls.

Recommended Usage: The suggested use is 1 µl for up to 3 X 10^6 live cells in 100 µl. It is recommended that the antibody be titrated for optimal performance for each of the desired applications.



Human HeLa cells (top) and human HT29 cells (bottom) stained with 174Yb-anti-MIC A/B (6D4).

Description

The 6D4 monoclonal antibody reacts with the human major histocompatibility complex (MHC) class I chain-related (MIC) MICA and MICB proteins, also known as PERB11.1 and PERB11.2. MICA and MICB are 65-75 kD highly-polymorphic, stress-inducible glycoproteins. MICA and MICB possess 83% amino acid similarity, and show homology with classical human leukocyte antigen (HLA) molecules. The structure of MICA and MICB are similar to classical HLA class I chains, however they do not bind β2 microglobulin or bind peptide typical of HLA class I. MICA and MICB act as a ligand for NKGD2 expressed on the surface of NK cells, γδ T cells and αβ CD8+ T cells. Furthermore, they are expressed on endothelial cells, fibroblasts, gastric epithelium and PHA-stimulated T cells. Reports have shown that human cytomegalovirus (HCMV) subverts NK cell detection by inhibiting the function of MICB. Furthermore, MICA and MICB expression has been detected in epithelial tumors from the breast, lung, ovary, prostate, colon and kidney.

References

Bandura, D. R., et al. Mass Cytometry: Technique for Real Time Single Cell Multitarget Immunoassay Based on Inductively Coupled Plasma Time-of-Flight Mass Spectrometry. *Analytical Chemistry* 81:6813-6822, 2009.

Ornatsky, O. I., et al. **Highly Multiparametric Analysis by Mass Cytometry.** J Immunol Methods 361 (1-2):1-20, 2010.

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