SONY

Product Data Sheet

Biotin anti-human MICA/MICB

Catalog # / Size: 2204520 / 100 µg

Clone: 6D4

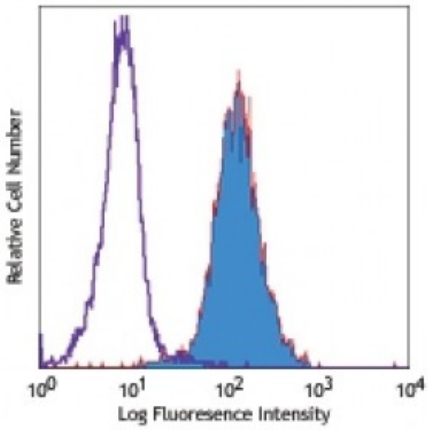
Isotype: Mouse IgG2a, κ

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5



Human Hela cell line stained with biotinylated 6D4, followed by Sav-PE

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤1.0 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Additional reported (for the relevant formats) applications include: immunohistochemistry[2,3,5] of acetone-fixed frozen sections and formalin-fixed paraffin-embedded tissue sections, immunoprecipitation[7], and blocking[2,3] of MIC mediated cytotoxicity. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 320910).

Application References:

1. Groh V, *et al.* 1999. *Science* 279:1737.
2. Groh V, *et al.* 1999. *Proc. Natl. Acad. Sci. USA.* 96:6879.
3. Groh V, *et al.* 2001. *Nature Immunol.* 2:255.
4. Li Z, *et al.* 2000. *Immunogenetics* 51:246.
5. Park EJ, *et al.* 2003. *J. Immunol.* 171:4131.
6. Jinushi M, *et al.* 2003. *J. Immunol.* 171:5423.
7. Wu J, *et al.* 2003. *J. Immunol.* 170:4196.
8. Takahara M, *et al.* 2008. *J. Leukoc. Biol.* 83:742. PubMed
9. Tiwa ET, *et al.* 2012. *J. Virol. 89:4102. PubMed.*

Description: 6D4 antibody reacts with a common epitope of the human nonclassical MHC class I chain-related protein A (MICA) and B (MICB), also known as PERB11.1 and PERB11.2. The MIC gene is located in MHC class I region. MICA/B are 65-75 kD stress-inducible glycoproteins with highly polymorphic. They are MHC class I-like transmembrane molecules that do not associate β2-microglobulin and do not present peptides. MICA and MICB share 85% identify, and are mainly expressed on Intestinal epithelial cells, epithelial tumor cells, endothelial cells, fibroblasts, and IFN-α-stimulated dendritic cells. MIC molecules bind NKG2D, an activating receptor, and induce activation of NK cells, and subset of $CD8^+$ α/β T cells and γ/δ

T cells, as well as suppression of T cell proliferation. MICA/B recognition is involved in the regulation of tumor surveillance, viral infection and autoimmune diseases. The 6D4 antibody is able to block MIC mediated cytotoxicity.

Antigen References:

1. Groh V, *et al.* 1996. *Proc. Natl. Acad. Sci. USA.* 93:12445.
2. Groh V, *et al.* 1999. *Proc. Natl. Acad. Sci. USA.* 96:6879.
3. Jinushi M, *et al.* 2003. *J. Immunol.* 170:1249.
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