Certificate of Analysis and Data Sheet

Mouse Anti-Human MICA/MICB
With HRP-conjugated Secondary Antibody

Catalog No.	Target Species	Isotype
DS-MB-03389	Human	IgG2a

Preparation

Purification: Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Immunogen: MICA transfected C1R cells
Fusion Partners: Spleen cells from immunised RBF/DnJ mice were fused with cells of the P3 mouse myeloma cell line.

Specificity

DS-MB-03389 is specific for nonclassical MHC class I chain A (MICA) and nonclassical MHC class I chain MICB (MICB).
MICA and MICB are stress inducible antigens, which are closely related and appear functionally indistinguishable. MICA and MICB are ligands for NKG2D, an activating receptor on most natural killer (NK) cells, CD8 T cells and gamma delta T cells.
MICA is principally expressed on intestinal epithelium, and several epithelial tumours. Expression may be induced to high surface levels by heat shock, oxidative stress, and virus infection.
DS-MB-03389 is reported to inhibit the cytotoxicity of NK cells stimulated by IFN alpha-treated dendritic cells (6).

Formulation

Product Type: Monoclonal Antibody
Product Form: Purified IgG - liquid
Buffer Solution: Phosphate buffered saline pH7.4
Preservative Stabilizers: 0.09% Sodium Azide
Approx. Protein Concentrations: IgG concentration 1.0 mg/ml

Storage

Store at -20°C only.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life: 18 months from date of dispatch.

Applications

Options / Functions	YES	NO	Not determined	Recommended Work dilution or concentration
Immunohistology – Frozen	•			1:100
mmunohistology - Paraffin			•	
Immunohistology - Resin			•	
Immunoprecipitation	•			
Flow Cytometry(1)	•			
Western Blotting			•	

Note: Other applications are not tested yet. Optimal dilutions should be determined.
(1) Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

Secondary Antibody Applications
Immunoassay (ELISA, Western blotting): 1:5,000-1:10,000

References

1. Groh, V.*et al*. (1998) Recognition of stress-induced MHC molecules by intestinal epithelial gamma delta T cells. Science. 279: 1737-1740.
2. Bauer, S. *et al*. (1999) Activation of NK cells and T cells by NKG2D, a receptor for stress-inducible MICA. Science. 285: 727-729.
3. Groh, V. *et al*. (1999) Broad tumor-associated expression and recognition by tumor-derived gamma delta T cells of MICA and MICB. Proc. Natl. Acad. Sci. USA. 96: 6879-6884.
4. Groh, V. *et al*. (2001) Costimulation of CD8 alpha beta T cels by NKG2D via engagement by MIC induced on virus-infected cells. Nat Immunol. 2: 255-60.
5. Das, H. *et al*. (2004) Mechanisms of V delta 1 T cell activation by microbial components. J. Immunol. 172: 6578-6586.
6. Jinushi, M. *et al*. (2003) Critical role of MHC class I – related chain A and B expression on IFN – alpha – stimulated dendritic cells in NK cell activation: Impairment in chronic hepatitis C virus infection. J. Immunol. 170: 1249-1256.