

Anti-Human CD314 (NKG2D) Functional Grade Purified

Catalog Number: 16-5878

Also Known As: KLRK1

RUO: For Research Use Only

Product Information

Contents: Anti-Human CD314 (NKG2D) Functional Grade Purified

Formulation: aqueous buffer, no sodium azide

REF Catalog Number: 16-5878

 **Temperature Limitation:** Store at 2-8°C.

Clone: 1D11

LOT **Batch Code:** Refer to Vial

Concentration: 1 mg/ml

 **Use By:** Refer to Vial

Host/Isotype: Mouse IgG1

Handling Conditions: Use in sterile environment.

Endotoxin Level: Less than 0.001 ng/ug antibody, as determined by the LAL assay.

Description

The 1D11 monoclonal antibody reacts with the human NKG2D, a 42 kDa lectin-like molecule expressed by NK cells, $\gamma\delta$ T cells, some CD4⁺ and CD8⁺ T cells. Human NKG2D forms complexes with DAP10, a membrane adaptor protein, and has the ability to costimulate multiple NK activation receptors. The counter-receptor for human NKG2D has been identified as MICA/MICB expressed on epithelial tumors from lung, breast, kidney, ovary, prostate and colon carcinoma. 5C6 and 1D11 block binding of soluble MICA to $\gamma\delta$ TCR T cell clones and inhibit lysis by these cells. 5C6 and 1D11 induced NKG2D function of redirected lysis of FcReceptor bearing P815 cells.

Applications Reported

The 1D11 antibody has been reported for use in flow cytometric analysis. It has also been reported for use in functional assays.

Applications Tested

This 1D11 antibody has been tested by flow cytometric analysis of human peripheral blood leukocytes. This can be used at less than or equal to 0.06 μ g per test. A test is defined as the amount (μ g) of antibody that will stain a cell sample in a final volume of 100 μ L. Cell number should be determined empirically but can range from 10⁵ to 10⁸ cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References

Veronika Groh, Alexander Steinle, Stefan Bauer, and Thomas Spies. 1998. Recognition of Stress-Induced MHC Molecules by Intestinal Epithelial T Cells. *Science*. 279:1737-1740.

Stefan Bauer, Veronika Groh, Jun Wu, Alexander Steinle, Joseph H. Phillips, Lewis L. Lanier, and Thomas Spies. 1999. Activation of NK Cells and T Cells by NKG2D, a Receptor for Stress-Inducible MICA. *Science*. 285: 727-729.

Groh V, Bruhl A, et al. 2003. Stimulation of T cell autoreactivity by anomalous expression of NKG2D and its MIC ligands in rheumatoid arthritis. *Proc Natl Acad Sci U S A*. 100(16):9452-7, (IHC frozen, PubMed)

Roberts AI, Lee L, et al. 2001. NKG2D receptors induced by IL-15 costimulate CD28-negative effector CTL in the tissue microenvironment. *J Immunol*. 167(10):5527-30. (activation, PubMed)

Related Products

12-5879 Anti-Human CD314 (NKG2D) PE (5C6)

13-5879 Anti-Human CD314 (NKG2D) Biotin (5C6)

14-5879 Anti-Human CD314 (NKG2D) Purified (5C6)

16-4714 Mouse IgG1 K Isotype Control Functional Grade Purified