

PerCP/Cy5.5 anti-human CD314 (NKG2D)

Catalog # / Size: 2204090 / 100 tests
2204085 / 25 tests

Clone: 1D11

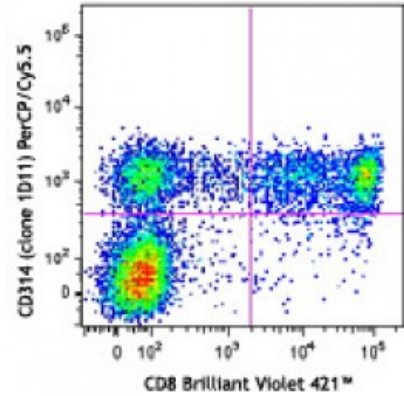
Isotype: Mouse IgG1, κ

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography and conjugated with PerCP/Cy5.5 under optimal conditions. The solution is free of unconjugated PerCP/Cy5.5 and unconjugated antibody.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

Concentration: Lot-specific



Human peripheral blood lymphocytes were stained with CD8 Brilliant Violet 421™ and CD314 (clone 1D11) PerCP/Cy5.5 (top), or mouse IgG1, κ PerCP/Cy5.5 isotype control (bottom).

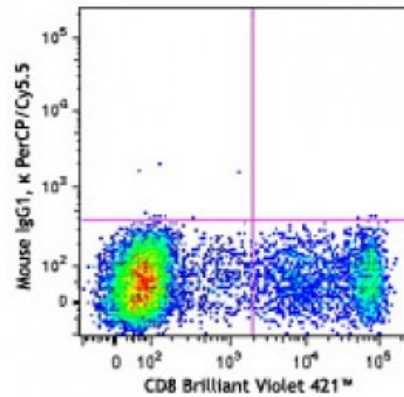
Applications:

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 5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* PerCP/Cy5.5 has a maximum absorption of 482 nm and a maximum emission of 690 nm.

Application Notes: The 1D11 antibody blocks MICA binding to T cells, induces redirected lysis, and costimulates T cells activation and proliferation. Additional reported (for the relevant formats) applications include: immunoprecipitation^{1,2}, blocking of ligand binding, induction of redirected cell lysis, and costimulation of T cells proliferation²⁻⁷. The LEAF™ purified antibody (Endotoxin <0.1 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. No. 320810). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 320814) with a lower endotoxin limit than standard



LEAF™ purified antibodies (Endotoxin <0.01 EU/microg).

- Application**
- References:**
1. Wu J, *et al.* 1999. *Science* 285:730.
 2. Wu J, *et al.* 2000. *J. Exp. Med.* 192:1059.
 3. Groh V, *et al.* 2001. *Nature Immunol.* 2:255.
 4. Wu J, *et al.* 2002. *J. Immunol.* 169:1236.
 5. Roberts A, *et al.* 2001. *J. Immunol.* 167:5527.
 6. Groh V, *et al.* 2003. *Proc. Natl. Acad. Sci. USA* 100:9452.
 7. Kraetzl K *et al.* 2008. *Eur. Respir. J.* 32:563. [PubMed](#)
 8. Correia DV, *et al.* 2011. *Blood* 118:992. (FC) [PubMed](#)
 9. Watanabe M, *et al.* 2014. *Int Immunol.* [PubMed](#)
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Description: CD314 is a homodimeric C-type lectin-like protein also known as NKG2D. It is expressed on NK cells, CD8⁺ T cells, γ/δ T cells, and *in vitro* induced LAK cells. Several molecules have been identified as the ligands for NKG2D, including MHC class-I chain-related protein A (MICA), MICB, and UL16-binding proteins (ULBPs). NKG2D has no intrinsic signaling capacity, but attains this by non-covalent association with DAP10 or DAP12 adaptors. In addition to being a primary activation receptor on NK cells, NKG2D is also a costimulatory receptor for TCR-mediated T cell proliferation and cytokine production. The interaction of NKG2D with its ligands plays a role in the immune surveillance against pathogen and tumor cells, and in the pathogenesis of autoimmune diseases.

- Antigen**
- References:**
1. Vance RE, *et al.* 1999. *J. Exp. Med.* 190:1801.
 2. Raulet DH. 2003. *Nat. Rev. Immunol.* 3:781.
 3. Lohwasser S, *et al.* 1999. *Eur. J. Immunol.* 29:755.
 4. Jamieson AM, *et al.* 2002.