

**APC/Cy7 anti-human CD314 (NKG2D)**

**Catalog # / Size:** 2204120 / 100 tests  
2204115 / 25 tests

**Clone:** 1D11

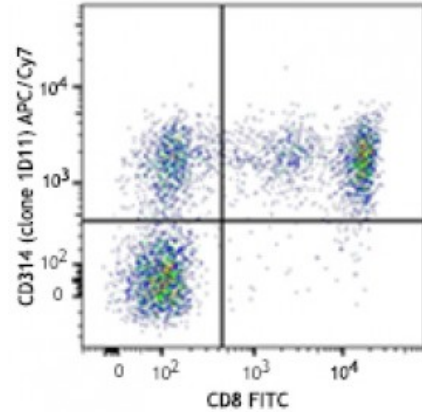
**Isotype:** Mouse IgG1, κ

**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography and conjugated with APC/Cy7 under optimal conditions. The solution is free of unconjugated APC/Cy7 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 FITC and CD314 (clone 1D11) APC/Cy7 (top) or mouse IgG1, κ APC/Cy7 isotype control (bottom).

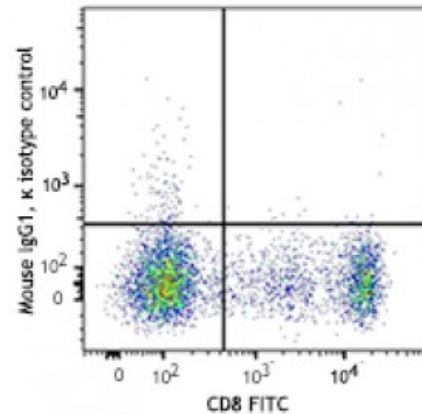
**Applications:**

**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.

**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<sup>1,2</sup>, blocking of ligand binding, induction of redirected cell lysis, and costimulation of T cells proliferation<sup>2-7</sup>. 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. Kraetzel 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<sup>+</sup> T cells,  $\gamma/\delta$  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. Raulot DH. 2003. *Nat. Rev. Immunol.* 3:781.
  3. Lohwasser S, *et al.* 1999. *Eur. J. Immunol.* 29:755.
  4. Jamieson AM, *et al.* 2002.