

**PE anti-human CD314 (NKG2D)**

**Catalog # / Size:** 2204025 / 25 tests  
2204030 / 100 tests

**Clone:** 1D11

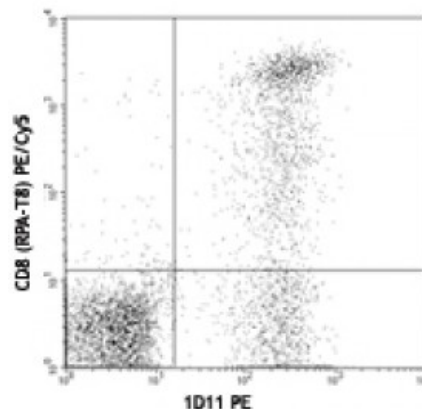
**Isotype:** Mouse IgG1,  $\kappa$

**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions. The solution is free of unconjugated PE 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 CD314 (clone 1D11) PE and CD8 PE/Cy5.

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. **Test size products are transitioning from 20 microL to 5 microL per test.** Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 microL staining volume or 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](#)

**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. 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.