

Brilliant Violet 605™ anti-human CD314 (NKG2D)

Catalog # / Size: 2204160 / 100 tests
2204155 / 25 tests

Clone: 1D11

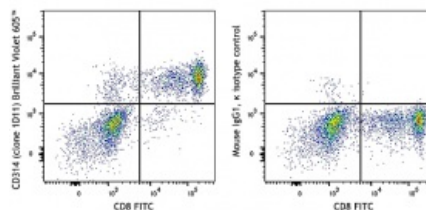
Isotype: Mouse IgG1, κ

Reactivity: Human, Non-human primate

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 605™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 605™ and unconjugated antibody.

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

Concentration: Lot-specific



Human peripheral blood lymphocytes were stained with CD8 FITC, and CD314 (clone 1D11) Brilliant Violet 605™ (left) or mouse IgG1, κ Brilliant Violet 605™ isotype control (right).

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

Brilliant Violet 605™ excites at 405 nm and emits at 603 nm. The bandpass filter 610/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. Be sure to verify

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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.

Application 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.

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.
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