



11-650-C100

## Monoclonal Antibody to CD314 Purified Antibody (0.1 mg)

<b>Clone:</b>	1D11
<b>Isotype:</b>	Mouse IgG1
<b>Specificity:</b>	The mouse monoclonal antibody 1D11 recognizes CD314 / NKG2D, a 42 kDa C-type lectin-like activating receptor expressed by NK cells, gamma/delta T cells, and CD8+ T cells.
<b>Regulatory Status:</b>	RUO
<b>Immunogen:</b>	NKL cell line
<b>Species Reactivity:</b>	Human
<b>Application:</b>	Flow Cytometry Immunoprecipitation Immunohistochemistry (frozen sections) Functional Application blocking of ligand binding
<b>Purity:</b>	> 95% (by SDS-PAGE)
<b>Purification:</b>	Purified by protein-A affinity chromatography
<b>Concentration:</b>	1 mg/ml
<b>Storage Buffer:</b>	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
<b>Storage / Stability:</b>	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
<b>Expiration:</b>	See vial label
<b>Lot Number:</b>	See vial label
<b>Background:</b>	CD314, also known as NKG2D (natural killer receptor G2D) or KLRK1 (killer cell lectin-like receptor subfamily K, member 1), is a homodimeric C-type lectin-like activating receptor and costimulator with type II membrane orientation (C terminus extracellular). CD314 homodimers are associated with DAP10, a membrane adaptor protein that signals similar to CD28 by recruitment of phosphatidylinositol 3-kinase. Engagement of CD314 amplifies antigen-specific T cell responses in CD314-positive T cell populations. In NK cells, CD314 is a primary activating receptor. As CD314 ligands the MHC class-I chain-related proteins A and B (MICA, MICB) and UL16-binding proteins (ULBPs) have been identified.

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**Antibodies****References:**

- \*Bauer S, Groh V, Wu J, Steinle A, Phillips JH, Lanier LL, Spies T: Activation of NK cells and T cells by NKG2D, a receptor for stress-inducible MICA. *Science*. 1999 Jul 30;285(5428):727-9.
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- \*Sangiolo D, Martinuzzi E, Todorovic M, Vitaggio K, Vallario A, Jordaney N, Carnevale-Schianca F, Capaldi A, Geuna M, Casorzo L, Nash RA, Aglietta M, Cignetti A: Alloreactivity and anti-tumor activity segregate within two distinct subsets of cytokine-induced killer (CIK) cells: implications for their infusion across major HLA barriers. *Int Immunol*. 2008 Jul;20(7):841-8.
- \*Hasenkamp J, Borgerding A, Uhrberg M, Falk C, Chapuy B, Wulf G, Jung W, Trümper L, Glass B: Self-tolerance of human natural killer cells lacking self-HLA-specific inhibitory receptors. *Scand J Immunol*. 2008 Mar;67(3):218-29.
- \*Ebert LM, Meuter S, Moser B: Homing and function of human skin gammadelta T cells and NK cells: relevance for tumor surveillance. *J Immunol*. 2006 Apr 1;176(7):4331-6.
- \*Valencia J, Hernández-López C, Martínez VG, Hidalgo L, Zapata AG, Vicente A, Varas A, Sacedón R: Transient beta-catenin stabilization modifies lineage output from human thymic CD34+CD1a- progenitors. *J Leukoc Biol*. 2010 Mar;87(3):405-14.

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