

TECHNICAL DATA SHEET

CyFlow™ CD314 FITC Anti-Hu; Clone 1D11

REF BJ615099

For Research Use Only.
Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD314
Alternative Names	NKG2D, NKG2-D, KLR, KLRK1, KLAR
Clone	1D11
Clonality	monoclonal
Format	FITC
Host / Isotype	Mouse / IgG1
Species Reactivity	Human
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	NKL cell line

Specificity

The mouse monoclonal antibody 1D11 recognizes CD314 antigen, a 42 kDa C-type lectin-like activating receptor expressed by NK cells, γ/δ T cells, and CD8+ T cells.

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Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

CD314 (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.

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. < PMID: 10426993 >
- Wu J, Cherwinski H, Spies T, Phillips JH, Lanier LL: DAP10 and DAP12 form distinct, but functionally cooperative, receptor complexes in natural killer cells. J Exp Med. 2000 Oct 2; 192(7):1059-68. < PMID: 11015446 >
- Wu J, Groh V, Spies T: T cell antigen receptor engagement and specificity in the recognition of stress-inducible MHC class I-related chains by human epithelial gamma delta T cells. J Immunol. 2002 Aug 1; 169(3):1236-40. < PMID: 12133944 >

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- 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. < PMID: 16547270 >
- 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. < PMID: 18226015 >
- 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. < PMID: 18469328 >
- 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. < PMID: 19952356 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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