

TECHNICAL DATA SHEET

CyFlow™ CD314 Purified Anti-Hu; Clone 1D11

REF AH746503

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	Purified
Host / Isotype	Mouse / IgG1
Species Reactivity	Human
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
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.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

Application

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Immunoprecipitation
- Immunohistochemistry (frozen sections)
- Functional assays

Storage Buffer

The reagent is provided in phosphate buffered saline (PBS) solution, pH $\approx$ 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 >

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

- 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 >
- 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.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com