

## TECHNICAL DATA SHEET

### CyFlow™ CD314 Purified Anti-Hu; Clone 1D11

**REF** AH746503



Sysmex Partec GmbH  
Arndtstraße 11 a-b  
02826 Görlitz  
Germany  
Tel.: +49 3581 8746 0  
E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)  
[www.sysmex-partec.com](http://www.sysmex-partec.com)

Distributed in the U.S.A. and Canada by:  
**Sysmex America, Inc.**  
577 Aptakisic Road  
Lincolnshire, IL 60069, U.S.A.  
Tel.: 1-888-879-7639 or 1-847-367-3503  
E-mail: [cytometry@sysmex.com](mailto:cytometry@sysmex.com)  
<https://us.sysmex-flowcytometry.com/>

**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,  $\gamma/\delta$  T cells, and CD8+ T cells.

## 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 0.09% (w/v) sodium azide.

## Storage and Stability

<b>Storage</b>	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
<b>Stability</b>	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.

## Warnings











**Non-Hazardous Statement:** This is not considered hazardous by the criteria in 29 CFR 1910.1200 or the General Classification guideline for preparations of the EU.

**Safety Data Sheet Statement:** Important information regarding the safe handling, transport, and disposal of this product is contained in the Safety Data Sheet (SDS). SDS are available at <http://www.sysmex-partec.com/services>, or at <https://us.sysmex-flowcytometry.com/> (U.S. customers only).

## 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 >
- 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 >

## Symbols

	Reference number		Contains sufficient for <n> tests
	For research use only		Temperature limit
	Batch code		Keep away from sunlight
	Manufacturer		Consult accompanying documents
	Use-by date		Unique device identifier