

Technical Data Sheet

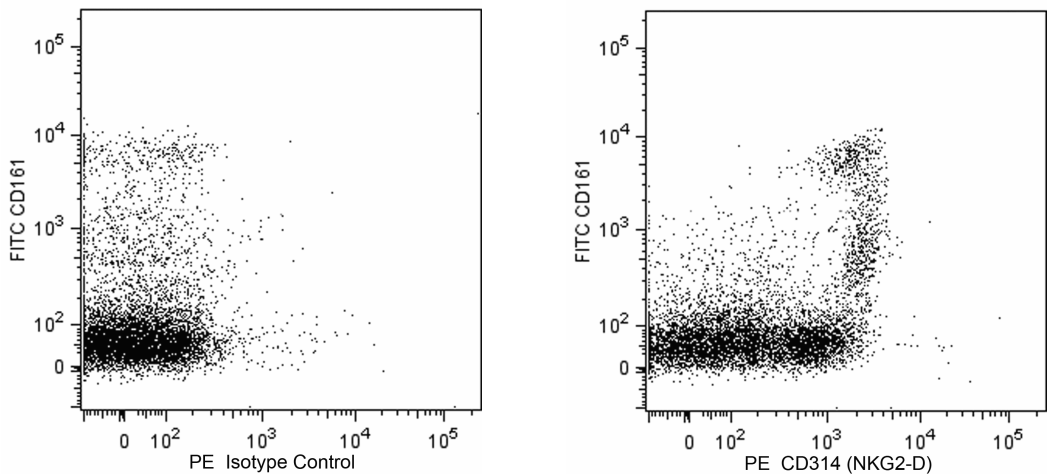
PE Mouse Anti-Rat CD314 (NKG2-D)

Product Information

Material Number:	563263
Alternate Name:	NKR-P2, Nkg2d, Nkrp2, Klrk1; NKLLR
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	9C11G4
Immunogen:	Rat NKG2-D Recombinant Protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 9C11G4 monoclonal antibody specifically binds to CD314, also known as NKG2-D, NKR-P2 and NKLLR. CD314 is encoded by *Klrk1* (Killer cell lectin-like receptor subfamily K, member 1). It is a type II transmembrane glycoprotein of the C-type lectin family. This lectin-like receptor is expressed by several cell types including NK cells, NKT cells, γδ T lymphocytes and CD8-positive αβ T lymphocytes. CD314 acts as an activating receptor that can induce NK effector cell activities. NK cells can reportedly bind to members of the RAE1 family, including cell surface RAE-1L and RRLT as ligands, through their CD314 receptors. NK cells are thereby induced to secrete IFN-γ and exert cytotoxicity that may play a role in allograft rejection.



**Two-color flow cytometric analysis of CD314 (NKG2-D) expression on rat splenic leukocytes.** Lewis rat splenic leukocytes were stained with FITC Mouse Anti-Rat CD161a antibody (Cat. No. 555008/ 561781) and either PE Mouse IgG1, κ Isotype Control (Cat. No. 554680, Left Panel) or PE Mouse Anti-Rat CD314 (NKG2-D) antibody (Cat. No. 563263; Right Panel). The two-color flow cytometric dot plots show the correlated expression patterns of CD314 (or Ig Isotype control staining) versus CD161 for gated events with the forward and side light-scatter characteristics of viable splenic leukocytes. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.  
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.  
The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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## Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
554680	PE Mouse IgG1, $\kappa$ Isotype Control	0.1 mg	MOPC-21
555008	FITC Mouse Anti-Rat CD161a	0.5 mg	10/78
561781	FITC Mouse Anti-Rat CD161a	50 $\mu$ g	10/78
555899	Lysing Buffer	100 ml	(none)

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
5. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.

## References

Berg SF, Dissen E, Westgaard IH, Fossum S. Molecular characterization of rat NKR-P2, a lectin-like receptor expressed by NK cells and resting T cells. *Int Immunol*. 1998; 10(4):379-385. (Biology)

Savithri B, Khar A. A transmembrane-anchored rat RAE-1-like transcript as a ligand for NKR-P2, the rat ortholog of human and mouse NKG2D. *Eur J Immunol*. 2006; 36(1):107-117. (Biology)

Wai LE, Garcia JA, Martinez OM, Krams SM. Distinct roles for the NK cell-activating receptors in mediating interactions with dendritic cells and tumor cells. *J Immunol*. 2011; 186(1):222-229. (Biology)

Zhuo M, Fujiki M, Wang M, Piard-Ruster K, Wai LE, Wei L, Martinez OM, Krams SM. Identification of the rat NKG2D ligands, RAE1L and RRLT, and their role in allograft rejection. *Eur J Immunol*. 2010; 40(6):1748-1757. (Biology)

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