

Technical Data Sheet

Purified NA/LE Rat Anti-Mouse CD314

Product Information

Material Number:	562172
Alternate Name:	Klrk1; NKG2D; NKG2-D; NK cell receptor D; Natural killer cell group 2D
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	CX5
Immunogen:	Purified Mouse NKG2D protein
Isotype:	Rat IgG1
Reactivity:	QC Testing: Mouse
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2µm sterile filtered. Endotoxin level is ≤0.01 EU/µg (≤0.001 ng/µg) of protein as determined by the LAL assay.

Description

The CX5 monoclonal antibody specifically binds to NKG2D, also known as CD314. NKG2D is a lectin-like receptor that is detected on resting and IL-2-activated NK cells, activated CD8-positive T lymphocytes, and LPS-activated macrophages, but not on resting T cells or unstimulated macrophages. NKG2D has little homology to the other members of the NKG2 family, NKG2A, C, and E, and does not form heterodimers with CD94. On NK cells, NKG2D is an activating receptor that associates with DAP10, an adapter protein that stimulates the PI3 kinase pathway. An isoform of mouse NKG2D can also associate with the signaling adapter protein DAP12, also known as KARAP (Killer cell-Associated Receptor-Associated Polypeptide), that activates the Syk and ZAP70 tyrosine kinases. On cytotoxic T cells, NKG2D is a co-stimulatory receptor that associates with DAP10. The ligands for NKG2D include the minor histocompatibility antigen H60, MULT1 (Murine *UL16-binding protein-Like Transcript 1*), and the five retinoic acid-inducible proteins Rae-1α, β, γ, δ and ε. Interactions of NKG2D with its ligands are involved in the regulation of innate and immune cytotoxic responses to tumor and pathogen-infected cells and in diabetes progression in the NOD mouse. The CX5 mAb blocks the binding of NKG2D to its ligands.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

Flow cytometry	Routinely Tested
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Carayannopoulos LN, Naidenko OV, Fremont DH, Yokoyama WM. Murine UL16-binding protein-like transcript 1: A newly described transcript encoding a high-affinity ligand for murine NKG2D. *J Immunol.* 2002; 169(8):4079-4083. (Biology)

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Ogasawara K, Hamerman JA, Ehrlich LR, et al. NKG2D blockade prevents autoimmune diabetes in NOD mice. *Immunity.* 2004; 20(6):757-767. (Clone-specific: Blocking)

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Yokoyama WM. Natural killer cell receptors. *Curr Opin Immunol.* 1998; 10:298-305. (Biology)

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