Technical Data Sheet

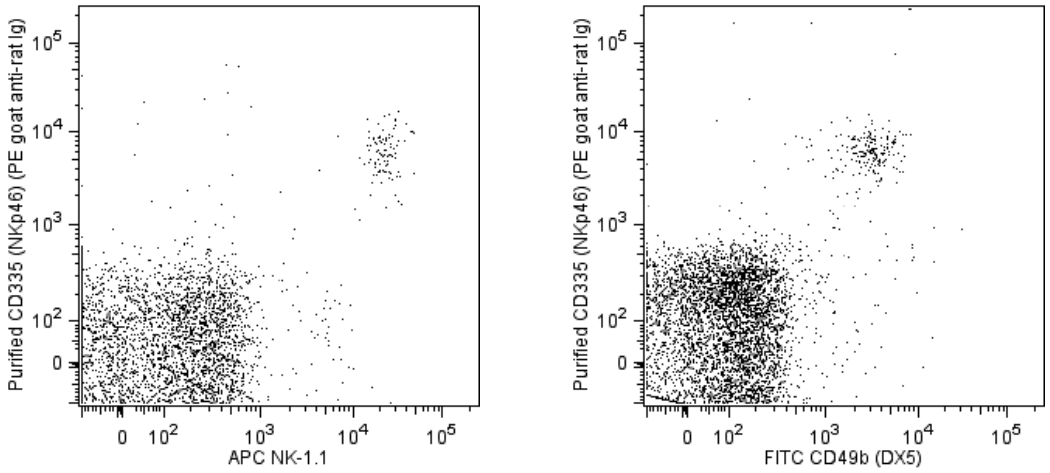
Purified Rat Anti-Mouse CD335 (NKp46)

Product Information

Material Number:	**560754**
Alternate Name:	NKp46; Ar1; Ly94; Lymphocyte antigen 94; Mar1; MAR-1; Mouse activating rece
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	29A1.4
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The monoclonal antibody 29A1.4 specifically binds to mouse CD335, also known as NKp46. NKp46 is a 46 kDa type I transmembrane glycoprotein that is a member of the natural cytotoxicity receptor (NCR) family and immunoglobulin superfamily. NKp46 is encoded by the Ncr1 gene located on chromosome 7. NKp46 functions as a cytotoxicity triggering receptor and is selectively expressed by immature and mature NK cells in all mouse strains tested. NKp46 is detected on a minute fraction of NK-like T cells (less than 2% of NKp46+ express CD3e) but not on CD1d-restricted NKT cells from C57BL/6 mice. When immobilized on tissue culture plates, the 29A1.4 antibody reportedly stimulates NK cells to produce interferon-gamma and to release their cytoplasmic granule contents. Although the ligands for the NKp46 receptor have not been fully characterized, recent evidence indicates that this receptor plays an important role in the NK cell-mediated recognition and killing of some virus-infected cells and tumor cells. The immunogen used to generate the 29A1.4 clone was mouse NKp46-Fc recombinant protein.



Flow cytometric analysis of CD335 (NKp46) expression on mouse splenocytes. *C57BL/6 and BALB/c mouse spleen cells were stained separately with Purified anti-mouse CD335 (NKp46) antibody followed by PE-conjugated Goat anti-rat Ig (Cat. No. 550767). After washing, C57BL/6 cells were stained with APC-conjugated anti-mouse NK-1.1 (NKR-P1B and NKR-P1C) antibody (Cat. No.550627; left panel) and BALB/c cells were stained with FITC-conjugated anti-mouse CD49b (DX5) antibody (Cat. No.553857; right panel). Two-color dot plots showing the correlated expression patterns of CD335/NKp46 and either NK-1.1/CD161 (C57BL/6 cells; left panel) or DX5/CD49b (BALB/c cells; right panel) were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSRII System.*

Preparation and Storage

Store undiluted at 4°C.

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

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
550767	PE Goat Anti-Rat Ig	0.2 mg	Polyclonal
550627	APC Mouse Anti-Mouse NK-1.1	0.1 mg	PK136
553857	FITC Rat Anti-Mouse CD49b	0.5 mg	DX5

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. 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.
3. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Biassoni R, Pessino A, Bottino C, Pende D, Moretta L, Moretta A. The murine homologue of the human NKp46, a triggering receptor involved in the induction of natural cytotoxicity. *Eur J Immunol.* 1999; 29(3):1014-1020. (Biology)

Gazit R, Gruda R, Elboim M, et al. Lethal influenza infection in the absence of the natural killer cell receptor gene Ncr1. *Nat Immunol.* 2006; 7(5):517-523. (Biology)

Joncker NT, Fernandez NC, Treiner E, Vivier E, Raulet DH. NK cell responsiveness is tuned commensurate with the number of inhibitory receptors for self-MHC class I: the rheostat model. *J Immunol.* 2009; 182(8):4572-4580. (Clone-specific: Flow cytometry)

Walzer T, Blery M, Chaix J, et al. Identification, activation, and selective in vivo ablation of mouse NK cells via NKp46.. *Proc Natl Acad Sci U S A.* 2007; 104(9):3384-3389. (Clone-specific: Activation, Flow cytometry)

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