Technical Data Sheet

V450 Rat Anti-Mouse CD335 (NKp46)

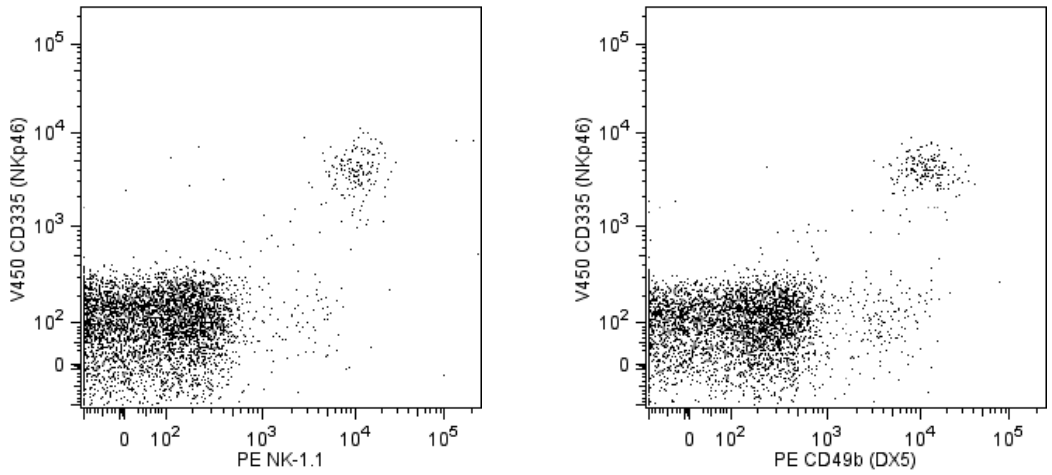
Product Information

Material Number:	**560763**
Alternate Name:	NKp46; Ar1; Ly94; Lymphocyte antigen 94; Mar1; MAR-1; Mouse activating rece
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	29A1.4
Isotype:	Rat IgG2a, κ
Reactivity:	QC Tested: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤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.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the **V**iolet laser Ex max of 406 nm and has an Em Max at **450** nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.



Flow cytometric analysis of BD Horizon™ V450 anti-mouse CD335 (NKp46) on mouse splenocytes. *C57BL/6 and BALB/c mouse spleen cells were stained separately with BD Horizon™ V450 anti-mouse CD335 (NKp46) antibody. After washing, C57BL/6 cells were stained with PE anti-mouse NK-1.1(NKR-P1B and NKR-P1C) antibody (Cat. No.553165; left panel) and BALB/c cells were stained with PE anti-mouse CD49b(DX5) (Cat. No.553858; right panel). Two-color dot plots showing the correlated expression patterns of CD335/NKp46 and either NK1.1/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.*

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.268.5430	32.53.720.550	0120.8555.90	65.6861.0633	0800.771.7157

For country-specific contact information, visit **bdbiosciences.com/how_to_order/**

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
553165	PE Mouse Anti-Mouse NK-1.1	0.2 mg	PK136
553858	PE Rat Anti-Mouse CD49b	0.2 mg	DX5

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.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
4. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
5. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. 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.

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)