

Technical Data Sheet

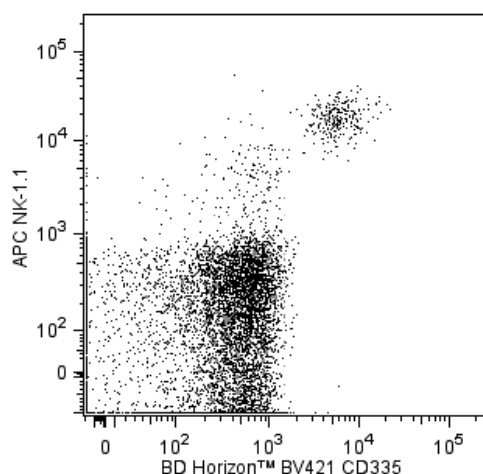
BV421 Rat Anti-Mouse CD335**Product Information**

Material Number:	562850
Alternate Name:	Ncr1; NK-p46; NKp46; mNKp46; MAR1; mAR-1; mouse activating receptor 1; Ly94
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	29A1.4
Immunogen:	Mouse NKp46 Recombinant Protein
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA 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 was conjugated to BD Horizon™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Flow cytometric analysis of CD335 (NKp46) expression on mouse splenocytes. C57BL/6 mouse splenic leucocytes were stained with BD Horizon™ BV421 Rat Anti-Mouse CD335 (NKp46) antibody (Cat. No. 562850) and APC Mouse Anti-Mouse NK-1.1 antibody (Cat. No. 550627/561117). A two-color dot plot showing the correlated expression of NK1.1 versus CD335 was derived from gated events with the forward and side light-scatter characteristics of viable leucocytes. Flow cytometry was performed using a BD™ LSRII Flow Cytometry 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 BD Horizon™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

Application Notes**Application**

Flow cytometry

Routinely Tested

BD Biosciences

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562602	BV421 Rat IgG2a, κ Isotype Control	50 µg	R35-95
555899	Lysing Buffer	100 ml	(none)
550627	APC Mouse Anti-Mouse NK-1.1	0.1 mg	PK136
561117	APC Mouse Anti-Mouse NK-1.1	25 µg	PK136
560628	APC Rat Anti-Mouse CD49b	50 µg	DX5

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

References

Blassoni 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. (Immunogen: Activation, Flow cytometry)

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