Technical Data Sheet

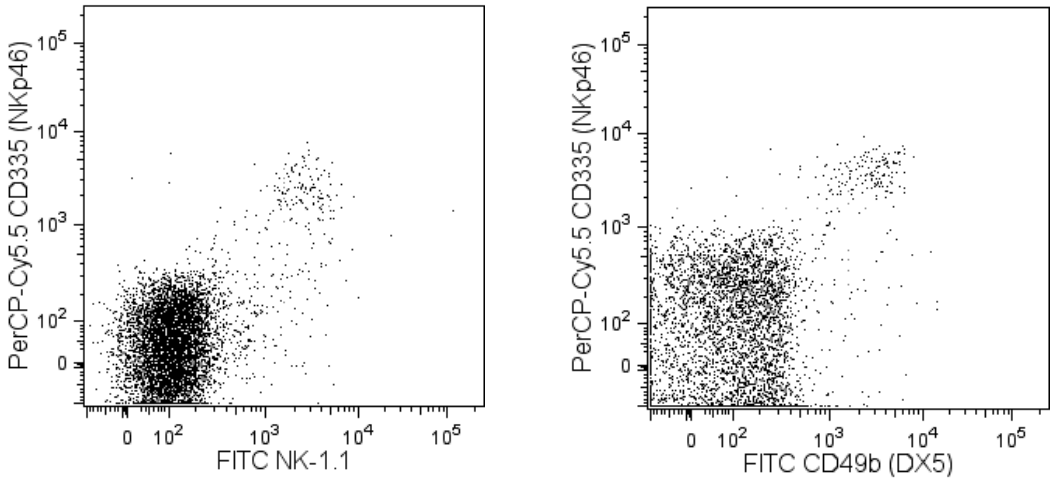
PerCP-Cy™5.5 Rat Anti-Mouse CD335 (NKp46)

Product Information

Material Number:	**560800**
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 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 PerCP-Cy5.5 anti-mouse CD335 (NKp46) expression on mouse splenocytes. *C57BL/6 and BALB/c mouse spleen cells were stained separately with PerCP-Cy5.5 anti-mouse CD335 (NKp46) antibody. The cells were washed and then C57BL/6 cells were stained with FITC anti-mouse NK-1.1(NKR-P1B and NKR-P1C) antibody (Cat. No.553164; left panel). The BALB/c cells were stained with FITC anti-mouse CD49b(DX5) (Cat. No. 553857; 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.*

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 PerCP-Cy5.5 under optimum conditions, and unconjugated antibody and free PerCP-Cy5.5 were removed. Storage of PerCP-Cy5.5 conjugates in unoptimized diluent is not recommended and may result in loss of signal intensity.

Application Notes

Application

Flow cytometry	Routinely Tested

BD Biosciences

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Suggested Companion Products

Catalog Number	Name	Size	Clone
553164	FITC Mouse Anti-Mouse NK-1.1	0.5 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. An isotype control should be used at the same concentration as the antibody of interest.
3. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
4. Cy is a trademark of Amersham Biosciences Limited. This conjugated product is sold under license to the following patents: US Patent Nos. 5,486,616; 5,569,587; 5,569,766; 5,627,027.
5. This product is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. If you require a commercial license to use this product and do not have one return this material, unopened to BD Biosciences, 10975 Torreyana Rd, San Diego, CA 92121 and any money paid for the material will be refunded.
6. PerCP-Cy5.5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using dual-laser cytometers, which may directly excite both PerCP and Cy5.5™. We recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
7. PerCP-Cy5.5–labelled antibodies can be used with FITC- and R-PE–labelled reagents in single-laser flow cytometers with no significant spectral overlap of PerCP-Cy5.5, FITC, and R-PE fluorescence.
8. 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.
9. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
10. 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)

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