Technical Data Sheet

BV711 Mouse Anti-Human CD335 (NKp46)

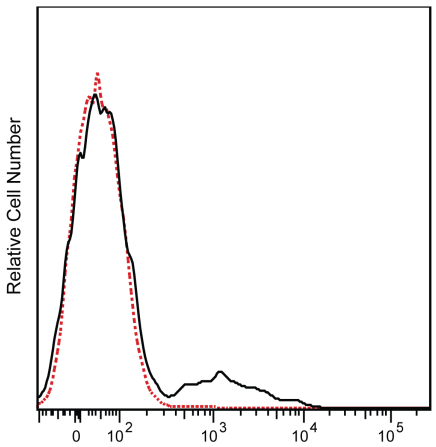
Product Information

Material Number:	**563043**
Alternate Name:	NCR1; NK-p46; hNKp46; LY94; Natural cytotoxicity triggering receptor 1
Size:	50 tests
Vol. per Test:	5 µl
Clone:	9E2/Nkp46
Immunogen:	Human NKp46 Recombinant Protein
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 9E2/Nkp46 monoclonal antibody specifically binds to CD335. CD335 is also known as the Natural killer cell p46-related protein (NKp46) and the Natural cytotoxicity triggering receptor 1 (NCR1). CD335 is a 46 kDa type I membrane glycoprotein that is expressed on resting and activated NK cells. Its extracellular region contains two C2-type, Ig-like domains. The transmembrane domain contains a positively charged amino acid (Arg) which could be involved in stabilizing the association with CD3ζ. Its intracellular region does not contain immunoreceptor tyrosine-based activating motifs (ITAM), but it is linked to intracytoplasmic transduction machinery by its association with CD3ζ and FcεRIγ adaptor proteins. CD335 along with NKp30 and NKp44 are referred to as natural cytotoxicity receptors (NCR). These receptors play very important roles in cells that kill virus-infected target cells, tumor cells and MHC-class I-unprotected cells.

The antibody was conjugated to BD Horizon™ BV711 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. This dye is a tandem fluorochrome of BD Horizon™ BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon™ BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy™5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.



BD Horizon™ BV711 CD335 with Isotype Control

Flow cytometric analysis of CD335 expression on human peripheral blood lymphocytes. *Whole blood was stained with BD Horizon™ BV711 Mouse Anti-Human CD335 (NKp46) antibody (Cat. No. 563043; solid line histogram) or with a BD Horizon™ BV711 Mouse IgG1, κ Isotype Control (Cat. No. 563044; dashed line histogram). Erythrocytes were lysed with BD PharmLyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer 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™ BV711 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV711 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
555899	Lysing Buffer	100 ml	(none)
563044	BV711 Mouse IgG1, k Isotype Control	50 µg	X40

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Brilliant Violet™ 711 is a trademark of Sirigen.
4. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. Cy is a trademark of Amersham Biosciences Limited.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. 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.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Mandelboim O, Porgador A. NKp46. *Int J Biochem Cell Biol.* 2001; 33(12):1147-1150. (Biology)

Nakajima H, Cella M, Bouchon A, et al. Patients with X-linked lymphoproliferative disease have a defect in 2B4 receptor-mediated NK cell cytotoxicity. *Eur J Immunol.* 2000; 30(11):3309-3318. (Immunogen: Flow cytometry, Functional assay)

Sivori S, Pende D, Bottino C, et al. NKp46 is the major triggering receptor involved in the natural cytotoxicity of fresh or cultured human NK cells. Correlation between surface density of NKp46 and natural cytotoxicity against autologous, allogeneic or xenogeneic target cells. *Eur J Immunol.* 1999; 29(5):1656-1666. (Biology)

Sivori S, Vitale M, Morelli L, et al. p46, a novel natural killer cell-specific surface molecule that mediates cell activation. *J Exp Med.* 1997; 186(7):1129-1136. (Biology)

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