

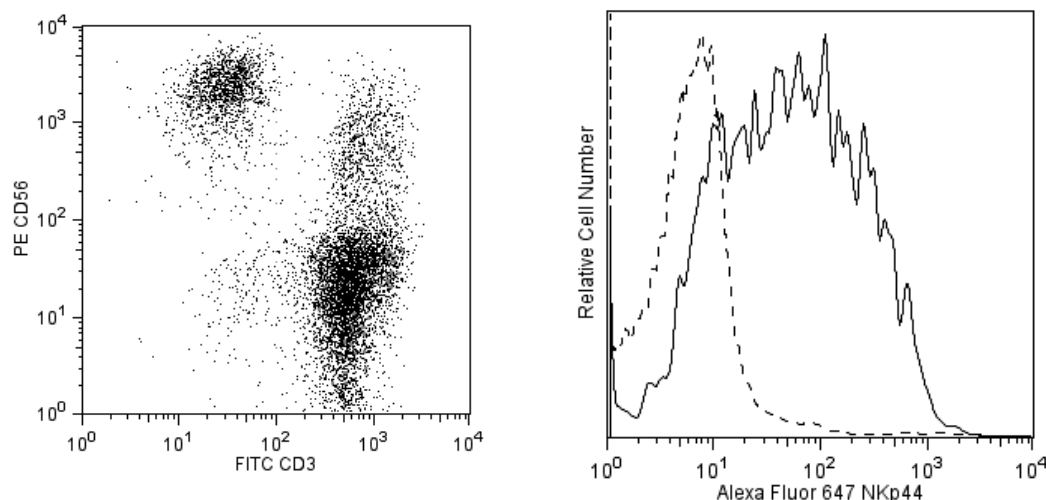
Technical Data Sheet

Alexa Fluor® 647 Mouse anti-Human NKp44 (CD336)**Product Information**

Material Number:	558564
Alternate Name:	NCR2; NCT2; NKp44; NK-p44; LY95; dJ149M18.1; p44-8
Size:	100 Tests
Vol. per Test:	20 µl
Clone:	p44-8
Immunogen:	Human NKp44 Recombinant Protein
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

The p44-8 monoclonal antibody specifically binds to the natural killer (NK) cell receptor, NKp44, which is also known as CD336, Natural cytotoxicity triggering receptor 2 (NCR2), or Lymphocyte antigen 95 homolog (Ly95). NKp44 is a ~44 kDa type I transmembrane protein that belongs to the natural cytotoxicity receptor (NCR) family within the immunoglobulin superfamily. NKp44 is expressed by activated NK cells. NKp44 serves as an activating receptor that can enhance NK cell mediated lysis of target cells including tumor cells and virus-infected cells. Killer activating receptor associated protein (KARAP), which is also known as DAP12, is an intracellular adaptor protein that can associate with the intracellular region of NKp44. DAP12 can then function to help transmit activating signals through its immunoreceptor tyrosine-based activation motif (ITAM).



Expression of Alexa Fluor® 647-conjugated anti-human NKp44 (CD336) in stimulated and unstimulated human NK cells. Human PBMC were isolated and activated with rhIL-2 (Cat. No. 554603) for 7 days at 37°C. Activated NK cells were then simultaneously stained with Alexa Fluor® 647 anti-NKp44, FITC anti-human CD3 (Cat. No. 555332) and PE anti-human CD56 (Cat No. 555516). The left panel dot plot displays the CD56 versus CD3 staining profile. The CD56+ CD3- NK cell population was electronically gated to display NKp44 expression on this subpopulation (right panel). In this figure, the solid line represents the stimulated cells that are mostly positive for NKp44 while the dashed line shows that NKp44 is not detected on PBMC that were cultured in the absence of rhIL-2. Flow cytometry was performed on a BD FACSCalibur™ flow 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 to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes**Application**

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
555516	PE Mouse Anti-Human CD56	100 Tests	B159
555332	FITC Mouse Anti-Human CD3	100 Tests	UCHT1
557714	Alexa Fluor® 647 Mouse IgG1 κ Isotype Control	100 Tests	MOPC-21
554656	Stain Buffer (FBS)	500 mL	(none)

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- μ l experimental sample (a test).
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
3. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
4. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
9. An isotype control should be used at the same concentration as the antibody of interest.

References

Byrd A, Hoffmann SC, Jarahian M, Momburg F, Watzl C. Expression analysis of the ligands for the Natural Killer cell receptors NKp30 and NKp44. *PLoS ONE*. 2007; 2(12):e1339. (Immunogen: ELISA, Flow cytometry)

Lanier LL. Natural killer cell receptor signaling. *Curr Opin Immunol*. 2003; 15:308-314. (Biology)

Moretta L, Moretta A. Unravelling natural killer cell function: triggering and inhibitory human NK receptors. *EMBO J*. 2004; 23(2):255-259. (Biology)

Vitale M, Bottino C, Sivori S, Sanseverino L, Castriconi R, Marcenaro E, Augugliaro R, Moretta L, Moretta A. NKp44, a novel triggering surface molecule specifically expressed by activated natural killer cells, is involved in non-major histocompatibility complex-restricted tumor cell lysis. *J Exp Med*. 187(12):2065-2072. (Biology)

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