

Technical Data Sheet

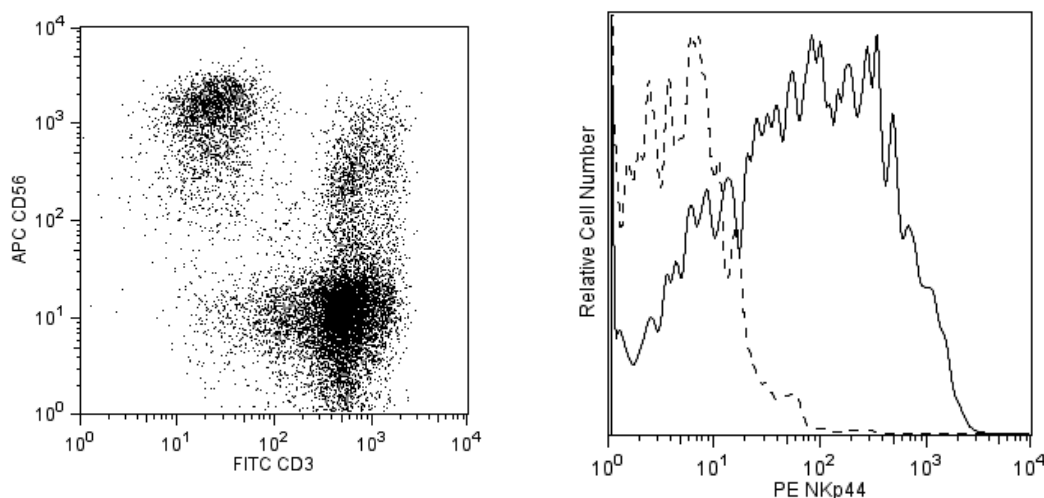
PE Mouse anti-Human NKp44 (CD336)

Product Information

Material Number:	558563
Alternate Name:	CD336
Size:	100 tests
Vol. per Test:	20 µl
Clone:	p44-8.1
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The monoclonal antibody p44-8.1, reacts with the natural killer (NK) cell receptor NKp44 (also known as CD336), a 44kD protein expressed only by activated NK cells. NK cells are specialized lymphoid cells that have the ability to kill some tumor cells and virally infected cells. A well-defined characteristic of NK cells is their ability to lyse target cells deficient in expression of MHC class I molecules. This activity is finely regulated by a series of inhibitory and activating receptors. The inhibitory receptors, specific for binding major histocompatibility complex (MHC) class I molecules, allow NK cells to distinguish between normal cells and those that have lost the expression of the MHC class I such as tumors. Upon binding to MHC class I molecules expressed on target cells, these receptors deliver inhibitory signals that down-regulate cytolytic functions. If the cell does not express MHC class I, the NK cell becomes cytotoxic. The major receptors responsible for NK cell inhibition/triggering are NKp30, NKp44, NKp46 and NKG2D.

**Expression of PE anti-human NKp44 (CD336) in stimulated and unstimulated human NK cells.**

Human PBMC were isolated and activated with rIL-2 (cat: 554603) for 7 days at 37°C. Activated NK cells were then simultaneously stained with PE anti-NKp44, FITC anti-human CD3 (clone: UCHL1, cat: 555332) and APC anti-human CD56 (clone: B159, cat: 555518). 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 rIL-2. Flow cytometry was performed on a BD FACSCalibur™ flow system.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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Application Notes

Application

Flow cytometry

Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
555518	APC Mouse Anti-Human CD56	100 tests	B159
555332	FITC Mouse Anti-Human CD3	100 tests	UCHT1
559320	PE Mouse IgG1, κ Isotype Control	100 tests	MOPC-21

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. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Please refer to www.bdbiosciences.com/pharmlngen/protocols for technical protocols.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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 et al. 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. (Biology)