Human NKp46/NCR1
Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 195314

Catalog Number: FAB1850R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NKp46/NCR1 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_{2B} Clone # 195314
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse T cell hybridoma transfected with human NKp46/NCR1
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	Human whole blood $CD56^+$ natural killer cells

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

NKp46, along with NKp30 and NKp44, are activating receptors that have been collectively termed the natural cytotoxicity receptors (NCR) (1). These receptors lack significant sequence homology to one another. They are expressed almost exclusively by NK cells and play a major role in triggering some of the key lytic activities of NK cells. The $CD56^{dim}CD16^+$ subpopulation that makes up the majority of NK cells in the peripheral blood and spleen expresses NKp46 in both resting and activated states (2). The main NK cell population of the lymph node ($CD56^{bright}CD16^-$) expresses low levels of NKp46 in resting cells, but expression is up-regulated by IL-2. NKp46 is a type I transmembrane protein with two extracellular Ig-like domains followed by a short stalk region, a transmembrane domain containing a positively charged amino acid residue, and a short cytoplasmic tail. Through its positive charge in the transmembrane domain, NKp46 associates with the ITAM-bearing signal adapter proteins, CD3ζ and FcεR1γ, which are able to form disulfide-linked homodimers and heterodimers (3, 8). Studies with neutralizing antibodies indicate that the three NCRs are primarily responsible for triggering the NK-mediated lysis of many human tumor cell lines. Blocking any of the NCRs individually resulted in partial inhibition of tumor cell lysis, but nearly complete inhibition of lysis was observed if all three receptors were blocked simultaneously (4). NKp46 has also been implicated in recognition of virus-infected cells through its capacity to bind to viral hemagglutinins (5-7). Human NKp46 shares 58% and 59% amino acid sequence identity with the mouse and rat proteins, respectively.

References:

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2. Ferlazzo, G. *et al.* (2004) J. Immunol. **172**:1455.
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4. Pende, D. *et al.* (1999) J. Exp. Med. **190**:1505.
5. Arnon, T. *et al.* (2004) Blood **103**:664.
6. Arnon, T. *et al.* (2001) Eur. J. Immunol. **31**:2680.
7. Mandelboim, O. *et al.* (2001) Nature **409**:1055.
8. Moretta, A. *et al.* (2001) Annu. Rev. Immunol. **19**:197.

PRODUCT SPECIFIC NOTICES

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