Human NKp44/NCR2 PE-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 253415

Catalog Number: FAB22491P

100 Tests, 25 Tests

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NKp44/NCR2 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) NKp30, rhNKp46, rhNKp80, or recombinant mouse NKp46 is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 253415
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human NKp44/NCR2 Gln22-Pro190 Accession # CAB52289
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied 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.

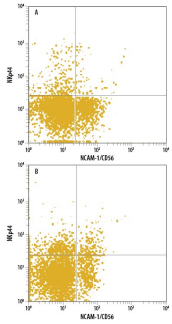
APPLICATIONS

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	10 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of NKp44/NCR2 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) either (A) untreated or (B) treated with Recombinant Human IL-2 (Catalog # 202-IL) were stained with Mouse Anti-Human NKp44/NCR2 PE-conjugated Monoclonal Antibody (Catalog # FAB22491P) and Mouse Anti-Human NCAM-1/CD56 APC-conjugated Monoclonal Antibody (Catalog # FAB2408A). Quadrant markers were set based on control antibody staining (Catalog # IC003A). View our protocol for Staining Membrane-associated Proteins.

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.

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BACKGROUND

NKp44, along with NKp30 and NKp46, constitute a group of receptors termed "Natural Cytotoxicity Receptors" (NCR) (1). These receptors are expressed almost exclusively by NK cells and play a major role in triggering NK-mediated killing of most tumor cell lines. No rodent ortholog to NKp44 has been identified. Human NKp44, also known as NCR2, is a 44 kDa type I transmembrane glycoprotein that is characterized by the presence of one extracellular V-like immunoglobulin domain (2). It is synthesized as a 276 amino acid (aa) precursor that contains a 21 aa signal sequence, a 171 aa extracellular region, a 21 aa transmembrane segment and a 63 aa cytoplasmic tail. Alternate splicing in both the cytoplasmic tail and extracellular region generates multiple isoforms of unknown significance. The Ig-like region is unaffected. A physical association with the ITAM-bearing accessory protein, DAP12, occurs via a charged residue in the NKp44 transmembrane domain. Ligation of NKp44 with a specific antibody results in phosphorylation of DAP12 (3) and activation of target cell lysis in a redirected killing assay (4). NKp44 is absent from resting NK cells but is upregulated upon activation with IL-2. Activation-induced expression occurs in the $CD56^{dim}$ $CD16^{+}$ NK subset that accounts for more than 85% of NK cells found in peripheral blood and spleen, as well as the $CD56^{bright}$ $CD16^{-}$ NK subset that constitutes the majority of NK cells in lymph node and tonsil (5). Studies with neutralizing antibodies reveal that NKp44 is partially responsible for triggering lytic activity against several tumor cell types (2, 6). Blocking any of the individual NCRs results in partial inhibition of tumor cell lysis, but nearly complete inhibition of lysis is observed if all three receptors are blocked simultaneously (6). NKp44 has also been implicated in recognition of virus-infected cells through its capacity to bind to viral hemagglutinins (7).

References:

1. Moretta, L. and A. Moretta (2004) EMBO J. **23**:255.
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3. Augugliaro, R. *et al.* (2003) Eur. J. Immunol. **33**:1235.
4. Vitale, M. *et al.* (1998) J. Exp. Med. **187**:2065.
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6. Pende, D. *et al.* (1999) J. Exp. Med. **190**:1505.
7. Arnon, T. *et al.* (2001) Eur. J. Immunol. **31**:2680.

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