

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse NKp46/NCR1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) NKp30, rhNKp44, rhNKp46, or rhNKp80 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 29A1.4
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Murine myeloma cell line NSO-derived recombinant mouse NKp46-Fc chimera Glu22-Asn255 Accession # Q8C567
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	Mouse splenocytes

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. <ul style="list-style-type: none"> 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 are expressed almost exclusively by NK cells and play a major role in triggering some of the key lytic activities of NK cells. In human systems, 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 upregulated by IL-2. Mouse NKp46, also known as MAR-1 (3), is a type I transmembrane protein with two extracellular Ig-like domains. It has a positive charge in its transmembrane domain that permits association with the ITAM-bearing signal adapter proteins, CD3ζ and Fcε R1γ (4). Studies with neutralizing antibodies indicate that the three NCR 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 (5). NKp46 has also been implicated in recognition of virus-infected cells through its capacity to bind to viral hemagglutinins (6-8).

References:

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3. Biassoni, R. *et al.* (1999) *Eur. J. Immunol.* **29**:1014.
4. Westgaard, I. *et al.* (2004) *J. Leukoc. Biol.* PMID 15356098.
5. Pende, D. *et al.* (1999) *J. Exp. Med.* **190**:1505.
6. Arnon, T. *et al.* (2004) *Blood* **103**:664.
7. Arnon, T. *et al.* (2001) *Eur. J. Immunol.* **31**:2680.
8. Mandelboim, O. *et al.* (2001) *Nature* **409**:1055.

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