

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human NKp46 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 5% cross-reactivity with recombinant mouse NKp46 (MAR-1) is observed and less than 1% cross-reactivity with recombinant human (rh) NKp30, rhNKp44, and rhNKp80 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human NKp46/NCR1 Gln22-Asn254 Accession # AAH64806
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

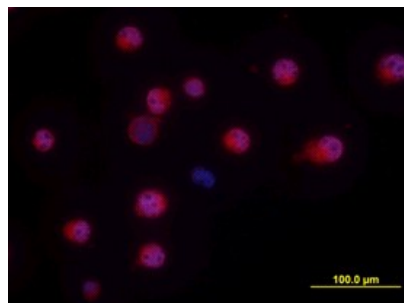
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human NKp46/NCR1 Fc Chimera (Catalog # <a href="#">1850-NK</a> )
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below

## DATA

### Immunocytochemistry



**NKp46/NCR1 in NK-92 human cell line** NKp46/NCR1 was detected in immersion fixed NK-92 human natural killer lymphoma cell line using Goat Anti-Human NKp46/NCR1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1850) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # [NL001](#)) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**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<sup>dim</sup>CD16<sup>+</sup> 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<sup>bright</sup>CD16<sup>-</sup>) 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, CD3 $\zeta$  and Fc $\epsilon$ R1 $\gamma$ , 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:**

1. Moretta, L. and A. Moretta (2004) *EMBO J.* **23**:255.
2. Ferlazzo, G. *et al.* (2004) *J. Immunol.* **172**:1455.
3. Augugliaro, R. *et al.* (2003) *Eur. J. Immunol.* **33**:1235.
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.