

# NKp30 (N-20): sc-20476

## BACKGROUND

The immune response is the way the body recognizes and defends itself against microorganisms, viruses and substances recognized as foreign and potentially harmful to the body. Innate immunity is the barrier that keeps foreign materials from entering the body and represents the first line of defense in the immune response. During the innate response to many inflammatory and infectious stimuli, dendritic cells (DCs) undergo a differentiation process termed maturation. Mature DCs activate antigen-specific naive T cells and resting human natural killer (NK) cells. NK cell receptors NKp30, NKp44 and NKp46 appear to play prominent roles in NK cell activation. The human NKp30 gene maps to chromosome 6p21.33 and encodes a 190 amino acid protein. The NKp30 protein contains a signal peptide followed by a 120 amino acid extracellular region that forms a V-type Ig-like domain with two potential N-linked glycosylation sites, a hydrophobic transmembrane region with a positively charged Arginine residue, and a 33 amino acid cytoplasmic tail lacking an immunoreceptor tyrosine-based activating motif (ITAM). NKp30 cooperates with NKp46 and/or NKp44 in the induction of NK-mediated cytotoxicity against the majority of target cells, where it represents the major triggering receptor in the killing of certain tumors.

## REFERENCES

1. Pende, D., et al. 1999. Identification and molecular characterization of NKp30, a novel triggering receptor involved in natural cytotoxicity mediated by human natural killer cells. *J. Exp. Med.* 190: 1505-1516.
2. Sato, M., et al. 2001. Identification of novel single nucleotide substitutions in the NKp30 gene expressed in human natural killer cells. *Tissue Antigens* 58: 255-258.
3. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 109170. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Ferlazzo, G., et al. 2002. Human dendritic cells activate resting natural killer (NK) cells and are recognized via the NKp30 receptor by activated NK cells. *J. Exp. Med.* 195: 343-351.
5. LocusLink Report (LocusID: 7940). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: NCR3 (human) mapping to 6p21.33.

## SOURCE

NKp30 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of NKp30 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20476 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NKp30 (N-20) is recommended for detection of NKp30 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NKp30 (N-20) is also recommended for detection of NKp30 in additional species, including bovine.

Suitable for use as control antibody for NKp30 siRNA (h): sc-42950, NKp30 shRNA Plasmid (h): sc-42950-SH and NKp30 shRNA (h) Lentiviral Particles: sc-42950-V.

Molecular Weight of NKp30: 39 kDa.

Positive Controls: THP-1 cell lysate: sc-2238.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Ponnampalam, A.P., et al. 2008. Identification and hormonal regulation of a novel form of NKp30 in human endometrial epithelium. *Eur. J. Immunol.* 38: 216-226.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **NKp30 (CLH9): sc-33647** or **NKp30 (CLH3): sc-33646**, our highly recommended monoclonal alternatives to NKp30 (N-20).