

NKp46 (C-20): sc-18158

BACKGROUND

NKp46 (lymphocyte antigen 94, LY94) is a natural cytotoxicity receptor that belongs to the immunoglobulin superfamily and is expressed by all resting or activated NK cells, but not on T cells or B cells. The NKp46 cDNA encodes a 304 amino acid type I transmembrane protein with an extracellular region preceded by a 21-residue signal peptide and two cysteine-bridged C2-type Ig-like domains. A stem connects the extracellular domain to a 19 amino acid, Arginine containing-transmembrane domain. NKp46 is involved in natural cytotoxicity and is involved in the recognition and lysis of both human and murine tumor cells. NKp46-expressing NK cells may recognize target cells infected by influenza or parainfluenza without the decreased expression of target-cell MHC class I protein, providing a mechanism for NK cells to destroy virus-infected cells and tumor cells without the need for previous antigen stimulation.

REFERENCES

1. Sivori, S., et al. 1997. p46, a novel natural killer cell-specific surface molecule that mediates cell activation. *J. Exp. Med.* 186: 1129-1136.
2. Pessino, A., et al. 1998. Molecular cloning of NKp46: a novel member of the immunoglobulin superfamily involved in triggering of natural cytotoxicity. *J. Exp. Med.* 188: 953-960.
3. Sivori, S., et al. 1999. NKp46 is the major triggering receptor involved in the natural cytotoxicity of fresh or cultured human NK cells. Correlation between surface density of NKp46 and natural cytotoxicity against autologous, allogeneic or xenogeneic target cells. *Eur. J. Immunol.* 29: 1656-1666.
4. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 604530. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Mandelboim, O., et al. 2001. Recognition of haemagglutinins on virus-infected cells by NKp46 activates lysis by human NK cells. *Nature* 409: 1055-1060.
6. LocusLink Report (LocusID: 9437). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: NCR1 (human) mapping to 19q13.42.

SOURCE

NKp46 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NKp46 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-18158 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NKp46 (C-20) is recommended for detection of NKp46 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).

Suitable for use as control antibody for NKp46 siRNA (h): sc-42951, NKp46 shRNA Plasmid (h): sc-42951-SH and NKp46 shRNA (h) Lentiviral Particles: sc-42951-V.

Molecular Weight of NKp46: 47 kDa.

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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **NKp46 (9E2): sc-53599**, our highly recommended monoclonal alternative to NKp46 (C-20).