

NKp46 (M-100): sc-292796

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 2 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

- Sivori, S., Vitale, M., Morelli, L., Sanseverino, L., Augugliaro, R., Bottino, C., Moretta, L. and Moretta, A. 1997. p46, a novel natural killer cell-specific surface molecule that mediates cell activation. *J. Exp. Med.* 186: 1129-1136.
- Pessino, A., Sivori, S., Bottino, C., Malaspina, A., Morelli, L., Moretta, L., Biassoni, R. and Moretta, A. 1998. Molecular cloning of NKp46: a novel member of the immunoglobulin superfamily involved in triggering of natural cytotoxicity. *J. Exp. Med.* 188: 953-960.
- Sivori, S., Pende, D., Bottino, C., Marcenaro, E., Pessino, A., Biassoni, R., Moretta, L. and Moretta, A. 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.
- Mandelboim, O., Lieberman, N., Lev, M., Paul, L., Arnon, T.I., Bushkin, Y., Davis, D.M., Strominger, J.L., Yewdell, J.W. and Porgador, A. 2001. Recognition of haemagglutinins on virus-infected cells by NKp46 activates lysis by human NK cells. *Nature* 409: 1055-1060.
- 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/>
- LocusLink Report (LocusID: 9437). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: Ncr1 (mouse) mapping to 7 A1.

SOURCE

NKp46 (M-100) is a rabbit polyclonal antibody raised against amino acids 75-174 mapping within an internal region of NKp46 of mouse origin.

PRODUCT

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

APPLICATIONS

NKp46 (M-100) is recommended for detection of NKp46 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 (m): sc-63344, NKp46 shRNA Plasmid (m): sc-63344-SH and NKp46 shRNA (m) Lentiviral Particles: sc-63344-V.

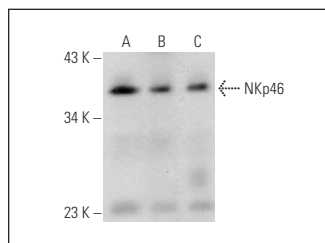
Molecular Weight of NKp46: 47 kDa.

Positive Controls: AMJ2-C8 whole cell lysate: sc-364366, mouse thymus extract: sc-2406 or mouse lymph node extract: sc-364243.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotting A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



NKp46 (M-100): sc-292796. Western blot analysis of NKp46 expression in AMJ2-C8 whole cell lysate (A) and mouse thymus (B) and mouse lymph node (C) tissue extracts.

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 or our catalog for detailed protocols and support products.