SANTA CRUZ BIOTECHNOLOGY, INC.

NKp46 (6D614): sc-71711

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

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2. 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.
3. 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.
4. 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.
5. 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/
6. LocusLink Report (LocusID: 9437). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

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

SOURCE

NKp46 (6D614) is a mouse monoclonal antibody raised against full length NKp46 of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NKp46 (6D614) is recommended for detection of NKp46 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for NKp46 siRNA (h): sc-42951.

Molecular Weight of NKp46: 47 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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.

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.