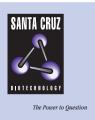
SANTA CRUZ BIOTECHNOLOGY, INC.

NKp44 (P44-8): sc-73401



BACKGROUND

Natural killer (NK) cells direct cytotoxicity against tumor or virally infected cells. NK cell-mediated cytotoxicity is stimulated by several activating receptors associated with the signaling adapter DNAX activation 12/killer cell-activating receptor-associated protein (DAP12). NKp44 is a natural cytotoxicity receptor that is expressed on IL-2-activated human NK cells and may contribute to the increased efficiency of NK cells to mediate tumor cell lysis. NKp44 is composed of one Ig-like extracellular domain, a transmembrane segment and a cytoplasmic domain. Prolactin upregulates and cortisol downregulates the surface expression of NKp44 at the transcriptional level. A cellular ligand for NKp44 (NKp44L) is expressed during HIV-1 infection and is correlated with the progression of CD4+ T cell depletion and an increase of viral load. This implicates NKp44 as a therapeutic agent that may aid in the progress towards a vaccine for HIV-1 infection.

REFERENCES

- Cantoni, C., Ponassi, M., Biassoni, R., Conte, R., Spallarossa, A., Moretta, A., Moretta, L., Bolognesi, M. and Bordo, D. 2003. The three-dimensional structure of the human NK cell receptor NKp44, a triggering partner in natural cytotoxicity. Structure 11: 725-734.
- De Maria, A., Fogli, M., Costa, P., Murdaca, G., Puppo, F., Mavilio, D., Moretta, A. and Moretta, L. 2003. The impaired NK cell cytolytic function in viremic HIV-1 infection is associated with a reduced surface expression of natural cytotoxicity receptors (NKp46, NKp30 and NKp44). Eur. J. Immunol. 33: 2410-2418.
- Campbell, K.S., Yusa, S., Kikuchi-Maki, A. and Catina, T.L. 2004. NKp44 triggers NK cell activation through DAP12 association that is not influenced by a putative cytoplasmic inhibitory sequence. J. Immunol. 172: 899-906.
- Forte, P., Lilienfeld, B.G., Baumann, B.C. and Seebach, J.D. 2005. Human NK cytotoxicity against porcine cells is triggered by NKp44 and NKG2D. J. Immunol. 175: 5463-5470.
- Fuchs, A., Cella, M., Kondo, T. and Colonna, M. 2005. Paradoxic inhibition of human natural interferon-producing cells by the activating receptor NKp44. Blood 106: 2076-2082.
- Mavoungou, E., Bouyou-Akotet, M.K. and Kremsner, P.G. 2005. Effects of prolactin and cortisol on natural killer (NK) cell surface expression and function of human natural cytotoxicity receptors (NKp46, NKp44 and NKp30). Clin. Exp. Immunol. 139: 287-296.
- Stet, R.J., Hermsen, T., Westphal, A.H., Jukes, J., Engelsma, M., Lidy Verburg-van Kemenade, B.M., Dortmans, J., Aveiro, J. and Savelkoul, H.F. 2005. Novel immunoglobulin-like transcripts in teleost fish encode polymorphic receptors with cytoplasmic ITAM or ITIM and a new structural Ig domain similar to the natural cytotoxicity receptor NKp44. Immunogenetics 57: 77-89.
- Srivastava, B.I. and Srivastava, M.D. 2006. Expression of natural cytotoxicity receptors NKp30, NKp44, and NKp46 mRNAs and proteins by human hematopoietic and non-hematopoietic cells. Leuk. Res. 30: 37-46.

CHROMOSOMAL LOCATION

Genetic locus: NCR2 (human) mapping to 6p21.1.

SOURCE

NKp44 (P44-8) is a mouse monoclonal antibody raised against recombinant NKp44 of human origin.

PRODUCT

Each vial contains 100 $\mu g~lgG_1$ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NKp44 (P44-8) is recommended for detection of NKp44 of human origin by flow cytometry (1 μg per 1 x 10⁶ cells).

Suitable for use as control antibody for NKp44 siRNA (h): sc-72170.

Molecular Weight of NKp44: 44 kDa.

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.