NKp44 (8F12): sc-59342



The Power to Question

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 up-regulates and cortisol down-regulates 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., et al. 2003. The three-dimensional structure of the human NK cell receptor NKp44, a triggering partner in natural cytotoxicity. Structure 11: 725-734.
- 2. De Maria, A., et al. 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.
- 3. Campbell, K.S., et al. 2004. NKp44 triggers NK cell activation through DAP12 association that is not influenced by a putative cytoplasmic inhibitory sequence. J. Immunol. 172: 899-906.
- 4. Forte, P., et al. 2005. Human NK cytotoxicity against porcine cells is triggered by NKp44 and NKG2D. J. Immunol. 175: 5463-5470.
- 5. Fuchs, A., et al. 2005. Paradoxic inhibition of human natural interferon-producing cells by the activating receptor NKp44. Blood 106: 2076-2082.
- 6. Mavoungou, E., et al. 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.
- 7. Stet, R.J., et al. 2005. Novel immunoglobulin-like transcripts in teleost fish encode polymorphic receptors with cytoplasmic ITAM or ITIM and a new structural lg domain similar to the natural cytotoxicity receptor NKp44. Immunogenetics 57: 77-89.
- 8. 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 (8F12) is a mouse monoclonal antibody raised against amino acids 19-130 of NKp44 of human origin.

PRODUCT

Each vial contains 50 μg lgG_3 in 500 μl of PBS with < 0.1% sodium azide and 0.1% gelatin.

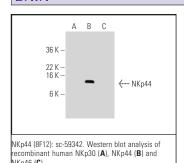
APPLICATIONS

NKp44 (8F12) is recommended for detection of NKp44 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for NKp44 siRNA (h): sc-72170, NKp44 shRNA Plasmid (h): sc-72170-SH and NKp44 shRNA (h) Lentiviral Particles: sc-72170-V.

Molecular Weight of NKp44: 44 kDa.

DATA



SELECT PRODUCT CITATIONS

 Choi, J.W., et al. 2020. Proteome analysis of human natural killer cell derived extracellular vesicles for identification of anticancer effectors. Molecules 25: 5216.

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 for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com