

NKp44 (8F12): sc-59342

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

1. 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.
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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. Paradoxical 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 Ig 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 IgG₃ in 500 µl of PBS with < 0.1% sodium azide and 0.1% gelatin.

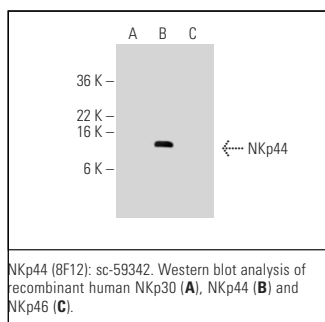
APPLICATIONS

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 µg per 100-500 µg 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

1. 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.