



NKTR (Q-16): sc-103077

BACKGROUND

Natural killer (NK) cells, also referred to as large granular lymphocytes, are involved in the destruction of tumors and virus-infected cells through recognition of major histocompatibility complex (MHC)-class I molecules on cell surfaces. NKTR (natural killer triggering receptor), also known as Natural-killer cells cyclophilin-related protein, is a 1462 amino acid peripheral membrane protein that facilitates the binding of NK cells to tumor targets. Activation of NK cells by IL-2 changes the splicing pattern of NKTR, which results in upregulation of the full-length protein. The gene encoding NKTR maps to human chromosome 3, which is made up of about 214 million bases encoding over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Marfan Syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth Disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. Young, H.A., Jenkins, N.A., Copeland, N.G., Simek, S., Lerman, M.I., Zbar, B., Glenn, G., Ortaldo, J.R. and Anderson, S.K. 1993. Localization of a novel natural killer triggering receptor locus to human chromosome 3p23-p21 and mouse chromosome 9. *Genomics* 16: 548-549.
2. Rinfret, A. and Anderson, S.K. 1993. IL-2 regulates the expression of the NK-TR gene via an alternate RNA splicing mechanism. *Mol. Immunol.* 30: 1307-1313.
3. Anderson, S.K., Gallinger, S., Roder, J., Frey, J., Young, H.A. and Ortaldo, J.R. 1993. A cyclophilin-related protein involved in the function of natural killer cells. *Proc. Natl. Acad. Sci. USA* 90: 542-546.
4. Rinfret, A., Collins, C., Menard, R. and Anderson, S.K. 1994. The N-terminal cyclophilin-homologous domain of a 150-kilodalton tumor recognition molecule exhibits both peptidylprolyl cis-trans-isomerase and chaperone activities. *Biochemistry* 33: 1668-1673.
5. Chambers, C.A., Gallinger, S., Anderson, S.K., Giardina, S., Ortaldo, J.R., Hozumi, N. and Roder, J. 1994. Expression of the NKTR gene is required for NK-like activity in human T cells. *J. Immunol.* 152: 2669-2674.
6. Simons-Evelyn, M., Young, H.A. and Anderson, S.K. 1997. Characterization of the mouse Nktr gene and promoter. *Genomics* 40: 94-100.
7. Alkhatib, G., Murata, K. and Roder, J.C. 1997. Cellular distribution of a natural killer cell tumour recognition-related surface antigen in purified human lymphocytes. *Immunology* 92: 173-179.
8. Vos, Q., Ortaldo, J.R., Conan-Cibotti, M., Vos, M.D., Young, H.A., Anderson, S.K., Witherspoon, K., Prager, I., Snapper, C.M. and Mond, J.J. 1998. Phenotypic and functional characterization of a panel of cytotoxic murine NK cell clones that are heterogeneous in their enhancement of Ig secretion *in vitro*. *Int. Immunol.* 10: 1093-1101.
9. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 161565. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: NKTR (human) mapping to 3p22.1.

SOURCE

NKTR (Q-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NKTR of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-103077 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NKTR (Q-16) is recommended for detection of NKTR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 NKTR siRNA (h): sc-78500, NKTR shRNA Plasmid (h): sc-78500-SH and NKTR shRNA (h) Lentiviral Particles: sc-78500-V.

Molecular Weight of NKTR: 150 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.