

Ninjurin-1 (V-19): sc-79649

BACKGROUND

Ninjurin family proteins are multi-pass membrane proteins induced by nerve injury in Schwann cells and dorsal root ganglion neurons. Ninjurin proteins act as homophilic cell adhesion molecules that promote axonal growth. Ninjurin proteins also play a role in the formation and function of other tissues. Ninjurin-1 is widely expressed in adult and embryonic tissues, particularly those with epithelial origin. Ninjurin-2 is also widely expressed, with highest levels in adult bone marrow and peripheral blood lymphocytes and embryo liver, thymus and heart. The genes that encode the Ninjurin proteins map to a region known to cause several genetic disorders, including hereditary sensory neuropathy type I and type II (HSN1 and HSN2). However, no link between mutations in the genes encoding Ninjurins and the diseases have been found.

REFERENCES

1. Araki, T. and Milbrandt, J. 1996. Ninjurin, a novel adhesion molecule, is induced by nerve injury and promotes axonal growth. *Neuron* 17: 353-361.
2. Araki, T., Zimonjic, D.B., Popescu, N.C. and Milbrandt, J. 1997. Mechanism of homophilic binding mediated by Ninjurin, a novel widely expressed adhesion molecule. *J. Biol. Chem.* 272: 21373-21380.
3. Chadwick, B.P., Heath, S.K., Williamson, J., Obermayr, F., Patel, L., Sheer, D. and Frischauf, A.M. 1998. The human homologue of the Ninjurin gene maps to the candidate region of hereditary sensory neuropathy type I (HSNI). *Genomics* 47: 58-63.
4. Online Mendelian Inheritance in Man, OMIM[™]. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 602062. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Araki, T. and Milbrandt, J. 2000. Ninjurin-2, a novel homophilic adhesion molecule, is expressed in mature sensory and enteric neurons and promotes neurite outgrowth. *J. Neurosci.* 20: 187-195.
6. Toyama, T., Sasaki, Y., Horimoto, M., Iyoda, K., Yakushijin, T., Ohkawa, K., Takehara, T., Kasahara, A., Araki, T., Hori, M. and Hayashi, N. 2004. Ninjurin-1 increases p21 expression and induces cellular senescence in human hepatoma cells. *J. Hepatol.* 41: 637-643.
7. Cardoso, C.C., Martinez, A.N., Guimarães, P.E., Mendes, C.T., Pacheco, A.G., de Oliveira, R.B., Teles, R.M., Illarramendi, X., Sampaio, E.P., Sarno, E.N., Dias-Neto, E. and Moraes, M.O. 2007. Ninjurin-1 asp110ala single nucleotide polymorphism is associated with protection in leprosy nerve damage. *J. Neuroimmunol.* 190: 131-138.

CHROMOSOMAL LOCATION

Genetic locus: NINJ1 (human) mapping to 9q22.31; Ninj1 (mouse) mapping to 13 A5.

SOURCE

Ninjurin-1 (V-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ninjurin-1 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-79649 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ninjurin-1 (V-19) is recommended for detection of Ninjurin-1 of mouse, rat and 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).

Ninjurin-1 (V-19) is also recommended for detection of Ninjurin-1 in additional species, including canine, bovine and avian.

Suitable for use as control antibody for Ninjurin-1 siRNA (h): sc-75915, Ninjurin-1 siRNA (m): sc-75916, Ninjurin-1 shRNA Plasmid (h): sc-75915-SH, Ninjurin-1 shRNA Plasmid (m): sc-75916-SH, Ninjurin-1 shRNA (h) Lentiviral Particles: sc-75915-V and Ninjurin-1 shRNA (m) Lentiviral Particles: sc-75916-V.

Molecular Weight of Ninjurin-1: 22 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.



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Try **Ninjurin-1 (50): sc-136295**, our highly recommended monoclonal alternative to Ninjurin-1 (V-19).