

Ninjurin-1 (50): sc-136295

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., et al. 1997. Mechanism of homophilic binding mediated by Ninjurin, a novel widely expressed adhesion molecule. *J. Biol. Chem.* 272: 21373-21380.
3. Chadwick, B.P., et al. 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., et al. 2004. Ninjurin-1 increases p21 expression and induces cellular senescence in human hepatoma cells. *J. Hepatol.* 41: 637-643.

CHROMOSOMAL LOCATION

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

SOURCE

Ninjurin-1 (50) is a mouse monoclonal antibody raised against amino acids 1-152 representing full length Ninjurin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Ninjurin-1 (50) is recommended for detection of Ninjurin-1 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

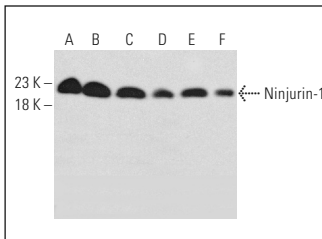
Molecular Weight of Ninjurin-1: 22 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

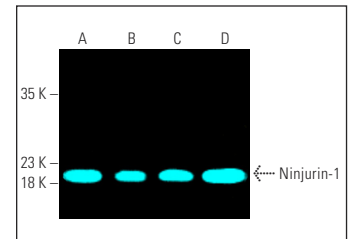
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Ninjurin-1 (50): sc-136295. Western blot analysis of Ninjurin-1 expression in A549 (A), HeLa (B), Hep G2 (C), K-562 (D) and RAW 264.7 (E) whole cell lysates and rat liver tissue extract (F).



Ninjurin-1 (50): sc-136295. Fluorescent western blot analysis of Ninjurin-1 expression in Hep G2 (A), HeLa (B), K-562 (C) and A549 (D) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2a} BP-CFL 647: sc-542738.

SELECT PRODUCT CITATIONS

1. Minoshima, A., et al. 2018. Pericyte-specific Ninjurin-1 deletion attenuates vessel maturation and blood flow recovery in hind limb ischemia. *Arterioscler. Thromb. Vasc. Biol.* 38: 2358-2370.
2. Matsuo, R., et al. 2022. Ninjurin-1 deletion in NG2-positive pericytes prevents microvessel maturation and delays wound healing. *JID Innov.* 2: 100141.

RESEARCH USE

For research use only, not for use in diagnostic procedures. Not for resale.