SANTA CRUZ BIOTECHNOLOGY, INC.

Ninjurin-1 (50): sc-136295

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ninjurin family proteins are muli-pass membrane proteins induced by nerve injury in Schwann cells and dorsal root ganglion neurons. Nunjurin 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.

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.

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) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunoprecipitation.

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.

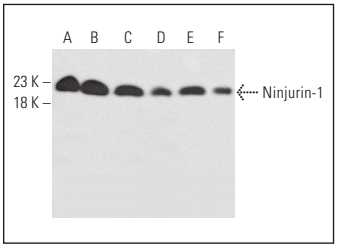
Molecular Weight of Ninjurin-1: 22 kDa.

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

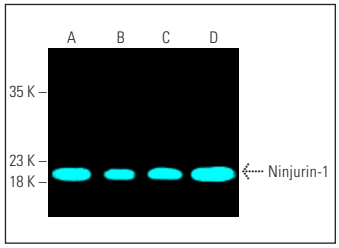
RECOMMENDED SUPPORT REAGENTS

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) 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.
3. Toma, L., et al. 2023. Oscillating glucose induces the increase in inflammatory stress through Ninjurin-1 up-regulation and stimulation of transport proteins in human endothelial cells. Biomolecules 13: 626.
4. Sheng, Y., et al. 2023. Tomo-seq identifies NINJ1 as a potential target for anti-inflammatory strategy in thoracic aortic dissection. BMC Med. 21: 396.

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. Not for resale.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.