SANTA CRUZ BIOTECHNOLOGY, INC.

Ninjurin-2 siRNA (h): sc-75917

BACKGROUND

Ninjurin family proteins are multi-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

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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.
7. Cardoso, C.C., et al. 2007. Ninjurin-1 asp110ala single nucleotide polymorphism is associated with protection in leprosy nerve damage. J. Neuroimmunol. 190: 131-138.

CHROMOSOMAL LOCATION

Genetic locus: NINJ2 (human) mapping to 12p13.33.

PRODUCT

Ninjurin-2 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Ninjurin-2 shRNA Plasmid (h): sc-75917-SH and Ninjurin-2 shRNA (h) Lentiviral Particles: sc-75917-V as alternate gene silencing products.

For independent verification of Ninjurin-2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75917A, sc-75917B and sc-75917C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Ninjurin-2 siRNA (h) is recommended for the inhibition of Ninjurin-2 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Ninjurin-2 gene expression knockdown using RT-PCR Primer: Ninjurin-2 (h)-PR: sc-75917-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.