SANTA CRUZ BIOTECHNOLOGY, INC.

Neuron navigator 3 siRNA (h): sc-95867

BACKGROUND

Neuron navigator 3 (NAV3), also known as pore membrane and/or filament-interacting-like protein 1 (POMFIL1), unc-53 homolog 3 (unc53H3) or STEERIN3, is a 2,385 amino acid protein that localizes to the nuclear outer membrane and plays a role in neuron regeneration. Existing as three alternatively spliced isoforms, Neuron navigator 3 is highly expressed in adult and fetal brain and is found at moderate to low levels in ovary, lung, testis, placenta and heart. Neuron navigator 3 is thought be involved in the regulation of IL-2 production and contains one CH (calponin-homology) domain, three N-terminal hydrophobic domains, multiple N-glycosylation sites, three ATP/GTP-binding A motifs (P loops) and several phosphorylation sites. The gene encoding Neuron navigator 3 maps to human chromosome 12q21.2.

REFERENCES

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2. Coy, J.F., et al. 2002. Pore membrane and/or filament interacting like protein 1 (POMFIL1) is predominantly expressed in the nervous system and encodes different protein isoforms. Gene 290: 73-94.
3. Maes, T., et al. 2002. Neuron navigator: a human gene family with homology to unc-53, a cell guidance gene from *Caenorhabditis elegans*. Genomics 80: 21-30.
4. Peeters, P.J., et al. 2004. Sensory deficits in mice hypomorphic for a mammalian homologue of unc-53. Brain Res. Dev. Brain Res. 150: 89-101.
5. Karenko, L., et al. 2005. Primary cutaneous T-cell lymphomas show a deletion or translocation affecting NAV3, the human UNC-53 homologue. Cancer Res. 65: 8101-8110.
6. Imami, K., et al. 2008. Automated phosphoproteome analysis for cultured cancer cells by two-dimensional nanoLC-MS using a calcined titania/C18 biphasic column. Anal. Sci. 24: 161-166.
7. Kawai, K., et al. 2010. Cutaneous-type adult T-cell leukemia/lymphoma does not primarily show deletion of NAV3 gene. J. Invest. Dermatol. 130: 316-318.

CHROMOSOMAL LOCATION

Genetic locus: NAV3 (human) mapping to 12q21.2.

PRODUCT

Neuron navigator 3 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 Neuron navigator 3 shRNA Plasmid (h): sc-95867-SH and Neuron navigator 3 shRNA (h) Lentiviral Particles: sc-95867-V as alternate gene silencing products.

For independent verification of Neuron navigator 3 (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-95867A, sc-95867B and sc-95867C.

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

Neuron navigator 3 siRNA (h) is recommended for the inhibition of Neuron navigator 3 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 Neuron navigator 3 gene expression knockdown using RT-PCR Primer: Neuron navigator 3 (h)-PR: sc-95867-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.