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SANTA CRUZ BIOTECHNOLOGY, INC.

NgR2 siRNA (m): sc-149954

BACKGROUND

The Nogo receptor is a brain-specific protein that is most highly expressed in the gray matter of the CNS. NgR2 (nogo-66 receptor-related protein 2), also known as RTN4RL2 (reticulon 4 receptor-like 2), NGRL3 (nogo receptor-like 3) or NGRH1 (nogo-66 receptor homolog 1), is a 420 amino acid cell membrane protein that localizes to the surface of neurons. Involved in the regulation of axonal regulation in the central nervous system, NgR2 is highly expressed in liver and brain, with lower levels found in mammary gland, kidney, skeletal muscle, thyroid, placenta and spleen. NgR2 belongs to the Nogo receptor family and contains eight LRR (leucine-rich) repeats, one LRRNT domain and a single LRRCT domain. The gene encoding NgR2 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

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2. Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. Ann. Hum. Genet. 67: 269-280.
3. Barton, W.A., et al. 2003. Structure and axon outgrowth inhibitor binding of the Nogo-66 receptor and related proteins. EMBO J. 22: 3291-3302.
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CHROMOSOMAL LOCATION

Genetic locus: Rtn4rl2 (mouse) mapping to 2 D.

PRODUCT

NgR2 siRNA (m) is a target-specific 19-25 nt siRNA 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 NgR2 shRNA Plasmid (m): sc-149954-SH and NgR2 shRNA (m) Lentiviral Particles: sc-149954-V as alternate gene silencing products.

PROTOCOLS

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

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

NgR2 siRNA (m) is recommended for the inhibition of NgR2 expression in mouse 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 NgR2 gene expression knockdown using RT-PCR Primer: NgR2 (m)-PR: sc-149954-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.