SANTA CRUZ BIOTECHNOLOGY, INC.

Neurofascin siRNA (m): sc-61185

BACKGROUND

Members of the L1 subgroup of the immunoglobulin (Ig) superfamily promote axon outgrowth by interactions with a neuronal NgCAM-related cell adhesion molecule. Neurofascin is a cell adhesion, ankyrin-binding, single-pass membrane protein that plays a role in neurite extension in embryonic development. It also is involved in synaptogenesis, myelination and neuron-glial cell interaction. Neurofascin may be a component of a Neurofascin/NRCAM/Ankyrin G complex and can dimerize in solution. The Neurofascin protein interacts with GLDN/gliomedin and associates with the sodium channel β-3 (SCN3B) and β-1 (SCNB1) subunits. It contains five Fibronectin type III domains and six Ig-like C2-type (immunoglobulin-like) domains. There are 13 known isoforms of the Neurofascin protein.

REFERENCES

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3. Koticha, D., Babiarz, J., Kane-Goldsmith, N., Jacob, J., Raju, K. and Grumet, M. 2005. Cell adhesion and neurite outgrowth are promoted by Neurofascin NF155 and inhibited by NF186. Mol. Cell. Neurosci. 30: 137-148.
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5. Sherman, D.L., Tait, S., Melrose, S., Johnson, R., Zonta, B., Court, F.A., Macklin, W.B., Meek, S., Smith, A.J., Cottrell, D.F. and Brophy, P.J. 2005. Neurofascins are required to establish axonal domains for saltatory conduction. Neuron 48: 737-742.

CHROMOSOMAL LOCATION

Genetic locus: Nfasc (mouse) mapping to 1 E4.

PRODUCT

Neurofascin siRNA (m) 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 Neurofascin shRNA Plasmid (m): sc-61185-SH and Neurofascin shRNA (m) Lentiviral Particles: sc-61185-V as alternate gene silencing products.

For independent verification of Neurofascin (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61185A, sc-61185B and sc-61185C.

RESEARCH USE

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

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

Neurofascin siRNA (m) is recommended for the inhibition of Neurofascin 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 Neurofascin gene expression knockdown using RT-PCR Primer: Neurofascin (m)-PR: sc-61185-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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