SANTA CRUZ BIOTECHNOLOGY, INC.

Neuroglycan C siRNA (m): sc-62682

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The Power to Question

BACKGROUND

Neuroglycan C is a brain-specific chondroitin sulfate proteoglycan (CSPG) implicated in the proliferation of neural stem and progenitor cells. Neuroglycan C is a single-pass membrane protein that can manifest as a part-time proteoglycan depending on the tissue expressing it. In its proteoglycan form, Neuroglycan C exhibits chondroitin sulfate glycans and functions as a receptor for midkine, a growth factor that binds heparin, to affect cytoskeletal changes. By means of ectodomain shedding, the ectodomain of Neuroglycan C is able to enhance neurite outgrowth from neurons. Neurite growth stimulation is affected by both an EGF-like and an acidic amino acid domain found on the shed ectodomain. Both domains instigate neurite growth, however, these domains exhibit differing functionality as to number of neurites produced and neuron types stimulated.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Cspg5 (mouse) mapping to 9 F2.

PROTOCOLS

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

PRODUCT

Neuroglycan C 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 Neuroglycan C shRNA Plasmid (m): sc-62682-SH and Neuroglycan C shRNA (m) Lentiviral Particles: sc-62682-V as alternate gene silencing products.

For independent verification of Neuroglycan C (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-62682A, sc-62682B and sc-62682C.

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

Neuroglycan C siRNA (m) is recommended for the inhibition of Neuroglycan C 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 Neuroglycan C gene expression knockdown using RT-PCR Primer: Neuroglycan C (m)-PR: sc-62682-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.