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SLITRK2 siRNA (m): sc-153595

BACKGROUND

SLITRK family proteins are integral membrane proteins that have a C-terminal domain that is partially similar to TRK neurotrophin receptor proteins and two leucine-rich repeat (LRR) domains that are similar to those of SLIT proteins. SLITRK2 (SLIT and NTRK-like protein 2) is a 845 amino acid single-pass type I membrane protein that contains 14 LRR (leucine-rich repeats) and is expressed in neural tissues, with highest levels found in adult cerebral cortex. Over-expression of SLITRK2 leads to inhibition of unipolar neurites in cultured cells, suggesting that it suppresses neurite outgrowth. Inhibitory activity of SLITRK2 is localized to its C-terminal intracellular domain and without this region the protein induces neurite outgrowth. Variants in the gene encoding SLITRK2 may contribute to the development of bipolar disorder, autism spectrum disorder and schizophrenia. There are two isoforms of SLITRK2 that are produced as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Slitrk2 (mouse) mapping to X A7.1.

RESEARCH USE

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

PRODUCT

SLITRK2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLITRK2 shRNA Plasmid (m): sc-153595-SH and SLITRK2 shRNA (m) Lentiviral Particles: sc-153595-V as alternate gene silencing products.

For independent verification of SLITRK2 (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-153595A, sc-153595B and sc-153595C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SLITRK2 siRNA (m) is recommended for the inhibition of SLITRK2 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 μ M in 66 μ l. 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 SLITRK2 gene expression knockdown using RT-PCR Primer: SLITRK2 (m)-PR: sc-153595-PR (20 μ l). 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.