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SANTA CRUZ BIOTECHNOLOGY, INC.

neuroligin 3 siRNA (m): sc-42088

BACKGROUND

Neuroligins are a family of plasma membrane proteins that possess an N-terminal hydrophobic domain, a large esterase homology domain, a single transmembrane region, a short cytoplasmic domain, and an EF-hand binding domain. Members of the neuroligin family include neuroligin 1, neuroligin 2 and neuroligin 3. Neuroligins are expressed in excitatory neuronal synaptic clefts. Neuroligins play a role in the formation and remodeling of CNS synapses by binding to β-neurexins, a family of neuronal cell surface proteins. Neuroexin 1β binds to the EF-hand domain of Neuroligin 1 and requires calcium ion. Neuroligins also bind to PSD-95, which may recruit ion channels and neurotransmitter receptors to the synapses.

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6. Philibert R.A., Winfield, S.L., Sandhu, H.K., Martin, B.M. and Ginns, E.I. 2000. The structure and expression of the human neuroligin 3 gene. Gene 246: 303-310.
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CHROMOSOMAL LOCATION

Genetic locus: Nlgn3 (mouse) mapping to X D.

PRODUCT

neuroligin 3 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 neuroligin 3 shRNA Plasmid (m): sc-42088-SH and neuroligin 3 shRNA (m) Lentiviral Particles: sc-42088-V as alternate gene silencing products.

For independent verification of neuroligin 3 (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-42088A, sc-42088B and sc-42088C.

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

neuroligin 3 siRNA (m) is recommended for the inhibition of neuroligin 3 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.

GENE EXPRESSION MONITORING

neuroligin 3 (C-3): sc-137052 is recommended as a control antibody for monitoring of neuroligin 3 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor neuroligin 3 gene expression knockdown using RT-PCR Primer: neuroligin 3 (m)-PR: sc-42088-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.