

neurocalcin δ siRNA (m): sc-149932

BACKGROUND

Neurocalcin δ (NCALD) is a 193 amino acid protein that belongs to the neuronal calcium sensor (NCS) family of calcium-binding proteins and is thought to play a role in the calcium-dependent regulation of rhodopsin phosphorylation. Expressed in cerebellum, cerebrum, brain stem, spinal cord, small intestine, retina, testis and ovary, neurocalcin δ localizes to the cytosol at resting calcium levels but moves to the membrane or perinuclear *trans*-Golgi network when intracellular calcium levels are elevated. The gene encoding neurocalcin δ maps to human chromosome 8, which consists of nearly 146 million base pairs, encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that map to chromosome 8.

REFERENCES

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3. Iivings, L., et al. 2002. Identification of Ca^{2+} -dependent binding partners for the neuronal calcium sensor protein neurocalcin delta: interaction with actin, clathrin and tubulin. *Biochem. J.* 363: 599-608.
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CHROMOSOMAL LOCATION

Genetic locus: Ncald (mouse) mapping to 15 B3.1.

PROTOCOLS

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

PRODUCT

neurocalcin δ 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 neurocalcin δ shRNA Plasmid (m): sc-149932-SH and neurocalcin δ shRNA (m) Lentiviral Particles: sc-149932-V as alternate gene silencing products.

For independent verification of neurocalcin δ (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-149932A, sc-149932B and sc-149932C.

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

neurocalcin δ siRNA (m) is recommended for the inhibition of neurocalcin δ 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 neurocalcin δ gene expression knockdown using RT-PCR Primer: neurocalcin δ (m)-PR: sc-149932-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.

RESEARCH USE

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