SANTA CRUZ BIOTECHNOLOGY, INC.

Neurotrimin siRNA (m): sc-61192

BACKGROUND

Cell adhesion molecules (CAMs) influence cell growth, differentiation, embryogenesis, immune response and cancer metastasis by networking information from the extracellular matrix to the cell. The four major families of cell adhesion molecules are immunoglobulin (Ig) superfamily (calcium-independent transmembrane glycoproteins), integrins (transmembrane non-covalently linked heterodimers of α and β subunits), calcium-dependent cadherins and divalent cation-dependent selectins. Regulation of neuronal synaptic adhesion by CAMs has proven important for learning and memory. Proper embryonic morphogenic development is also heavily dependent on the regulation of cell adhesion molecules. Neurotrimin (hNT) is a neural cell adhesion molecule localizing to the cell membrane, where it acts as a lipid-anchor. Neurotrimin belongs to the IgLON family of proteins, a member of the larger immunoglobulin superfamily.

REFERENCES

1. Yoon, I.K., et al. 2004. Exploration of replicative senescence-associated genes in human dermal fibroblasts by cDNA microarray technology. Exp. Gerontol. 39: 1369-1378.
2. Liu, J., et al. 2004. The cloning and preliminarily functional analysis of the human neurotrimin gene. Sci. China C, Life Sci. 47: 158-164.
3. Zhang, Z. and Henzel, W.J. 2004. Signal peptide prediction based on analysis of experimentall sites. Protein Sci. 13: 2819-2824.
4. Reed, J., et al. 2004. Diglons are heterodimeric proteins composed of IgLON subunits, and Diglon-CO inhibits neurite outgrowth from cerebellar granule cells. J. Cell Sci. 117: 3961-3973.
5. Ntougkos, E., et al. 2005. The IgLON family in epithelial ovarian cancer: expression profiles and clinicopathologic correlates. Clin. Cancer Res. 11: 5764-5768.
6. Grijalva, I., et al. 2006. Expression of neurotrimin in the normal and injured adult human spinal cord. Spinal Cord 44: 280-286.

CHROMOSOMAL LOCATION

Genetic locus: Ntm (mouse) mapping to 9 A4.

PRODUCT

Neurotrimin 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 Neurotrimin shRNA Plasmid (m): sc-61192-SH and Neurotrimin shRNA (m) Lentiviral Particles: sc-61192-V as alternate gene silencing products.

For independent verification of Neurotrimin (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-61192A, sc-61192B and sc-61192C.

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

Neurotrimin siRNA (m) is recommended for the inhibition of Neurotrimin 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

Neurotrimin (F-9): sc-390941 is recommended as a control antibody for monitoring of Neurotrimin 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 Neurotrimin gene expression knockdown using RT-PCR Primer: Neurotrimin (m)-PR: sc-61192-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.