SANTA CRUZ BIOTECHNOLOGY, INC.

neogenin siRNA (m): sc-36029

BACKGROUND

Neogenin (NGN) was first identified in chicken as a highly regulated protein in the developing nervous system and gastrointestinal tract. The human homolog is roughly 50% identical to the protein DCC (deleted in colorectal cancer), a candidate tumor suppressor that is also involved in neural development. DCC and neogenin may play complementary roles in the generation of the fully functional central nervous system. Neogenin is expressed in most normal tissues; in contrast to DCC, it is also detected at normal levels in cancer tissues. Neogenin is a member of the N-CAM family of cell adhesion molecules and is expressed on the surfaces of growing nerve cells as well as in a number of other developing embryonic tissues.

REFERENCES

1. Fearon, E.R., et al. 1990. Identification of a chromosome 18q gene that is altered in colorectal cancers. Science 247: 49-56.
2. Hedrick, L., et al. 1994. The DCC gene product in cellular differentiation and colorectal tumorigenesis. Genes Dev. 8: 1174-1183.
3. Vielmetter, J., et al. 1994. Neogenin, an avian cell surface protein expressed during terminal neuronal differentiation, is closely related to the human tumor suppressor molecule deleted in colorectal cancer. J. Cell Biol. 127: 2009-2020.
4. Keino-Masu, K., et al. 1996. Deleted in colorectal cancer (DCC) encodes a netrin receptor. Cell 87: 175-185.
5. Vielmetter, J., et al. 1997. Molecular characterization of human neogenin, a DCC-related protein, and the mapping of its gene (NEO1) to chromosomal position 15q22.3-q23. Genomics 41: 414-421.
6. Keeling, S.L., et al. 1997. Mouse Neogenin, a DCC-like molecule, has four splice variants and is expressed widely in the adult mouse and during embryogenesis. Oncogene 15: 691-700.
7. Gad, J.M., et al. 1997. The expression patterns of guidance receptors, DCC and neogenin, are spatially and temporally distinct throughout mouse embryogenesis. Dev. Biol. 192: 258-273.

CHROMOSOMAL LOCATION

Genetic locus: Neo1 (mouse) mapping to 9 B.

PRODUCT

neogenin 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 neogenin shRNA Plasmid (m): sc-36029-SH and neogenin shRNA (m) Lentiviral Particles: sc-36029-V as alternate gene silencing products.

For independent verification of neogenin (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-36029A, sc-36029B and sc-36029C.

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

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

neogenin (G-7): sc-514872 is recommended as a control antibody for monitoring of neogenin 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 neogenin gene expression knockdown using RT-PCR Primer: neogenin (m)-PR: sc-36029-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.