

NEURL siRNA (m): sc-149929

BACKGROUND

NEURL (neuralized like-protein 1), also known as RNF67 (RING finger protein 67), h-Neu or NEURL1, is a homolog of the *Drosophila melanogaster* protein neuralized (neur). In *Drosophila*, neur participates in the regulation of cell-cell interactions which are essential for neural precursor development. Due to its similarity with neur (30% amino acid sequence identity), NEURL may also play an important regulatory role in developmental processes and cell fate determination of the nervous system. NEURL consists of two neuralized homology repeat (NHR) domains and one C-terminal RING-type zinc finger. It is expressed in pituitary gland, brain, pancreas, testis and bone marrow and localizes to the perinuclear region of the cytoplasm. Expression levels of NEURL are low in most glioma cell lines, suggesting a possible role for NEURL as a tumor suppressor. Two isoforms exist for NEURL due to alternative splicing events.

REFERENCES

1. Nakamura, H., et al. 1998. Identification of a human homolog of the *Drosophila* neuralized gene within the 10q25.1 malignant astrocytoma deletion region. *Oncogene* 16: 1009-1019.
2. Vollrath, B., et al. 2001. Isolation of a murine homologue of the *Drosophila* neuralized gene, a gene required for axonemal integrity in spermatozoa and terminal maturation of the mammary gland. *Mol. Cell. Biol.* 21: 7481-7494.
3. Katoh, M. 2001. Molecular cloning and characterization of RNF26 on human chromosome 11q23 region, encoding a novel RING finger protein with leucine zipper. *Biochem. Biophys. Res. Commun.* 282: 1038-1044.
4. Timmusk, T., et al. 2002. Dendritic localization of mammalian neuralized mRNA encoding a protein with transcription repression activities. *Mol. Cell. Neurosci.* 20: 649-668.
5. Terada, K., et al. 2002. Prognostic value of loss of heterozygosity around three candidate tumor suppressor genes on chromosome 10q in astrocytomas. *J. Neurooncol.* 58: 107-114.
6. Pavlopoulos, E., et al. 2002. Cloning, chromosomal organization and expression analysis of NEURL, the mouse homolog of *Drosophila melanogaster* neuralized gene. *Biochim. Biophys. Acta* 1574: 375-382.

CHROMOSOMAL LOCATION

Genetic locus: Neurl1a (mouse) mapping to 19 C3.

PRODUCT

NEURL 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 NEURL shRNA Plasmid (m): sc-149929-SH and NEURL shRNA (m) Lentiviral Particles: sc-149929-V as alternate gene silencing products.

For independent verification of NEURL (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-149929A, sc-149929B and sc-149929C.

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

NEURL siRNA (m) is recommended for the inhibition of NEURL 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 NEURL gene expression knockdown using RT-PCR Primer: NEURL (m)-PR: sc-149929-PR (20 μ l, 453 bp). 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.