

Neudesin siRNA (h): sc-88293

BACKGROUND

Neudesin, also known as CIR2 (cell immortalization-related protein 2), SPUF (secreted protein of unknown function), NENF (neuron-derived neurotrophic factor) or SCIRP10, is a 172 amino acid secreted protein that belongs to the cytochrome b5 family and MAPR subfamily. Neudesin possesses neurotrophic activity, which is enhanced by binding to heme, and may contribute to neuronal differentiation and neural cell proliferation. In primary cultured neurons, Neudesin has been observed to activate Akt1 and ERK 1 phosphorylation. Upregulated in immortal cells, Neudesin contains one cytochrome b5 heme-binding domain and is encoded by a gene that maps to human chromosome 1q32.3. Human chromosome 1 spans 260 million base pairs and comprises nearly 8% of the human genome. A large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome, map to chromosome 1.

REFERENCES

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2. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa. *Science* 280: 1753-1757.
3. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. *Mol. Genet. Metab.* 73: 313-321.
4. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. *Eur. J. Hum. Genet.* 12: 365-371.
5. Neubauer, H., et al. 2006. Breast cancer proteomics by laser capture microdissection, sample pooling, 54-cm IPG IEF, and differential iodine radioisotope detection. *Electrophoresis* 27: 1840-1852.
6. Kimura, I., et al. 2006. Neudesin, a secreted factor, promotes neural cell proliferation and neuronal differentiation in mouse neural precursor cells. *J. Neurosci. Res.* 83: 1415-1424.

CHROMOSOMAL LOCATION

Genetic locus: NENF (human) mapping to 1q32.3.

PRODUCT

Neudesin siRNA (h) 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 Neudesin shRNA Plasmid (h): sc-88293-SH and Neudesin shRNA (h) Lentiviral Particles: sc-88293-V as alternate gene silencing products.

For independent verification of Neudesin (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-88293A, sc-88293B and sc-88293C.

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

Neudesin siRNA (h) is recommended for the inhibition of Neudesin expression in human 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 Neudesin gene expression knockdown using RT-PCR Primer: Neudesin (h)-PR: sc-88293-PR (20 μ l). 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.