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- Expressversand

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# NARC-1 shRNA (h) Lentiviral Particles: sc-45482-V

## BACKGROUND

Proprotein convertase subtilisin/kexin type 9 (NARC-1) belongs to the peptidase S8 family. NARC-1, a secreted protein, is important in cortical neuron differentiation and in cholesterol homeostasis. NARC-1 dramatically impairs the expression of the low density lipoprotein receptor (LDLR) and, in turn, LDL cellular binding and LDL clearance from the plasma compartment. NARC-1 is expressed in Schwann cells, colon carcinoma, neuro-epithelioma and hepatic and pancreatic cell lines. Defects in the gene encoding this protein cause the autosomal dominant disorder familial hypercholesterolemia 3 (FH3).

## REFERENCES

1. Damgaard, D., Jensen, J.M., Larsen, M.L., Soerensen, V.R., Jensen, H.K., Gregersen, N., Jensen, L.G. and Faergeman, O. 2004. No genetic linkage or molecular evidence for involvement of the PCSK9, ARH or CYP7A1 genes in the familial hyper-cholesterolemia phenotype in a sample of Danish families without pathogenic mutations in the LDL receptor and apoB genes. *Atherosclerosis* 177: 415-422.
2. Allard, D., Amsellem, S., Abifadel, M., Trillard, M., Devillers, M., Luc, G., Krempf, M., Reznik, Y., Girardet, J.P., Fredenrich, A., Junien, C., Varret, M., Boileau, C., Benlian, P. and Rabès, J.P. 2005. Novel mutations of the PCSK9 gene cause variable phenotype of autosomal dominant hypercholesterolemia. *Hum. Mutat.* 26: 497.
3. Lallane, F., Lambert, G., Amar, M.J., Chétiveaux, M., Zair, Y., Jarnoux, A.L., Ouguerram, K., Friburg, J., Seidah, N.G., Brewer, H.B., Jr., Krempf, M. and Costet, P. 2005. Wildtype PCSK9 inhibits LDL clearance but does not affect apoB-containing lipoprotein production in mouse and cultured cells. *J. Lipid Res.* 46: 1312-1319.
4. SWISS-PROT/TrEMBL (Q80W65). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: PCSK9 (human) mapping to 1p32.3.

## PRODUCT

NARC-1 shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200  $\mu$ l frozen stock containing  $1.0 \times 10^6$  infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see NARC-1 siRNA (h): sc-45482 and NARC-1 shRNA Plasmid (h): sc-45482-SH as alternate gene silencing products.

## STORAGE

Store lentiviral particles at  $-80^\circ\text{C}$ . Stable for at least one year from the date of shipment. Once thawed, particles can be stored at  $4^\circ\text{C}$  for up to one week. Avoid repeated freeze thaw cycles.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

NARC-1 shRNA (h) Lentiviral Particles is recommended for the inhibition of NARC-1 expression in human cells.

## SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200  $\mu$ l frozen viral stock containing  $1.0 \times 10^6$  infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

## GENE EXPRESSION MONITORING

NARC-1 (E-16): sc-34693 is recommended as a control antibody for monitoring of NARC-1 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 (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NARC-1 gene expression knockdown using RT-PCR Primer: NARC-1 (h)-PR: sc-45482-PR (20  $\mu$ l, 512 bp). Annealing temperature for the primers should be  $55-60^\circ\text{C}$  and the extension temperature should be  $68-72^\circ\text{C}$ .

## BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

## RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.