

# NOR-1 siRNA (m): sc-38843

## BACKGROUND

Nur77 (also designated NGFI-B), Nurrl (Nur-related factor 1), and NOR-1 (neuron-derived orphan receptor 1) constitute the NGFI-B subfamily within the nuclear receptor superfamily. Ligands for these protein have not been identified, and, therefore, they are designated "orphan nuclear receptors". Genes of the NGFI-B subfamily are classified as immediate-early genes, which are induced rapidly, but transiently, in response to a variety of stimuli. They have been implicated in cell proliferation, differentiation, and apoptosis. The human NOR-1 gene maps to chromosome 9q, and encodes a protein which is expressed in heart, skeletal muscle, thymus, and spleen as well as in brain, where it is developmentally regulated. Therefore, NOR-1 may be involved in regulating neural differentiation. The NOR-1 gene also undergoes chromosomal translocation with the EWS gene to produce a protein thought to affect pre-mRNA splicing.

## REFERENCES

- Ohkura, N., et al. 1996. Structure, mapping and expression of a human NOR-1 gene, the third member of the Nur77/NGFI-B family. *Biochim. Biophys. Acta* 1308: 205-214.
- Ohkura, N., et al. 1996. Antisense oligonucleotide to NOR-1, a novel orphan nuclear receptor, induces migration and neurite extension of cultured forebrain cells. *Brain Res. Mol. Brain Res.* 35: 309-313.
- Maruyama, K., et al. 1997. Expression of the putative transcription factor NOR-1 in the nervous, the endocrine and the immune systems and the developing brain of the rat. *Neuroendocrinology* 65: 2-8.
- Maruyama, K., et al. 1998. The NGFI-B subfamily of the nuclear receptor superfamily (review). *Int. J. Oncol.* 12: 1237-1243.

## CHROMOSOMAL LOCATION

Genetic locus: Nr4a3 (mouse) mapping to 4 B1.

## PRODUCT

NOR-1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NOR-1 shRNA Plasmid (m): sc-38843-SH and NOR-1 shRNA (m) Lentiviral Particles: sc-38843-V as alternate gene silencing products.

For independent verification of NOR-1 (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-38843A, sc-38843B and sc-38843C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

NOR-1 siRNA (m) is recommended for the inhibition of NOR-1 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  $\mu$ M in 66  $\mu$ 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.

## GENE EXPRESSION MONITORING

NOR-1 (H-7): sc-393902 is recommended as a control antibody for monitoring of NOR-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 reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 NOR-1 gene expression knockdown using RT-PCR Primer: NOR-1 (m)-PR: sc-38843-PR (20  $\mu$ l, 542 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

- Chio, C.C., et al. 2016. Neuron-derived orphan receptor 1 transduces survival signals in neuronal cells in response to hypoxia-induced apoptotic insults. *J. Neurosurg.* 124: 1654-1664.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

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