

# NOMO1 shRNA (h) Lentiviral Particles: sc-75944-V

## BACKGROUND

Three highly similar proteins termed NOMO1, NOMO2 and NOMO3, are encoded by a gene mapping to a region of duplication on the p arm of human chromosome 16. All three NOMO proteins share similar functions and have been difficult to characterize individually. NOMO1 (Nodal modulator 1), also known as PM5, is a 1,222 amino acid highly conserved single-pass type I membrane protein expressed in colon tumor tissue and normal colonic mucosa. NOMO proteins are novel antagonists of Nodal signaling which interact with Nicalin to form a Nicalin-NOMO complex, and are rapidly degraded or stabilized by Nicalin. NOMO proteins were once considered candidates for the development of pseudoxanthoma elasticum (PXE), a heritable disorder of connective tissue, as the NOMO genes are located in close proximity to the gene responsible for PXE development (MRP6).

## REFERENCES

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3. Perdu, J. and Germain, D.P. 2001. Identification of novel polymorphisms in the pM5 and MRP1 (ABCC1) genes at locus 16p13.1 and exclusion of both genes as responsible for pseudoxanthoma elasticum. *Hum. Mutat.* 17: 74-75.
4. Haffner, C., et al. 2004. Nicalin and its binding partner NOMO are novel Nodal signaling antagonists. *EMBO J.* 23: 3041-3050.
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## CHROMOSOMAL LOCATION

Genetic locus: NOMO1 (human) mapping to 16p13.11.

## PRODUCT

NOMO1 shRNA (h) Lentiviral Particles are concentrated, transduction-ready viral particles containing a target-specific construct that encodes a 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 NOMO1 siRNA (h): sc-75944 and NOMO1 shRNA Plasmid (h): sc-75944-SH as alternate gene silencing products.

## APPLICATIONS

NOMO1 shRNA (h) Lentiviral Particles is recommended for the inhibition of NOMO1 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NOMO1 gene expression knockdown using RT-PCR Primer: NOMO1 (h)-PR: sc-75944-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° 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.

## STORAGE

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

## 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.

## PROTOCOLS

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