SANTA CRUZ BIOTECHNOLOGY, INC.

# NIF3L1 siRNA (m): sc-61194

## BACKGROUND

The NGG1 interacting factor 3-like 1 (NIF3L1) is a 377 amino acid protein expressed mainly in the cytoplasm of cells in several different tissues. It has been highly conserved throughout evolution, from bacteria to mammals. NIF3L participates in retinoic acid-primed neural differentiation of P19 embryonic carcinoma cells by cooperating with Trip15/CSN2, a transcriptional corepressor/component of COP9 signalosome. NIF3L1 interacts with itself and with the NIF3L1 binding protein 1 (NIF3L1 BP1), which is a novel protein presumed to contain a leucine zipper domain.

## REFERENCES


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2. Hadano, S., et al. 2001. Cloning and characterization of three novel genes, ALS2CR1, ALS2CR2, and ALS2CR3, in the juvenile amyotrophic lateral sclerosis (ALS2) critical region at chromosome 2q33-q34: candidate genes for ALS2. Genomics 71: 200-213.
3. Tascou, S., et al. 2001. Isolation and characterization of a novel human gene, NIF3L1, and its mouse ortholog, Nif3l1, highly conserved from bacteria to mammals. Cytogenet. Cell Genet. 90: 330-336.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605778. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Akiyama, H., et al. 2003. The role of transcriptional corepressor Nif3l1 in early stage of neural differentiation via cooperation with Trip15/CSN2. J. Biol. Chem. 278: 10752-10762.
6. Tascou, S., et al. 2003. Identification and characterization of NIF3L1 BP1, a novel cytoplasmic interaction partner of the NIF3L1 protein. Biochem. Biophys. Res. Commun. 309: 440-448.
7. Merla, G., et al. 2004. The subcellular localization of the ChoRE-binding protein, encoded by the Williams-Beuren syndrome critical region gene 14, is regulated by 14-3-3. Hum. Mol. Genet. 13: 1505-1514.
8. Giuffrida, V., et al. 2006. Gene expression in mouse spermatogenesis during ontogenesis. Int. J. Mol. Med. 17: 523-528.


## CHROMOSOMAL LOCATION

Genetic locus: Nif3l1 (mouse) mapping to 1 C1.3.

## PRODUCT

NIF3L1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NIF3L1 shRNA Plasmid (m): sc-61194-SH and NIF3L1 shRNA (m) Lentiviral Particles: sc-61194-V as alternate gene silencing products.

For independent verification of NIF3L1 (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-61194A, sc-61194B and sc-61194C.

## 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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

NIF3L1 siRNA (m) is recommended for the inhibition of NIF3L1 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 µM in 66 µl. 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

NIF3L1 (B-8): sc-393632 is recommended as a control antibody for monitoring of NIF3L1 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 NIF3L1 gene expression knockdown using RT-PCR Primer: NIF3L1 (m)-PR: sc-61194-PR (20 µl). 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.