

# LRRN1 siRNA (h): sc-78350

## BACKGROUND

Leucine-rich repeats (LRRs) are 20-30 amino acid motifs that mediate protein-protein interactions. The primary function of these motifs is to provide a versatile structural framework for the formation of these protein-protein interactions. LRRs are present in a variety of proteins with diverse structure and function, including innate immunity and nervous system development. Several human diseases are associated with mutations in the genes encoding LRR-containing proteins. LRRN1 (leucine-rich repeat neuronal protein 1) is a 716 amino acid protein that contains eleven LRRs, one Ig-like C2-type (immunoglobulin-like) domain and one fibronectin type-III domain. The gene encoding this type I transmembrane protein is upregulated by N- and C-Myc and is found to be highly expressed in neuroblastomas that are associated with poor prognosis. Knockdown of the LRRN1 gene in cells exhibits reduced growth rate and sensitizes cells to serum starvation.

## REFERENCES

1. Taguchi, A., et al. 1996. Molecular cloning of novel leucine-rich repeat proteins and their expression in the developing mouse nervous system. *Brain Res. Mol. Brain Res.* 35: 31-40.
2. Ohira, M., et al. 2003. Neuroblastoma oligo-capping cDNA project: toward the understanding of the genesis and biology of neuroblastoma. *Cancer Lett.* 197: 63-68.
3. Clark, H.F., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. *Genome Res.* 13: 2265-2270.
4. Higgins, J.J., et al. 2004. Candidate genes for recessive non-syndromic mental retardation on chromosome 3p (MRT2A). *Clin. Genet.* 65: 496-500.

## CHROMOSOMAL LOCATION

Genetic locus: LRRN1 (human) mapping to 3p26.2.

## PRODUCT

LRRN1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LRRN1 shRNA Plasmid (h): sc-78350-SH and LRRN1 shRNA (h) Lentiviral Particles: sc-78350-V as alternate gene silencing products.

For independent verification of LRRN1 (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-78350A, sc-78350B and sc-78350C.

## 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.

## 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

LRRN1 siRNA (h) is recommended for the inhibition of LRRN1 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  $\mu$ 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LRRN1 gene expression knockdown using RT-PCR Primer: LRRN1 (h)-PR: sc-78350-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.