SANTA CRUZ BIOTECHNOLOGY, INC.

LRRN3 siRNA (h): sc-89484

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. LRRN3 (Leucine-rich repeat neuronal protein 3), also known as NLRR-3 (Neuronal leucine-rich repeat protein 3), is a 708 amino acid single-pass type I membrane protein that contains one Ig-like C2-type (immunoglobulin-like) domain, one fibronectin type-III domain and 12 LRR (leucine-rich) repeats. LRRN3 mRNA levels increase after brain injury, suggesting that it may play a role in the pathophysiological response to cortical damage. Certain allelic variations of the LRRN3 gene may be linked to autism spectrum disorder susceptibility.

REFERENCES

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4. Aruga, J. 2003. Slitrk6 expression profile in the mouse embryo and its relationship to that of Nlrr3. Gene Expr. Patterns 3: 727-733.
5. Hutcheson, H.B., et al. 2004. Examination of NRCAM, LRRN3, KIAA0716, and LAMB1 as autism candidate genes. BMC Med. Genet. 5: 12.
6. Hamano, S., et al. 2004. Identification of novel human neuronal leucine-rich repeat (hNLRR) family genes and inverse association of expression of Nbla10449/hNLRR-1 and Nbla10677/hNLRR-3 with the prognosis of primary neuroblastomas. Int. J. Oncol. 24: 1457-1466.

CHROMOSOMAL LOCATION

Genetic locus: LRRN3 (human) mapping to 7q31.1.

PRODUCT

LRRN3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LRRN3 shRNA Plasmid (h): sc-89484-SH and LRRN3 shRNA (h) Lentiviral Particles: sc-89484-V as alternate gene silencing products.

For independent verification of LRRN3 (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-89484A, sc-89484B and sc-89484C.

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

LRRN3 siRNA (h) is recommended for the inhibition of LRRN3 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LRRN3 gene expression knockdown using RT-PCR Primer: LRRN3 (h)-PR: sc-89484-PR (20 µl, 482 bp). 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.