

LRRC3B siRNA (m): sc-149078

BACKGROUND

Leucine-rich repeats (LRRs) are 20-29 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 mutation in the genes encoding LRR-containing proteins. The leucine-rich repeat-containing protein 3B (LRRC3B), also designated LRP15, is a 259 amino acid protein that contains three LRR repeats. The gene encoding LRRC3B is a tumor suppressor gene that is regulated by DNA methylation. Decreased expression of LRRC3B has been shown in colorectal cancer and gastric cancer, making LRRC3B a candidate marker for those cancers.

REFERENCES

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3. Matsushima, N., et al. 2005. Structural analysis of leucine-rich-repeat variants in proteins associated with human diseases. *Cell. Mol. Life Sci.* 62: 2771-2791.
4. Chen, Y., et al. 2006. AMIGO and friends: an emerging family of brain-enriched, neuronal growth modulating, type I transmembrane proteins with leucine-rich repeats (LRR) and cell adhesion molecule motifs. *Brain Res Rev.* 51: 265-274.
5. Dolan, J., et al. 2007. The extracellular leucine-rich repeat superfamily; a comparative survey and analysis of evolutionary relationships and expression patterns. *BMC Genomics* 8: 320.
6. Ko, J. and Kim, E. 2007. Leucine-rich repeat proteins of synapses. *J. Neurosci. Res.* 85: 2824-2832.

CHROMOSOMAL LOCATION

Genetic locus: *Lrrc3b* (mouse) mapping to 14 A2.

PRODUCT

LRRC3B 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LRRC3B shRNA Plasmid (m): sc-149078-SH and LRRC3B shRNA (m) Lentiviral Particles: sc-149078-V as alternate gene silencing products.

For independent verification of LRRC3B (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-149078A, sc-149078B and sc-149078C.

RESEARCH USE

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

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

APPLICATIONS

LRRC3B siRNA (m) is recommended for the inhibition of LRRC3B 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 μ M in 66 μ 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 LRRC3B gene expression knockdown using RT-PCR Primer: LRRC3B (m)-PR: sc-149078-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.