

# LRRC3 siRNA (h): sc-91503

## 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 mutations in genes encoding LRR-containing proteins. The leucine-rich repeat-containing protein 3 (LRRC3 or LRRC3A) is a 257 amino acid protein that contains three LRR repeats. The gene encoding LRRC3 maps to chromosome 21, the smallest of the human chromosomes. Chromosome 21 contains nearly 300 genes and 47 million base pairs. Down syndrome, also known as trisomy 21, is the disease most commonly associated with chromosome 21. Translocations are found to occur between chromosome 21 and 8, and chromosome 21 and 12, in certain leukemias.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: LRRC3 (human) mapping to 21q22.3.

## PRODUCT

LRRC3 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 LRRC3 shRNA Plasmid (h): sc-91503-SH and LRRC3 shRNA (h) Lentiviral Particles: sc-91503-V as alternate gene silencing products.

For independent verification of LRRC3 (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-91503A, sc-91503B and sc-91503C.

## 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

LRRC3 siRNA (h) is recommended for the inhibition of LRRC3 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 LRRC3 gene expression knockdown using RT-PCR Primer: LRRC3 (h)-PR: sc-91503-PR (20  $\mu$ l). 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.