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SANTA CRUZ BIOTECHNOLOGY, INC.

LRRTM3 siRNA (m): sc-149122

BACKGROUND

The leucine-rich repeat (LRR) is a 20-30 amino acid motif that forms a hydrophobic α/β horseshoe fold, allowing it to accommodate several leucine residues within a tightly packed core. All LRRs contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. The LRRTM protein family plays a role in the regulation of various cellular events during nervous system development. Localizing predominantly to the nervous system, LRRTM family members are known to exhibit synaptogenic activity. LRRTM3 (leucine rich repeat transmembrane neuronal 3) is a 581 amino acid single-pass type I membrane protein belonging to the LRRTM family. LRRTM3 is involved in the development and maintenance of the vertebrate nervous system, and contains ten LRRs. Expressed in neuronal tissues, LRRTM3 is encoded by a gene that maps to a region of chromosome 10 that has been linked to late-onset Alzheimer disease and elevated plasma β-Amyloid. As a result of alternative splicing events, two LRRTM3 isoforms exist.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Lrrtm3 (mouse) mapping to 10 B4.

RESEARCH USE

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

PRODUCT

LRRTM3 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 LRRTM3 shRNA Plasmid (m): sc-149122-SH and LRRTM3 shRNA (m) Lentiviral Particles: sc-149122-V as alternate gene silencing products.

For independent verification of LRRTM3 (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-149122A, sc-149122B and sc-149122C.

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

LRRTM3 siRNA (m) is recommended for the inhibition of LRRTM3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LRRTM3 gene expression knockdown using RT-PCR Primer: LRRTM3 (m)-PR: sc-149122-PR (20 µl). 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.