SANTA CRUZ BIOTECHNOLOGY, INC.

LRRC4 siRNA (m): sc-106186

BACKGROUND

The leucine-rich (LRR) repeat 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 LRR repeats 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 primary function of these motifs is to provide a versatile structural framework to mediate the formation of protein-protein interactions. The leucine-rich repeat-containing protein 4 (LRRC4), also designated Brain tumor-associated protein BAG, Nasopharyngeal carcinoma-associated gene 14 protein (NAG14) or Netrin-G2 ligand (NGL-2), contains one Ig-like (immunoglobulin-like) domain and nine LRR (leucine-rich) repeats. LRRC4 is specifically expressed in brain. Methylation of the LRRC4 gene occurs frequently in gliomas, making LRRC4 a biomarker for diagnosis or a potential therapeutic target.

REFERENCES

1. Kobe, B., et al. 2001. The leucine-rich repeat as a protein recognition motif. Curr. Opin. Struct. Biol. 11: 725-732.
2. 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.
3. Zhang, Q., et al. 2005. Expression and functional characterization of LRRC4, a novel brain-specific member of the LRR superfamily. FEBS Lett. 579: 3674-3682.
4. Wu, M., et al. 2006. LRRC4, a putative tumor suppressor gene, requires a functional leucine-rich repeat cassette domain to inhibit proliferation of glioma cells *in vitro* by modulating the extracellular signal-regulated kinase/protein kinase B/nuclear factor-κB pathway. Mol. Biol. Cell 17: 3534-3542.

CHROMOSOMAL LOCATION

Genetic locus: Lrrc4 (mouse) mapping to 6 A3.3.

PRODUCT

LRRC4 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 LRRC4 shRNA Plasmid (m): sc-106186-SH and LRRC4 shRNA (m) Lentiviral Particles: sc-106186-V as alternate gene silencing products.

For independent verification of LRRC4 (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-106186A, sc-106186B and sc-106186C.

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.

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

LRRC4 siRNA (m) is recommended for the inhibition of LRRC4 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 LRRC4 gene expression knockdown using RT-PCR Primer: LRRC4 (m)-PR: sc-106186-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.