SANTA CRUZ BIOTECHNOLOGY, INC.

PRG-3 siRNA (h): sc-92885

BACKGROUND

PRG-3 (plasticity-related gene 3), also known as PRG3 or LPPR1 (lipid phosphate phosphatase-related protein type 1), is a 325 amino acid multi-pass membrane protein that belongs to the PA-phosphatase related phosphoesterase family. Strongly expressed in brain, PRG-3 exhibits dynamic expression regulation during brain development and neuronal excitation. In mature brain, PRG-3 is strongly expressed in hippocampus and cerebellum. PRG-3 is known to induce both filopodia formation and neurite growth. Similar to other family members, PRG-3 mediates lipid phosphate phosphatase activity in neurons and is involved in neuronal plasticity. Contrary to other family members, PRG-3 does not function by way of enzymatic phospholipid degradation. PRG-3 also functions as a key enzyme involved in the metabolism of phospholipids, such as LPA and S1P, in the nervous system. The gene that encodes PRG-3 maps to human chromosome 9q31.1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: LPPR1 (human) mapping to 9q31.1.

PROTOCOLS

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

PRODUCT

PRG-3 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 PRG-3 shRNA Plasmid (h): sc-92885-SH and PRG-3 shRNA (h) Lentiviral Particles: sc-92885-V as alternate gene silencing products.

For independent verification of PRG-3 (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-92885A, sc-92885B and sc-92885C.

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

PRG-3 siRNA (h) is recommended for the inhibition of PRG-3 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 PRG-3 gene expression knockdown using RT-PCR Primer: PRG-3 (h)-PR: sc-92885-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.e

RESEARCH USE

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