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PDZ-GEF1 siRNA (m): sc-152702

BACKGROUND

PDZ-GEF1 (PDZ domain-containing guanine nucleotide exchange factor 1), also known as RAPGEF2 (rap guanine nucleotide exchange factor (GEF) 2), nRap GEP (neural RAP guanine nucleotide exchange protein), RA-GEF, NRAPGEP, Rap-GEP or CNrasGEF, is a 1,499 amino acid cell membrane protein that functions as a guanine nucleotide exchange factor for Rap 1A, Rap 1B and Rap 2B GTPases. Expressed at highest levels in brain, PDZ-GEF1 is found at low levels in placenta, heart, lung and kidney, and undergoes post-translational phosphorylation following DNA damage. PDZ-GEF1 interacts with MAGI-2 and contains one Ras-GEF domain, a Ras-associating domain, one PDZ (DHR) domain, a single N-terminal Ras-GEF domain and a cyclic nucleotide-binding domain. The gene encoding PDZ-GEF1 maps to human chromosome 4q32.1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Rapgef2 (mouse) mapping to 3 E3.

PRODUCT

PDZ-GEF1 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 PDZ-GEF1 shRNA Plasmid (m): sc-152702-SH and PDZ-GEF1 shRNA (m) Lentiviral Particles: sc-152702-V as alternate gene silencing products.

For independent verification of PDZ-GEF1 (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-152702A, sc-152702B and sc-152702C.

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 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

PDZ-GEF1 siRNA (m) is recommended for the inhibition of PDZ-GEF1 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 PDZ-GEF1 gene expression knockdown using RT-PCR Primer: PDZ-GEF1 (m)-PR: sc-152702-PR (20 μ l, 570 bp). 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.