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P-Rex2 siRNA (m): sc-151955

BACKGROUND

P-Rex2 (phosphatidylinositol 3,4,5-trisphosphate-dependent Rac exchanger 2 protein), also designated DEP domain-containing protein 2, is a 1,606 amino acid guanine nucleotide exchange factor (GEF) that activates Rac, a small GTPase. P-Rex2 confers substrate specificity and recognition through its PH domain. Activated by the $\beta\gamma$ subunits of heterotrimeric G protein and phosphatidylinositol-3,4,5-triphosphate, P-Rex2 activates Rac 1 in a PI3K-dependent manner. In cerebellum, P-Rex2 is specifically expressed in Purkinje neurons. P-Rex2-deficient mice exhibit impaired motor function, ataxia and Purkinje cell structural abnormalities, suggesting that P-Rex2 plays an important role in cerebellar function and Purkinje cell morphology. There are three isoforms of P-Rex2 which are produced as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: *Prex2* (mouse) mapping to 1 A2.

PROTOCOLS

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

PRODUCT

P-Rex2 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 P-Rex2 shRNA Plasmid (m): sc-151955-SH and P-Rex2 shRNA (m) Lentiviral Particles: sc-151955-V as alternate gene silencing products.

For independent verification of P-Rex2 (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-151955A, sc-151955B and sc-151955C.

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

P-Rex2 siRNA (m) is recommended for the inhibition of P-Rex2 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 P-Rex2 gene expression knockdown using RT-PCR Primer: P-Rex2 (m)-PR: sc-151955-PR (20 μ 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.