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PRRG1 siRNA (m): sc-152516

BACKGROUND

PRRG1 (proline-rich γ -carboxyglutamic acid protein 1), also known as TMG1 (transmembrane γ -carboxyglutamic acid protein 1) or PRGP1, is a 218 amino acid single-pass type I membrane protein that is highly expressed in spinal cord. A member of the vitamin K-dependent family of proteins, PRRG1 contains an N-terminal propeptide sequence that allows for vitamin K-dependent γ -carboxylation of various glutamic acid residues, followed by an N-terminal Gla (γ -carboxy-glutamate) domain. PRRG1 has a proline-rich C-terminus with PPXY and PXXP motifs. The gene encoding PRRG1 maps to human chromosome X, which consists of about 153 million base pairs and nearly 1,000 genes. Color blindness, hemophilia and Duchenne muscular dystrophy are well known X chromosome-linked conditions which affect males more frequently, as males carry a single X chromosome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Prrg1 (mouse) mapping to X B.

PRODUCT

PRRG1 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 PRRG1 shRNA Plasmid (m): sc-152516-SH and PRRG1 shRNA (m) Lentiviral Particles: sc-152516-V as alternate gene silencing products.

For independent verification of PRRG1 (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-152516A, sc-152516B and sc-152516C.

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

PRRG1 siRNA (m) is recommended for the inhibition of PRRG1 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 PRRG1 gene expression knockdown using RT-PCR Primer: PRRG1 (m)-PR: sc-152516-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.