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Leiomodin 1 siRNA (r): sc-270127

BACKGROUND

Members of the Leiomodin protein family are closely related to the tropomodulin family of Actin filament pointed end-capping proteins. Leiomodins are characterized as Actin-binding proteins that acts as strong filament nucleators in muscle cells. Leiomodin 1, also known as 64 kDa autoantigen D1 or SM-Lmod, is a 600 amino acid protein that is highly expressed in a variety of tissues that contain smooth muscle and is expressed at lower levels in thyroid and extraocular muscles. Analyzing sera from patients with Hashimoto thyroiditis with thyroid-associated ophthalmopathy (TAO) revealed that antibodies against Leiomodin 1 had been produced in 8 out of 34 patients, while all 12 normal and nonautoimmune individuals were negative. There are two isoforms of Leiomodin 1, which are produced as a result of alternative splicing events.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Lmod1 (rat) mapping to 13q13.

PRODUCT

Leiomodin 1 siRNA (r) 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 Leiomodin 1 shRNA Plasmid (r): sc-270127-SH and Leiomodin 1 shRNA (r) Lentiviral Particles: sc-270127-V as alternate gene silencing products.

For independent verification of Leiomodin 1 (r) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-270127A, sc-270127B and sc-270127C.

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

Leiomodin 1 siRNA (r) is recommended for the inhibition of Leiomodin 1 expression in rat 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 Leiomodin 1 gene expression knockdown using RT-PCR Primer: Leiomodin 1 (r)-PR: sc-270127-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.