

MURC siRNA (m): sc-108693

BACKGROUND

MURC (muscle-related coiled-coil protein), also known as muscle-restricted coiled-coil protein, is a 364 amino acid developmental protein belonging to the PTRF/SDPR family. Encoded by a gene that maps to human chromosome 9q31.1, MURC induces Rho A activation and activates ANP transcription and myofibrillar organization through the Rho/ROCK signaling pathway. The subunit structure of MURC interacts with SDPR, thus enhancing the transactivation of ANP. MURC accumulates in the Z-line of the sarcomere in cardiomyocytes and in cytoplasm in vascular smooth muscle cells. Evolutionarily conserved from frog to human, MURC plays important roles in the development of cardiac dysfunction and the regulation of skeletal myogenesis, caveolin expression and caveolae morphology. Overexpression of MURC in skeletal muscle and cardiac muscle promotes myogenesis and causes cardiac dysfunction and conduction disturbance.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Murc (mouse) mapping to 4 B1.

PROTOCOLS

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

PRODUCT

MURC siRNA (m) is a target-specific 19-25 nt siRNA 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 MURC shRNA Plasmid (m): sc-108693-SH and MURC shRNA (m) Lentiviral Particles: sc-108693-V as alternate gene silencing 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

MURC siRNA (m) is recommended for the inhibition of MURC 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 MURC gene expression knockdown using RT-PCR Primer: MURC (m)-PR: sc-108693-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.