SANTA CRUZ BIOTECHNOLOGY, INC.

Myozenin 3 siRNA (h): sc-75854

BACKGROUND

Myozenins, which includes Myozenin 1, Myozenin 2 and Myozenin 3, are a family of intracellular binding proteins that are involved in linking Z-disk proteins to the sarcomere. Myozenin 3, also known as calsarcin-3 or FATZ-related protein 3 (FRP3), is a 251 amino acid protein expressed specifically in skeletal muscle and enriched in fast-twitch muscle fibers. Myozenin 3, like Myozenin 1 and 2, interacts with calnineurin and the Z-disc proteins α-actinin, Filamin 2, and Telethonin. Myozenin 3 plays an important role in the modulation of calcineurin signaling, and it is thought to play a role in myofibrillogenesis. Due to the close involvement of Myozenin 3 with muscle formation, mutations in the gene encoding Myozenin 3 may be associated with muscular dystrophies and neuromuscular myopathies. Three isoforms of Myozenin 3 exist 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: MYOZ3 (human) mapping to 5q33.1.

PRODUCT

Myozenin 3 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Myozenin 3 shRNA Plasmid (h): sc-75854-SH and Myozenin 3 shRNA (h) Lentiviral Particles: sc-75854-V as alternate gene silencing products.

For independent verification of Myozenin 3 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75854A, sc-75854B and sc-75854C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Myozenin 3 siRNA (h) is recommended for the inhibition of Myozenin 3 expression in human 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 µM in 66 µl. 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 Myozenin 3 gene expression knockdown using RT-PCR Primer: Myozenin 3 (h)-PR: sc-75854-PR (20 µl). 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.