



myomesin-1 siRNA (h): sc-45889

BACKGROUND

Myomesin-1 and myomesin-2 are components of the vertebrate myofibrillar M band and are associated with Titin, Myosin and Connectin. The myomesin proteins are responsible for the formation of a head structure on one end of the Titin string that connects the Z and M bands of the sarcomere. Myomesin-1 and -2 have unique N-terminal domains and are expressed mainly in skeletal muscle. The gene encoding human myomesin-1 maps to chromosome 18p11.31.

REFERENCES

1. Grove, B.K., et al. 1984. A new 185,000-dalton skeletal muscle protein detected by monoclonal antibodies. *J. Cell Biol.* 98: 518-524.
2. Vinkemeier, U., et al. 1993. The globular head domain of titin extends into the center of the sarcomeric M band. cDNA cloning, epitope mapping and immunoelectron microscopy of two Titin-associated proteins. *J. Cell Sci.* 106: 319-330.
3. Speel, E.J., et al. 1998. Assignment of the human gene for the sarcomeric M-band protein myomesin (MYOM1) to 18p11.31-p11.32. *Genomics* 54: 184-186.
4. Agarkova, I., et al. 2000. A novel marker for vertebrate embryonic heart, the EH-myomesin isoform. *J. Biol. Chem.* 275: 10256-10264.
5. Porter, J.D., et al. 2003. Postnatal suppression of myomesin, muscle creatine kinase and the M-line in rat extraocular muscle. *J. Exp. Biol.* 206: 3101-3112.
6. Hornemann, T., et al. 2003. Muscle-type creatine kinase interacts with central domains of the M-band proteins myomesin and M-protein. *J. Mol. Biol.* 332: 877-887.

CHROMOSOMAL LOCATION

Genetic locus: MYOM1 (human) mapping to 18p11.31.

PRODUCT

myomesin-1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see myomesin-1 shRNA Plasmid (h): sc-45889-SH and myomesin-1 shRNA (h) Lentiviral Particles: sc-45889-V as alternate gene silencing products.

For independent verification of myomesin-1 (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-45889A, sc-45889B and sc-45889C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

myomesin-1 shRNA (h) Lentiviral Particles is recommended for the inhibition of myomesin-1 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 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.

GENE EXPRESSION MONITORING

myomesin-1 (4F5): sc-293303 is recommended as a control antibody for monitoring of myomesin-1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor myomesin-1 gene expression knockdown using RT-PCR Primer: myomesin-1 (h)-PR: sc-45889-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.