SANTA CRUZ BIOTECHNOLOGY, INC.

myomesin-2 siRNA (h): sc-60020

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.

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: MYOM2 (human) mapping to 8p23.3.

PRODUCT

myomesin-2 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 myomesin-2 shRNA Plasmid (h): sc-60020-SH and myomesin-2 shRNA (h) Lentiviral Particles: sc-60020-V as alternate gene silencing products.

For independent verification of myomesin-2 (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-60020A, sc-60020B and sc-60020C.

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

myomesin-2 siRNA (h) is recommended for the inhibition of myomesin-2 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.

GENE EXPRESSION MONITORING

myomesin-2 (E-5): sc-515638 is recommended as a control antibody for monitoring of myomesin-2 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-2 gene expression knockdown using RT-PCR Primer: myomesin-2 (h)-PR: sc-60020-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.

PROTOCOLS

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