SANTA CRUZ BIOTECHNOLOGY, INC.

# myomesin-1 (4F5): sc-293303

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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 kDa 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; Myom1 (mouse) mapping to 17 E1.3.

## SOURCE

myomesin-1 (4F5) is a mouse monoclonal antibody raised against amino acids 1586-1684 of myomesin-1 of human origin.

## PRODUCT

Each vial contains 100 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

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

## APPLICATIONS

myomesin-1 (4F5) is recommended for detection of myomesin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for myomesin-1 siRNA (h): sc-45889, myomesin-1 siRNA (m): sc-45890, myomesin-1 shRNA Plasmid (h): sc-45889-SH, myomesin-1 shRNA Plasmid (m): sc-45890-SH, myomesin-1 shRNA (h) Lentiviral Particles: sc-45889-V and myomesin-1 shRNA (m) Lentiviral Particles: sc-45890-V.

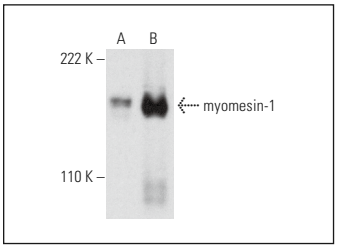
Molecular Weight of myomesin-1: 190 kDa.

Positive Controls: human skeletal muscle extract: sc-363776 or mouse skeletal muscle extract: sc-364250.

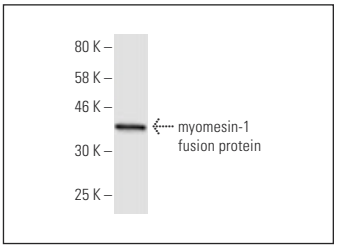
## RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA




myomesin-1 (4F5): sc-293303. Western blot analysis of myomesin-1 expression in human skeletal muscle (**A**) and mouse skeletal muscle (**B**) tissue extracts.




myomesin-1 (4F5): sc-293303. Western blot analysis of human recombinant myomesin-1 fusion protein.

## RESEARCH USE

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