

Product Information

Anti-Myosin (Skeletal, Fast) antibody, Mouse monoclonal

clone MY-32, purified from hybridoma cell culture

Product Number **M1570**

Product Description

Anti-Myosin (Skeletal, Fast) antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the hybridoma MY-32 produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse with rabbit muscle myosin. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2.

Anti-Myosin (Skeletal, Fast) antibody, Mouse monoclonal recognizes specifically the myosin heavy chain of either human or animal skeletal muscle extracts or purified myosin preparations, by immunoblotting.⁴ The antibody does not stain human or animal cardiac or smooth muscle myosin, or cells grown in tissue culture (non-muscle myosin). It has been demonstrated on human skeletal muscle that the antibody stains the fast twitch (type II) isomyosin molecules.

This antibody for fast-twitch skeletal myosin may be used for detecting cross striated muscle differentiation in tumors. The antibody localizes an epitope on the myosin chain that is stable to the routine formalin-fixation and paraffin-embedding process. The antibody may be used with immunoperoxidase or immunofluorescent procedures on formalin-fixed or frozen sections of skeletal muscle^{1,2} as well as other applications such as immunocytochemistry,^{3,4} immunoblotting,⁴ and dot blotting using muscle extracts or purified myosin preparations. The antibody may be used for staining of human,¹ rabbit, rat,² mouse,^{3,4} bovine, chicken, and guinea pig skeletal myosin.

Myosin is a 480 kDa protein known to interact with actin in muscle and in non-muscle cells. It contains two identical heavy chains (200 kDa each) and four light chains (15-26 kDa). Myosin molecules consist of two major regions: tails (rods) and heads; they aggregate into filaments through the tail region and interact with actin and with ATP through the head region.

Multiple forms of myosin heavy chains exist for each muscle type - skeletal, cardiac, and smooth, and non-muscle isomyosin forms exist in different types of skeletal muscle. These are designated as type I (slow-twitch) and type II (fast-twitch). Type II fibers can be further subdivided in types IIA, IIB, and IIC.⁵

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5-1.0 µg/mL is recommended using total extract of rabbit skeletal muscle.

Immunohistochemistry: a working concentration of 10-20 µg/mL is recommended using formalin-fixed, paraffin-embedded sections of porcine tongue.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Pagani, F.D., et al., *J. Amer. Coll. Card.*, **41**, 879-888 (2003).
2. Picquet, F., et al., *J. Histochem. Cytochem.*, **51**, 1479-1489 (2003).
3. Amack, J., et al., *Hum. Mol. Genet.*, **10**, 1879-1887 (2001).
4. Guttridge, D.C., et al., *J. Biol. Chem.*, **272**, 24117-24120 (1997).
5. Arner, A., et al., *J. Muscle Res. Cell Motil.*, **24**, 165-173 (2003).

DS,PHC 10/17-1