

Product Information

Anti-Myosin (Skeletal, Slow) antibody, Mouse monoclonal
clone NOQ7.5.4D, purified from hybridoma cell culture

Catalog Number **SAB4200670**

Product Description

Anti-Myosin (Skeletal, Slow) (mouse IgG1 isotype) is derived from the NOQ7.5.4D hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice. Myosin, purified from myofibrils isolated from human skeletal muscle, was used as the immunogen.¹⁻³ The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Anti-Myosin (Skeletal, Slow) is highly specific for the slow myosin heavy chain of adult skeletal muscle. It does not react with the fast myosin heavy chain, and with embryonic or neonatal skeletal myosins.^{2,4} The product shows no reactivity with human or rat adult smooth muscle or with non-muscle tissues. The antibody was reported to cross-react with slow myosin from human, bovine, sheep, goat, porcine, dog, cat, rabbit, hamster, guinea pig, rat, mouse, and chicken origin.¹⁻⁸ The antibody may be used in various immunochemical techniques including Immunoblotting,¹⁻³ Immunohistology,¹⁻⁵ Solid-phase RIA,² ELISA^{1,3-4} and Immunoelectronmicroscopy³.

Myosin is a hexameric protein containing two heavy chain subunits and four light chain subunits. It is a major protein component of heart and skeletal muscles and is the element responsible for energy transduction and force development in these tissues. Myosin is known to interact with actin in muscle and in non-muscle cells. Muscle myosin heavy chain (MHC) different isoforms are expressed depending on the physiological function of the muscle: skeletal, cardiac, smooth and non-muscle. Slow myosin, also known as β -MHC is expressed during embryogenesis as part of the cardiac myogenic program under the control of NKX-2.5, MEF-2C, and GATA-4/5/6. After birth, thyroid hormone induces expression of β -MHC and the β -MHC expression is inhibited. During cardiac hypertrophy β -MHC gene also is induced together with several other "fetal" genes by a mechanism involving Ca⁽²⁺⁾-mediated activation of calcineurin and NF-AT3.¹⁻⁸

Reagent

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

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

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 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

Immunohistochemistry: a working concentration of 2.5-5 μ g/mL is recommended using pronase digested, formalin-fixed, paraffin-embedded rabbit tongue sections and Biotin/ExtrAvidin®-Peroxidase staining system.

Immunoblotting: a working concentration of 1.25-2.5 μ g/mL is recommended using rat skeletal muscle lysate.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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5. Harris A., et al., *Development*, **107**, 771-784 (1989).
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RC,DR_LV/GG,AI, PHC 04/21-1