# MYOT Antibody / Myotilin (FY12868)

| Catalog No. | Formulation | Size |
|---|---|---|
| FY12868 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

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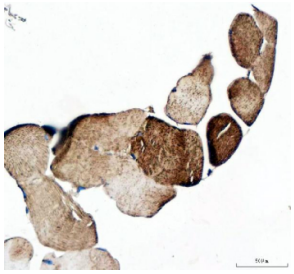
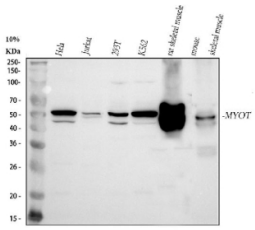
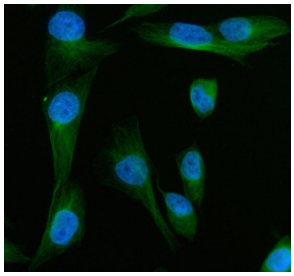
|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Lyophilized |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | Q9UBF9 |
| **Localization** | Cytoplasm, cell membrane |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>Immunohistochemistry : 2-5ug/ml<br>Immunocytochemistry/Immunofluorescence : 5ug/ml<br>Flow Cytometry : 1-3ug/million cells<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This MYOT antibody is available for research use only. |



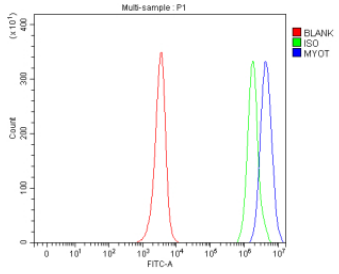
Immunohistochemical staining of MYOT using anti-MYOT antibody. MYOT was detected in a paraffin-embedded section of human skeletal muscle tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MYOT antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.




Western blot analysis of MYOT using anti-MYOT antibody. Lane 1: human Hela whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human K562 whole cell lysates, Lane 5: rat skeletal muscle tissue lysates, Lane 6: mouse skeletal muscle tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MYOT antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. MYOT western blot across cell lines and muscle tissues shows the expected ~55 kDa band for full-length myotilin, with an additional ~45 kDa band that likely represents a truncated/short isoform or a proteolytic fragment enriched in muscle extracts.



Immunofluorescent staining of MYOT using anti-MYOT antibody (green). MYOT was detected in an immunocytochemical section of GES-1 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-MYOT antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.




Flow Cytometry analysis of JK cells using anti-MYOT antibody. Overlay histogram showing JK cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MYOT antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

## Description

MYOT antibody detects Myotilin, a structural protein of the sarcomeric Z-disc that maintains muscle integrity and organization. Encoded by the MYOT gene on chromosome 5q31.2, this cytoskeletal protein binds alpha-actinin, filamin C, and other Z-disc components to stabilize actin filament cross-linking and support mechanical tension during muscle contraction. Myotilin plays a central role in maintaining sarcomere alignment, muscle elasticity, and myofibrillar assembly.

Structurally, Myotilin is a 57 kilodalton cytoplasmic protein containing two immunoglobulin-like domains at its C-terminus that mediate interactions with alpha-actinin and filamin. Its N-terminal serine-rich region supports actin binding and cross-linking, anchoring thin filaments at the Z-disc. Myotilin is expressed predominantly in skeletal and cardiac muscle, where it acts as a scaffold linking actin filaments to structural and signaling molecules that maintain contractile function.

The MYOT antibody is widely used in muscle biology, myopathy, and cytoskeletal research to study sarcomere structure, actin filament organization, and myofibrillogenesis. Western blot analysis identifies a 57 kilodalton band corresponding to Myotilin, while immunohistochemistry shows distinct Z-disc staining in muscle fibers. This antibody supports investigations into muscle development, maintenance, and degenerative conditions affecting the sarcomere.

Mutations in MYOT cause various myofibrillar myopathies, including limb-girdle muscular dystrophy type 1A and spheroid body myopathy. These mutations lead to Myotilin aggregation, sarcomeric disorganization, and progressive muscle weakness. Altered MYOT expression has also been linked to cardiac remodeling and hypertrophy. The MYOT antibody

provides a critical tool for examining these pathogenic mechanisms and evaluating Myotilin's interactions with actin-binding and signaling proteins. NSJ Bioreagents validates this antibody for its applications, ensuring dependable results for muscle and cytoskeletal studies.

## Application Notes

Optimal dilution of the MYOT antibody should be determined by the researcher.

## Immunogen

E.coli-derived human MYOT recombinant protein (Position: H9-E494) was used as the immunogen for the MYOT antibody.

## Storage

After reconstitution, the MYOT antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.