Saint Louis, Missouri 63103 USA
Telephone (800) 325-5832 (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Monoclonal Anti-Titin
Clone T11
Mouse Ascites Fluid

Product No. **T 9030**

Product Description

Monoclonal Anti-Titin (mouse IgG2b isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. A titin/nebulin fraction purified from chicken breast muscle was used as the immunogen. The isotype is determined by a double diffusion assay using immunoglobulin and subclass specific antisera.

Monoclonal Anti-Titin reacts with skeletal and cardiac muscle and not with smooth muscle or different non-muscle tissues and cultured cells. By indirect immunofluorescence, the antibody displays a typical striated staining pattern on frozen sections of chicken skeletal and cardiac muscle tissues. Monoclonal Anti-Titin stains around the region of the A-I junction by indirect immunofluorescence. It shows a decoration line 0.05 µm from the end of the A band in electron micrographs. In immunoblotting using total extracts of chicken breast muscle, the antibdody reacted specifically with both bands of the titin doublet and showed no reaction with nebulin.

This antibody has been characterized by immuno-blotting, immunofluorescence, and immunoelectron microscopy. It has been determined to have a broad cross-species reactivity. The following is a summary of the antibody reactivity on various muscles in immuno-fluorescence using frozen section, isolated myofibrils, or immunoblotting.

Fish skeletal muscle (*Torpedo* sp.)	+
Toad skeletal muscle (*Bufo marinus*)	+
Salamander skeletal muscle (*Ambystoma tigrina*)	+
Salamander heart muscle	+
Alligator skeletal muscle (*Alligator mississippiensis*)	+
Pigeon skeletal muscle	+
Chicken skeletal muscle	+
Chicken heart muscle	+
Chicken gizzard smooth muscle	-
Mouse skeletal muscle	-
Rat skeletal muscle	+
Rat heart muscle	+
Rat rhabdomyosarcoma	+
Rabbit skeletal muscle	+
Bovine heart muscle	-
Pig skeletal muscle	+
Human skeletal muscle	+

Titin (also known as connectin) is a high molecular weight protein (M.W. = 1-2,000,000 daltons). It is a flexible, filamentous constituent of striated muscle that is thought to give rise to an elastic filament component underlying the myofibrillar organization. Based on immunofluorescent data titin is localized in both the A-band and the I-band but stretches throughout the myofibril from the M-line to the Z-line or the NZ-line within the I-band. Although titin has been identified in cardiac muscle, almost all detailed studies have been performed on titin from skeletal muscle. Significant immunological differences have been found between cardiac and skeletal titin among several different species. Physiochemical investigations are difficult due to its high molecular weight.

Monoclonal Anti-Titin can be used for study of the elastic filaments within sarcomeric structures. It is also useful as a differentiation marker in the separation of rhabdomyosarcomas from other muscle tumors.

Reagent
The antibody is provided as ascites fluid containing 0.1% sodium azide (see MSDS)* as a preservative.

Precautions
*Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage
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 by centrifugation before use.

Product Profile
By indirect immunofluorescence, a working antibody dilution of 1:1,000 is recommended using frozen tissue sections of animal skeletal muscle.

In order to obtain the best results in various tissue preparations, we recommend to determine optimal working dilutions by titration test.

References

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