



Product Information

**MONOCLONAL ANTI-MYOSIN
LIGHT CHAIN KINASE
CLONE K36
Mouse Ascites Fluid**

Product No. **M 7905**

Monoclonal Anti-Myosin Light Chain Kinase (mouse IgG2b isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified chicken gizzard myosin light chain kinase was used as the immunogen. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Reagents

The product is provided as ascites fluid with 0.1% sodium azide as a preservative.

Precautions and Disclaimer

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.

Specificity

In immunoblotting, the antibody recognizes the myosin light chain kinase of smooth muscle from various sources including chicken gizzard, turkey gizzard, and pig stomach as well as the myosin light chain kinase of non-muscle cells such as cultured fibroblasts.

Description

Myosin Light Chain Kinase is a Ca^{2+} /calmodulin dependent myosin light chain phosphorylating agent. This enzyme plays a major role in the phosphorylation of the regulatory light chains of myosin which are essential for the shortening and tension development of smooth muscle cells resulting in smooth muscle contraction. Myosin light chain kinase has been found in all eukaryotic cells examined. Enzymes from different sources of smooth muscle have the same molecular weight of approximately 160 kDa.

The purified calmodulin-free kinases show one band of about 130-140 kDa and sometimes a second band of a slightly higher molecular weight (145 kDa). The second band is normally recognized early during enzyme preparation representing the intact catalytic subunit of the mammalian enzyme. The catalytic subunit of cardiac and skeletal muscle myosin light chain kinase is in the range of 80-95 kDa. Proteolysis of the 130 kDa myosin light chain kinase from chicken gizzard produces a 64 kDa fragment that neither binds to Ca^{2+} /calmodulin nor exhibits catalytic activity and a 61 kDa peptide that is active in the absence of Ca^{2+} /calmodulin.

Uses

Monoclonal Anti-Myosin Light Chain Kinase may be used in the study of the function of the enzyme and its interactions with other cell components.

Titer: at least 1:10,000

The antibody titer is determined by indirect immunoblotting using chicken gizzard extract.

In order to obtain best results, it is recommended that each individual user determine their working dilution by titration assay.

Storage

For continuous use, store at 2-8 °C for a maximum of one month. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

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