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Product Information

Anti-Myosin Light Chain Kinase antibody, Mouse monoclonal
Clone K36, purified from hybridoma cell culture

Product Number **SAB4200808**

Product Description

Monoclonal Anti-Myosin Light Chain Kinase (mouse IgG2b isotype) is derived from the K36 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with purified chicken gizzard myosin light chain kinase. 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.

Monoclonal Anti-Myosin Light Chain Kinase recognizes the myosin light chain kinase of smooth muscle and from non-muscle cells such as cultured fibroblasts. Reactivity has been observed with myosin light chain kinase from chicken,[1] turkey, bovine,[2] human,[3] mouse,[4] and pig origin. The antibody is recommended to use in various immunological techniques, including immuno-blotting (~160 kDa),[1-3] immunohistochemistry,[3] and immunofluorescence.[4-5]

Myosin Light Chain Kinase (MLCK) also known as MYLK 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.[3] Myosin light chain kinase is widely expressed in many different tissues and cells of eukaryote species.[6] There are two genes mylk1 and mylk2 encoding the MLCK protein, mylk2 is exclusively expressed in skeletal muscle cells.[6]

Increased expression of MLCK has been described in models of asthma and in human asthmatic airway smooth muscle.[3] Abnormal expression of MLCK has also been observed in respiratory diseases, pancreatitis, cardiovascular diseases, cancer, and inflammatory bowel disease.[6] MLCK has catalytic, inhibitory, and calmodulin-binding domains. MLCK inhibitors targeted to the catalytic subunit have pharmacological potential as vasodilators and anti-inflammatory agents.[6]

Reagent

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

Antibody Concentration: ~1.0 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 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 0.25-0.5 μg/mL is recommended using chicken gizzard extract.

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Note: In order to obtain best results in different techniques and preparations and preparations, it is recommended to determine optimal working concentration by titration test.

References

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