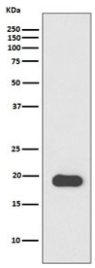
MLC2 Monoclonal Antibody FHO-13 / Myosin Light Chain 2 Rabbit Monoclonal [clone FHO-13] (RQ5348)

Catalog No.	Formulation	Size
RQ5348	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

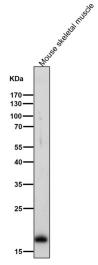
Recombinant RABBIT MONOCLONAL

Bulk quote request

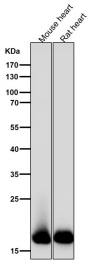
Species Reactivity	Mouse, Rat, Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	FHO-13
Purity	Affinity purified
UniProt	P10916
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1:50-1:200
Limitations	This MLC2 antibody is available for research use only.



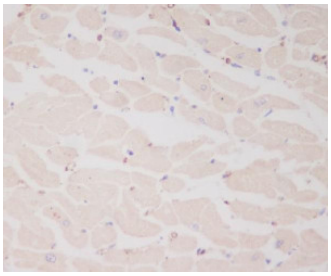
MLC2 Monoclonal Antibody FHO-13 by WB in Mouse Heart Western blot testing of mouse heart lysate with MLC2 Monoclonal Antibody clone FHO-13. A strong, discrete band is detected at approximately 19 kDa, consistent with the predicted molecular weight of MYL2/MLC2. The clean target-sized signal with minimal additional reactivity supports the specificity of this Myosin Light Chain 2 Rabbit Monoclonal in cardiac tissue.



MLC2 Monoclonal Antibody FHO-13 by WB in Mouse Skeletal Muscle Western blot testing of mouse skeletal muscle lysate with MLC2 Monoclonal Antibody clone FHO-13 at a 1:5000 dilution. A prominent band is observed at approximately 19 kDa, consistent with the expected molecular weight of MYL2/MLC2. A weaker higher molecular weight band is also visible, while the dominant immunoreactive signal produced by this Myosin Light Chain 2 Rabbit Monoclonal corresponds to the expected target size.



MLC2 Monoclonal Antibody FHO-13 by WB in Mouse and Rat Heart Western blot testing of mouse heart (lane 1) and rat heart (lane 2) lysates with MLC2 Monoclonal Antibody clone FHO-13 at a 1:5000 dilution. Strong bands are detected at approximately 19 kDa in both samples, consistent with the predicted molecular weight of MYL2/MLC2. The comparable target-sized signals demonstrate recognition of Myosin Light Chain 2 by this Myosin Light Chain 2 Rabbit Monoclonal in both mouse and rat cardiac tissue.



MLC2 Monoclonal Antibody FHO-13 by IHC in Human Heart Immunohistochemistry of FFPE human heart sections using MLC2 Monoclonal Antibody clone FHO-13. Cytoplasmic staining is observed throughout cardiomyocytes, consistent with localization of MYL2/MLC2 within the cardiac contractile apparatus. This Myosin Light Chain 2 Rabbit Monoclonal produces widespread myocardial labeling with limited nuclear staining.

Description

MLC2 Monoclonal Antibody FHO-13 recognizes myosin light chain 2, a regulatory component of the myosin motor encoded by the MYL2 gene. Also known as MLC-2v and ventricular myosin light chain 2, MYL2 associates with the neck region of myosin heavy chains in striated muscle. The protein contributes to the structural and mechanical properties of myosin and has a particularly important role in cardiac muscle, where coordinated interactions between myosin and actin generate contractile force.

MYL2 participates in the regulation of cardiac contraction through phosphorylation-dependent modulation of myosin activity. Phosphorylation of the regulatory light chain can influence the orientation and mobility of myosin heads, alter cross-bridge cycling and modify myofilament calcium sensitivity. These effects provide a mechanism for adjusting contractile force and cardiac performance in response to physiological signaling and changing mechanical demands.

Myosin light chain 2 also contributes to development and organization of the cardiac contractile apparatus. Its expression is associated with differentiated cardiomyocytes and formation of functional myofibrils, making MYL2 relevant to studies of cardiomyocyte differentiation, cardiac maturation and sarcomere assembly. The protein is consequently used in research examining both mature muscle physiology and the molecular processes responsible for establishing cardiac contractile function.

Genetic variants affecting MYL2 have been associated with inherited cardiomyopathies, particularly hypertrophic cardiomyopathy. Changes in regulatory light chain structure, abundance or phosphorylation can alter sarcomere mechanics and disrupt the relationship between calcium signaling and force generation. Studying MYL2 can therefore provide insight into how abnormalities of individual myofilament components influence cardiac performance and contribute to pathological remodeling.

Because MYL2 connects sarcomere structure with dynamic regulation of myosin function, it is an important target for research into cardiac contraction, myofilament regulation, muscle development and cardiomyopathy. NSJ Bioreagents offers this Myosin Light Chain 2 Rabbit Monoclonal for investigating MYL2 expression and associated contractile mechanisms. An MLC2 Monoclonal Antibody can support studies of cardiomyocyte biology, sarcomere organization and regulation of actomyosin-dependent contraction.

Application Notes

Optimal dilution of the MLC2 antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Myosin Light Chain 2 / MYL2 was used as the immunogen for the MLC2 antibody.

Storage

Store the MLC2 antibody at -20oC.

Alternate Names

Myosin Light Chain 2 antibody, MLC2 antibody, MLC-2 antibody, MLC-2v antibody, Myosin Light Chain 2V antibody, Ventricular Myosin Light Chain 2 antibody

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