10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MYL2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1265a

Product Information

Application	WB, E
Primary Accession	P10916
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	7C9
Isotype	IgG1
Calculated MW	18789
Description	MYL2(myosin, light chain 2, regulatory, cardiac, slow), also known as MLC-2, MLC2v. Entrez protein NP_000423. MYL2 associated with cardiac myosin beta (or slow) heavy chain. Ca+ triggers the phosphorylation of regulatory light chain that in turn triggers contraction. It is an hexamer of two heavy chains and four light chains that is predominantly expressed in adult cardiac ventricle muscle. Mutations in MYL2 are associated with mid-left ventricular chamber type hypertrophic cardiomyopathy.
Immunogen	Purified recombinant fragment of MYL2 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	4633
Other Names	Myosin regulatory light chain 2, ventricular/cardiac muscle isoform, MLC-2, MLC-2v, MYL2
Dilution	WB~~1/500 - 1/2000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MYL2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MYL2 (HGNC:7583)

Function	Contractile protein that plays a role in heart development and function (PubMed:23365102, PubMed:32453731). Following phosphorylation, plays a role in cross-bridge cycling kinetics and cardiac muscle contraction by increasing myosin lever arm stiffness and promoting myosin head diffusion; as a consequence of the increase in maximum contraction force and calcium sensitivity of contraction force. These events altogether slow down myosin kinetics and prolong duty cycle resulting in accumulated myosins being cooperatively recruited to actin binding sites to sustain thin filament activation as a means to fine-tune myofilament calcium sensitivity to force (By similarity). During cardiogenesis plays an early role in cardiac contractility by promoting cardiac myofibril assembly (By similarity).
Cellular Location	Cytoplasm, myofibril, sarcomere, A band {ECO:0000250|UniProtKB:P08733}
Tissue Location	Highly expressed in type I muscle fibers.

References

1. DNA Seq. 2003 Oct;14(5):339-50. 2. Oncogene. 2002 Aug 29;21(38):5852-60.

Images

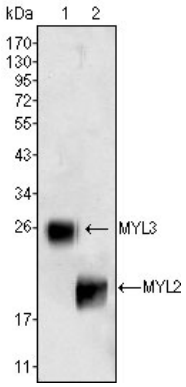


Figure 1: Western blot analysis using MYL3 (1) and MYL2 (2) mouse mAb against rat fetal heart tissue lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.