

Rabbit MLC2 Polyclonal Antibody | anti-MLC2 antibody

Phospho-MLC2 (Ser19) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329330	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry

PRODUCT SYNONYMS

MLC2; Polyclonal Antibody; Phospho-MLC2 (Ser19) Antibody; Cardiac myosin light chain-2; Cardiac ventricular myosin light chain 2; CMH10; MLC 2v; MLC-2; MLC-2v; MLRV_HUMAN; MYL 2; MYL2; Myosin light chain 2 regulatory cardiac slow; Myosin light polypeptide 2 regulatory cardiac slow; Myosin regulatory light chain 2; Myosin regulatory light chain 2 ventricular/cardiac muscle isoform; Regulatory light chain of myosin; RLC of myosin; Slow cardiac myosin regulatory light chain 2; ventricular/cardiac muscle isoform; anti-MLC2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-MLC2 (Ser19) Antibody detects endogenous levels of MLC2 only when phosphorylated at Ser19.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-MLC2 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry)
Immunogen	A synthesized peptide derived from human MLC2 around the phosphorylation site of Ser19.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	N-terminus is methylated by METTL11A/NTM1. Phosphorylated by MYLK3 and MYLK2; promotes cardiac muscle contraction and function (By similarity). Dephosphorylated by PPP1CB complexed to PPP1R12B (By similarity). The phosphorylated form in adult is expressed as gradients across the heart from endocardium (low phosphorylation) to epicardium (high phosphorylation); regulates cardiac torsion and workload distribution (By similarity).
Subunit Structure	Myosin is a hexamer of 2 heavy chains and 4 light chains. Interacts with MYOC.
Subcellular Location	Cytoplasm>Myofibril>Sarcomere>A band.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

Staining HepG2 cells (serum starvation treatment) by IF/ICC. The samples were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. Samples were then incubated with primary Ab (AF3829) and mouse anti-beta tubulin Ab (T0023) for 1 hour at 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG (H+L) Ab (Red) and an AlexaFluor488 conjugated goat anti-mouse IgG (H+L) Ab (Green) were used as the secondary antibody. The nuclear counter stain is DAPI (blue).



IHC (Immunohistochemistry)

At 1/100 staining Mouse muscle tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-MLC2 antibody	Contractile protein that plays a role in heart development and function (By similarity). 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).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	94981553
NCBI GeneID	4633
NCBI Accession #	NP_000423.2
NCBI GenBank Nucleotide #	NM_000432.3
UniProt Accession #	P10916; Q16123
Molecular Weight	18,789 Da
NCBI Official Full Name	myosin regulatory light chain 2, ventricular/cardiac muscle isoform
NCBI Official Synonym Full Names	myosin, light chain 2, regulatory, cardiac, slow
NCBI Official Symbol	MYL2
NCBI Official Synonym Symbols	MLC2; CMH10
NCBI Protein Information	myosin regulatory light chain 2, ventricular/cardiac muscle isoform; MLC-2; MLC-2v; RLC of myosin; myosin light chain 2; regulatory light chain of myosin; cardiac ventricular myosin light chain 2; slow cardiac myosin regulatory light chain 2; myosin, ligh
UniProt Protein Name	Myosin regulatory light chain 2, ventricular/cardiac muscle isoform
UniProt Gene Name	MYL2
UniProt Synonym Gene Names	MLC-2; MLC-2v
UniProt Entry Name	MLRV_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.