

Rabbit Myosin Polyclonal Antibody | anti-MYL12A antibody

Myosin Light Chain (Ser-19), phospho-specific Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA71664	Rabbit	Human, Rat, Mouse, Chicken	Immunocytochemistry, ELISA, Western Blot

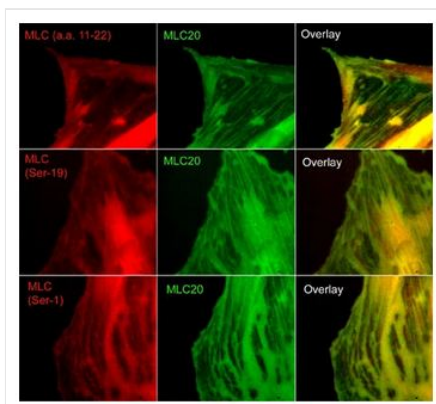
PRODUCT SYNONYMS

Myosin; Polyclonal Antibody; Myosin Light Chain (Ser-19); phospho-specific Antibody; phospho-specific; Myosin Light S19; anti-MYL12A antibody

PRODUCT SPECIFICATIONS

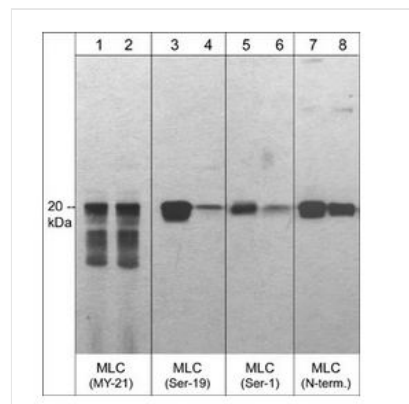
Host	Rabbit
Reactivity	Human, Rat, Mouse, Chicken
Clonality	Polyclonal
Specificity	This antibody was cross-adsorbed to MLC (a.a. 11-22) then affinity purified using phospho-MLC (Ser-19) peptide (without carrier). The antibody detects a 20kDa* band corresponding to the molecular weight of myosin light chain in human A431 treated with EGF and in mouse C2C12 treated with Calyculin A. This reactivity is not observed after lambda phosphatase treatment of MLC.
Form/Format	Rabbit polyclonal, affinity-purified antibody is supplied in 100ul phosphate-buffered saline, 50% glycerol, 1mg/ml BSA, and 0.05% sodium azide.
Applicable Applications for anti-MYL12A antibody	ICC (Immunocytochemistry), ELISA, WB (Western Blot)
Immunogen	Phospho-MLC (Ser-19) synthetic peptide (coupled to KLH) corresponds to amino acid residues surrounding Ser-19 in human myosin regulatory light chain 12A (Myl12A). This peptide sequence is highly conserved in human, rat, mouse, chicken, and zebrafish Myl12A, and in other smooth muscle and non-muscle MLCs.
Preparation and Storage	Store at -20 degree C. Stable for 1 year.

IMAGES



ICC (Immunocytochemistry)

Immunocytochemical labeling of phosphorylated MLC in paraformaldehyde fixed A7r5 cells. The cells were dual-labeled with anti-MLC (MM3441; middle) and anti-MLC (MP4201; top left), anti-MLC (Ser-19) (MP4221; middle left) and anti-MLC (Ser-1) (MP3461; bottom left). Goat anti-Mouse DyLight 488 and Goat anti-Rabbit DyLight 594 were used for detection of primary antibodies. The overlay of staining patterns are shown to the right.



WB (Western Blot)

Western blot analysis of C2C12 cells untreated (lanes 1, 3, 5, & 7) or treated with Lambda phosphatase (lanes 2, 4, 6, & 8). The blots were probed with monoclonal anti-MLC20 (clone MY-21) (lanes 1 & 2), polyclonal anti-MLC (Ser-19) phospho-specific (lanes 3 & 4), anti-MLC (Ser-1) phospho-specific (lanes 5 & 6), or anti-MLC (a.a. 11-22) (lanes 7 & 8).

ADDITIONAL INFORMATION

Related Product Information for anti-MYL12A antibody	Both smooth muscle and nonmuscle myosin II activity is regulated by the phosphorylation state of the myosin regulatory light chain (MLC, MRLC, MLC20, Myl9). Phosphorylation of MLC at Thr-18 and Ser-19 activates myosin II motor activity and increases myosin filament stability. This activation has important roles in various cell motile processes. By contrast, other phosphorylation sites on MLC may inhibit myosin II activity. PKC phosphorylates Ser-1/Ser-2 and Thr-9 in MLC, and this phosphorylation decreases activated myosin II interaction with actin, as well as inhibits MLC interaction with the activation site kinase, myosin light-chain kinase. The Ser-1/Ser-2 region may be the major inhibitory site since Ser-1 is phosphorylated during PDGF-induced stress fiber disassembly and expression of unphosphorylatable MLC20 at the Ser-1/Ser-2 site suppresses this disassembly. Thus, inhibition of myosin II activity through phosphorylation of Ser-1/Ser-2 may have important roles in growth factor-induced reorganization of actomyosin filaments.
References	Komatsu, S. & Ikebe, M. (2007) Mol. Biol. Cell 18:5081. Tan, J.L. et al. (1992) Annu. Rev. Biochem. 61:721. Sellers, J.R. (1991) Curr. Opin. Cell Biol. 3:98.

NCBI AND UNIPROT INFORMATION

NCBI GI #	127169
NCBI GeneID	10627
UniProt Accession #	P19105; Q53X45
Molecular Weight	171
NCBI Official Full Name	Myosin regulatory light chain 12A
NCBI Official Synonym Full Names	myosin, light chain 12A, regulatory, non-sarcomeric
NCBI Official Symbol	MYL12A
NCBI Official Synonym Symbols	MLCB; MRCL3; MRLC3; MYL2B; MLC-2B; HEL-S-24
NCBI Protein Information	myosin regulatory light chain 12A; myosin RLC; myosin regulatory light chain 3; epididymis secretory protein Li 24; myosin regulatory light chain MRLC3; myosin regulatory light chain 2, nonsarcomeric; myosin, light polypeptide, regulatory, non-sarcomeric
UniProt Protein Name	Myosin regulatory light chain 12A
UniProt Gene Name	MYL12A
UniProt Synonym Gene Names	MLCB; MRLC3; RLC; HEL-S-24
UniProt Entry Name	ML12A_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.