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

Anti-Myosin Light Chain (Ser-19), Phosphospecific Antibody

Catalog # AN1853

Product Information

Application	WB, ICC
Primary Accession	P19105
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	19794

Additional Information

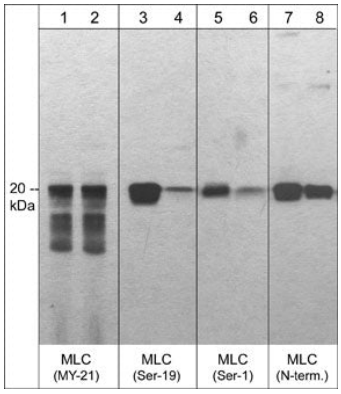
Gene ID	10627
Other Names	MLC20, RLC-C; Mylc2c; Myl9, MLC2, MRLC1, MYRL2; MLCB; MRCL3; MRLC3; MYL2B; MYL12A, myosin
Dilution	WB~~1:1000 ICC~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Myosin Light Chain (Ser-19), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

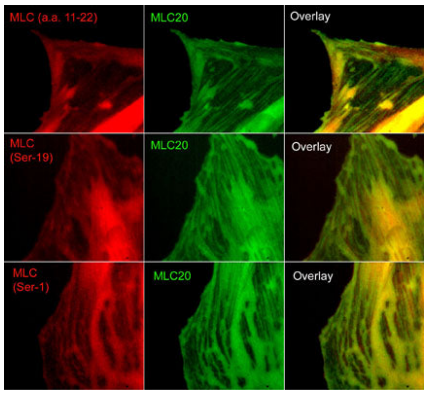
Both smooth muscle and nonmuscle myosin II activity is regulated by the phosphorylation state of the myosin regulatory light chain (MLC, MRLC, MLC20, Myl9). Phosphorylation of MLC at Thr-18 and Ser-19 activates myosin II motor activity and increases myosin filament stability. This activation has important 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.

Images

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) phosho-specific (lanes 3 & 4), anti-MLC (Ser-1) phosho-specific (lanes 5 & 6), or anti-MLC (a.a. 11-22) (lanes 7 & 8).



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) (AN1853; 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.