

# MLCK Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7966a

## Product Information

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<b>Application</b>	WB, IHC-P, E
<b>Primary Accession</b>	<a href="#">Q15746</a>
<b>Other Accession</b>	<a href="#">P29294</a>
<b>Reactivity</b>	Human, Rat, Mouse
<b>Predicted</b>	Rabbit
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB03067
<b>Antigen Region</b>	923-953

## Additional Information

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<b>Other Names</b>	Myosin light chain kinase, smooth muscle, MLCK, smMLCK, Kinase-related protein, KRP, Telokin, Myosin light chain kinase, smooth muscle, deglutamylated form, MYLK, MLCK, MLCK1, MYLK1
<b>Target/Specificity</b>	This MLCK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 923-953 amino acids from the N-terminal region of human MLCK.
<b>Dilution</b>	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	MLCK Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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### Background

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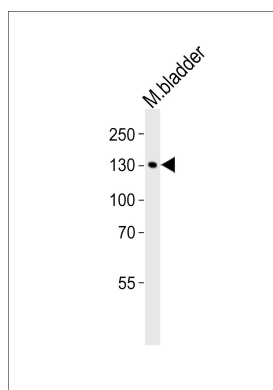
MLCK, a member of the Ser/Thr protein kinase family, is a calcium/calmodulin-dependent enzyme responsible for smooth muscle contraction via phosphorylation of a specific serine in the N-terminus of myosin light chains (MLC), an event that facilitates myosin interaction with actin filaments. It is a central

determinant in the development of vascular permeability and tissue edema formation. In the nervous system it has been shown to control the growth initiation of astrocytic processes in culture and to participate in transmitter release at synapses formed between cultured sympathetic ganglion cells. MLCK acts as a critical participant in signaling sequences that result in fibroblast apoptosis. Smooth muscle and non-muscle isozymes are expressed in a wide variety of adult and fetal tissues and in cultured endothelium with qualitative expression appearing to be neither tissue- nor development-specific. Non-muscle isoform 2 is the dominant splice variant expressed in various tissues. The Telokin isoform, which binds calmodulin, has been found in a wide variety of adult and fetal tissues. MLCK is probably down-regulated by phosphorylation. The protein contains 1 fibronectin type III domain and 9 immunoglobulin-like C2-type domains.

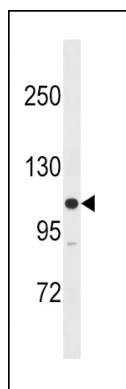
## References

Lazar, V., et al., Genomics 57(2):256-267 (1999). Watterson, D.M., et al., J. Cell. Biochem. 75(3):481-491 (1999). Garcia, J.G., et al., Am. J. Respir. Cell Mol. Biol. 16(5):489-494 (1997). Potier, M.C., et al., Genomics 29(3):562-570 (1995).

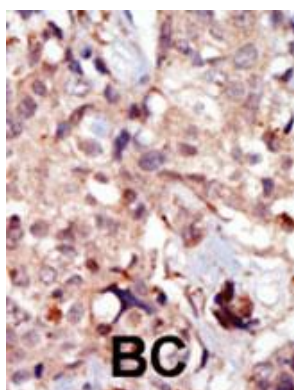
## Images



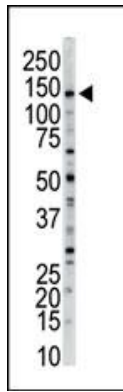
Western blot analysis of lysate from mouse bladder tissue lysate, using MLCKlong Antibody (M1)(Cat. #AP7966a). AP7966a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 35ug.



MLCK Antibody (M1) (Cat. #AP7966a) western blot analysis in SK-BR-3 cell line lysates (35ug/lane). This demonstrates the MLCK antibody detected the MLCK protein (arrow).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Western blot analysis of anti-MLCK-long Pab (Cat. #AP7966a) in mouse brain tissue lysate. MLCK-long (Arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.

## Citations

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- [P2Y6 receptor inhibition aggravates ischemic brain injury by reducing microglial phagocytosis](#)
- [P2Y6 Receptor-Mediated Microglial Phagocytosis in Radiation-Induced Brain Injury](#)
- [Macrophage-specific RhoA knockout delays Wallerian degeneration after peripheral nerve injury in mice](#)

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