

## Product datasheet for **AP14866PU-N**

### MYLK3 (N-term) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	ELISA: 1/1,000. Western blotting: 1/100 - 1/500. Immunohistochemistry: 1/50 - 1/100.
Reactivity:	Human, Mouse
Host:	Rabbit
Isotype:	Ig
Clonality:	Polyclonal
Immunogen:	This antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide selected from the N-terminal region of human MLCK.
Specificity:	This antibody reacts to MLCK.
Formulation:	PBS with 0.09% (W/V) sodium azide State: Purified State: Liquid purified Ig
Concentration:	lot specific
Purification:	Protein G column, eluted with high and low pH buffers and neutralized immediately, followed by dialysis against PBS
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	myosin light chain kinase 3
Database Link:	<a href="#">Entrez Gene 91807 Human Q32MK0</a>



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**Background:**

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.

**Synonyms:**

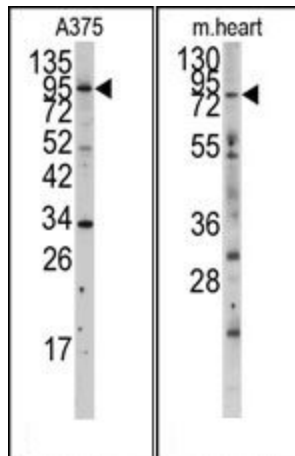
MYLK3, Putative myosin light chain kinase 3

**Protein Families:**

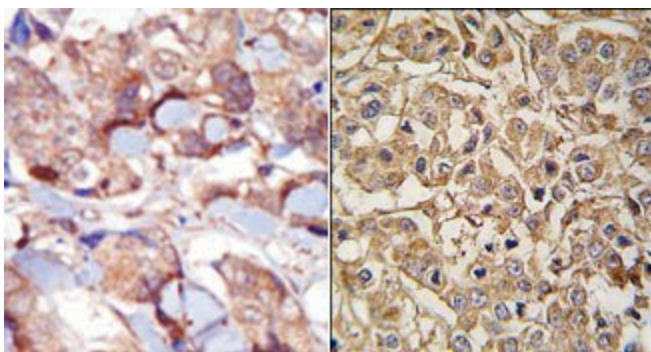
Druggable Genome, Protein Kinase

**Protein Pathways:**

Calcium signaling pathway, Focal adhesion, Regulation of actin cytoskeleton, Vascular smooth muscle contraction

**Product images:**

(LEFT)Western blot analysis of anti-MLCK Antibody (N-term) in A375 cell line lysates (35ug/lane). MLCK (arrow) was detected using the purified Pab. (RIGHT)Western blot analysis of anti-MLCK Antibody (N-term) in mouse heart tissue lysates (35ug/lane). MLCK (arrow) was detected using the purified Pab.



(LEFT) 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. (RIGHT) Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with MLCK antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining.