

**MKL1 Antibody (Center)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP18838C****Specification**

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**MKL1 Antibody (Center) - Product Information**

Application	WB,E
Primary Accession	<a href="#">O969V6</a>
Other Accession	<a href="#">NP_065882.1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	98919
Antigen Region	497-525

**MKL1 Antibody (Center) - Additional Information****Gene ID** 57591**Other Names**

MKL/myocardin-like protein 1, Megakaryoblastic leukemia 1 protein, Megakaryocytic acute leukemia protein, Myocardin-related transcription factor A, MRTF-A, MKL1, KIAA1438, MAL

**Target/Specificity**

This MKL1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 497-525 amino acids from the Central region of human MKL1.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

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.

**Precautions**

MKL1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**MKL1 Antibody (Center) - Protein Information****Name** MRTFA ([HGNC:14334](#))

**Function** Transcription coactivator that associates with the serum response factor (SRF) transcription factor to control expression of genes regulating the cytoskeleton during development, morphogenesis and cell migration (PubMed:[26224645](#)). The SRF-MRTFA complex activity responds to Rho GTPase-induced changes in cellular globular actin (G- actin) concentration, thereby coupling cytoskeletal gene expression to cytoskeletal dynamics. MRTFA binds G-actin via its RPEL repeats, regulating activity of the MRTFA-SRF complex. Activity is also regulated by filamentous actin (F-actin) in the nucleus.

#### Cellular Location

Cytoplasm. Nucleus Note=Subcellular location is tightly regulated by actin both in cytoplasm and nucleus: high levels of G-actin in the nucleus observed during serum deprivation lead to low levels of nuclear MRTFA, while reduced levels of nuclear G-actin result in accumulation of MRTFA in the nucleus (By similarity). G-actin-binding in the cytoplasm inhibits nuclear import by masking the nuclear localization signal (NLS) (By similarity). In contrast, binding to nuclear globular actin (G-actin) promotes nuclear export to the cytoplasm (By similarity). Nuclear localization is regulated by MICAL2, which mediates depolymerization of nuclear actin, which decreases nuclear G-actin pool, thereby promoting retention of MRTFA in the nucleus and subsequent formation of an active complex with SRF (PubMed:24440334). Nuclear import is mediated by importins KPNA4 and KPNB1 (By similarity) {ECO:0000250|UniProtKB:Q8K4J6, ECO:0000269|PubMed:24440334}

#### Tissue Location

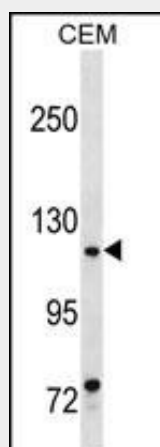
Ubiquitously expressed, has been detected in lung, placenta, small intestine, liver, kidney, spleen, thymus, colon, muscle, heart and brain (PubMed:11344311). Expressed in peripheral blood mononuclear cells (at protein level) (PubMed:26224645)

### MKL1 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### MKL1 Antibody (Center) - Images



MKL1 Antibody (Center)(Cat. #AP18838c) western blot analysis in CEM cell line lysates (35ug/lane). This demonstrates the MKL1 antibody detected the MKL1 protein (arrow).

#### **MKL1 Antibody (Center) - Background**

The protein encoded by this gene interacts with the transcription factor myocardin, a key regulator of smooth muscle cell differentiation. The encoded protein is predominantly nuclear and may help transduce signals from the cytoskeleton to the nucleus. This gene is involved in a specific translocation event that creates a fusion of this gene and the RNA-binding motif protein-15 gene. This translocation has been associated with acute megakaryocytic leukemia.

#### **MKL1 Antibody (Center) - References**

Gilles, L., et al. Blood 114(19):4221-4232(2009)  
Hinohara, K., et al. Hum. Genet. 126(4):539-547(2009)  
Estrada, K., et al. Hum. Mol. Genet. 18(18):3516-3524(2009)  
Brandt, D.T., et al. Nat. Cell Biol. 11(5):557-568(2009)  
Medjkane, S., et al. Nat. Cell Biol. 11(3):257-268(2009)