

MKL1 antibody - C-terminal region

Rabbit Polyclonal Antibody Catalog # AI11238

Product Information

Application	WB
Primary Accession	<u>Q8K4J6</u>
Other Accession	<u>NM_153049</u> , <u>NP_694629</u>
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Pig, Chicken, Dog, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	102546

Additional Information

Gene ID	223701
Alias Symbol Other Names	Mal, AMKL, Bsac, Mrtf-A, AI852829, AW743281, AW821984 MKL/myocardin-like protein 1, Basic SAP coiled-coil transcription activator, Megakaryoblastic leukemia 1 protein homolog, Myocardin-related transcription factor A, MRTF-A, Mkl1, Bsac
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 100 ul of distilled water. Final anti-MKL1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	MKL1 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Mrtfa
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: <u>12019265</u> , PubMed: <u>12732141</u> , PubMed: <u>17588931</u> , PubMed: <u>19350017</u> , PubMed: <u>24732378</u>). 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 (PubMed: <u>24732378</u>). MRTFA binds G-actin via its RPEL repeats, regulating activity of the MRTFA-SRF complex (PubMed: <u>12732141</u> ,

	PubMed: <u>17588931</u>). Activity is also regulated by filamentous actin (F-actin) in the nucleus (PubMed: <u>23558171</u> , PubMed: <u>25759381</u>).
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 (PubMed:17588931, PubMed:21673315). G-actin-binding in the cytoplasm inhibits nuclear import by masking the nuclear localization signal (NLS) (PubMed:17588931, PubMed:20818336, PubMed:21673315). In contrast, binding to nuclear globular actin (G-actin) promotes nuclear export to the cytoplasm (PubMed:17588931). 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 (By similarity). Nuclear import is mediated by importins KPNA4 and KPNB1 (PubMed:20818336). {ECO:0000250 UniProtKB:Q969V6, ECO:0000269 PubMed:17588931, ECO:0000269 PubMed:20818336, ECO:0000269 PubMed:21673315}
Tissue Location	Expressed in heart, brain, spleen, lung, liver, muscle, kidney and testis.

References

Sasazuki,T., et al., (2002) J. Biol. Chem. 277 (32), 28853-28860Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent freeze-thaw cycles.

Images



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.