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MICAL1 (13R9) Rabbit Monoclonal Antibody

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Catalog # AP93813

Specification

MICAL1 (13R9) Rabbit Monoclonal Antibody - Product Information

Application	WB, IP
Primary Accession	Q8TDZ2
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Calculated MW	117875

MICAL1 (13R9) Rabbit Monoclonal Antibody - Additional Information

Gene ID 64780

Other Names
[F-actin]-monooxygenase MICAL1, 1.14.13.225, 1.6.3.1, Molecule interacting with CasL protein 1, MICAL-1, NEDD9-interacting protein with calponin homology and LIM domains, MICAL1, MICAL, NICAL

Dilution
WB~~1:1000
IP~~N/A

Storage Conditions
-20℃

MICAL1 (13R9) Rabbit Monoclonal Antibody - Protein Information

Name MICAL1

Synonyms MICAL, NICAL

Function
Monooxygenase that promotes depolymerization of F-actin by mediating oxidation of specific methionine residues on actin to form methionine-sulfoxide, resulting in actin filament disassembly and preventing repolymerization (PubMed:29343822). In the absence of actin, it also functions as a NADPH oxidase producing H(2)O(2) (PubMed:21864500, PubMed:26845023, PubMed:29343822). Acts as a cytoskeletal regulator that connects NEDD9 to intermediate filaments. Also acts as a negative regulator of apoptosis via its interaction with STK38 and STK38L; acts by antagonizing STK38 and STK38L activation by MST1/STK4. Involved in regulation of lamina-specific connectivity in the nervous system such as the development of lamina-restricted hippocampal connections. Through redox regulation of the actin cytoskeleton controls the intracellular distribution of secretory vesicles containing L1/neurofascin/NgCAM family

proteins in neurons, thereby regulating their cell surface levels (By similarity). May act as Rab effector protein and play a role in vesicle trafficking. Promotes endosomal tubule extension by associating with RAB8 (RAB8A or RAB8B), RAB10 and GRAF (GRAF1/ARHGAP26 or GRAF2/ARHGAP10) on the endosomal membrane which may connect GRAFs to Rabs, thereby participating in neosynthesized Rab8-Rab10-Rab11-dependent protein export (PubMed:32344433).

Cellular Location
Cytoplasm. Cytoplasm, cytoskeleton. Endosome membrane. Midbody Note=Accumulates transiently at the abscission site before abscission occurs. Colocalized with GRAF1/ARHGAP26 and GRAF2/ARHGAP10, RAB8A, RAB8B and RAB10 on endosomal tubules (PubMed:32344433)

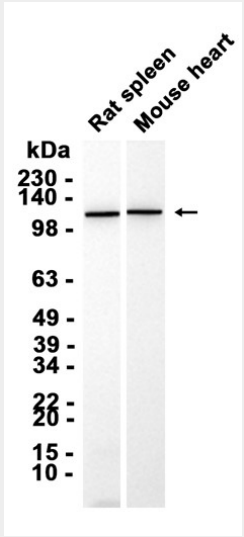
Tissue Location
Expressed in the thymus, lung, spleen, kidney, testis and hematopoietic cells.

MICAL1 (13R9) Rabbit Monoclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

MICAL1 (13R9) Rabbit Monoclonal Antibody - Images



Western blot analysis of extracts from Rat spleen Mouse heart tissue using AP93813 at 1:1000.

MICAL1 (13R9) Rabbit Monoclonal Antibody - Background

This gene encodes an enzyme that oxidizes methionine residues on actin, thereby promoting depolymerization of actin filaments. This protein interacts with and regulates signalling by NEDD9/CAS-L (neural precursor cell expressed, developmentally down-regulated 9). Alternative

splicing results in multiple transcript variants. [provided by RefSeq, Aug 2015]