

MICAL1 (14Q4) Mouse Monoclonal antibody MICAL1 (14Q4) Mouse Monoclonal antibody Catalog # AP93886

Specification

MICAL1 (14Q4) Mouse Monoclonal antibody - Product Information

Application WB, IHC
Primary Accession Q8TDZ2
Reactivity Human
Clonality Monoclonal
Calculated MW 117875

MICAL1 (14Q4) Mouse 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

Storage Conditions -20°C

MICAL1 (14Q4) Mouse 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

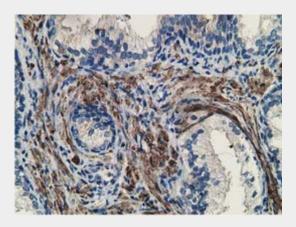
Expressed in the thymus, lung, spleen, kidney, testis and hematopoietic cells.

MICAL1 (14Q4) Mouse Monoclonal antibody - Protocols

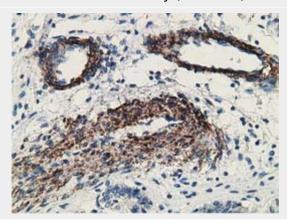
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

MICAL1 (14Q4) Mouse Monoclonal antibody - Images

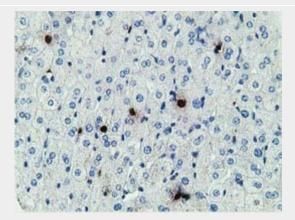


Immunohistochemical staining of paraffin-embedded Human prostate tissue within the normal limits using anti-MICAL1 mouse monoclonal antibody (AP93886) at 1:150 dilution.

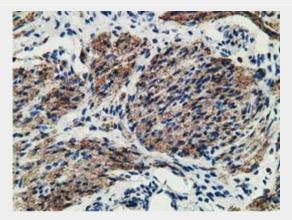




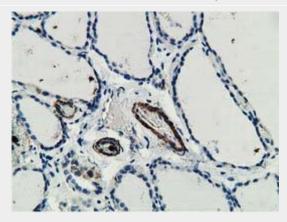
Immunohistochemical staining of paraffin-embedded Adenocarcinoma of Human endometrium tissue using anti-MICAL1 mouse monoclonal antibody (AP93886) at 1:150 dilution.



Immunohistochemical staining of paraffin-embedded Human liver tissue within the normal limits using anti-MICAL1 mouse monoclonal antibody (AP93886) at 1:150 dilution.

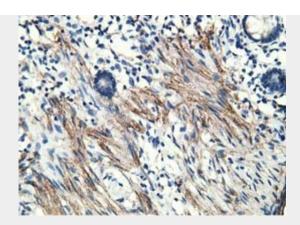


Immunohistochemical staining of paraffin-embedded Human endometrium tissue within the normal limits using anti-MICAL1 mouse monoclonal antibody (AP93886) at 1:150 dilution.

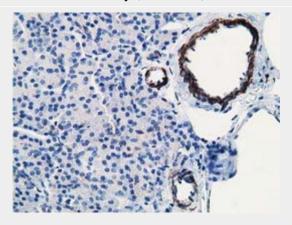


Immunohistochemical staining of paraffin-embedded Human thyroid tissue within the normal limits using anti-MICAL1 mouse monoclonal antibody (AP93886) at 1:150 dilution.





Immunohistochemical staining of paraffin-embedded Human colon tissue within the normal limits using anti-MICAL1 mouse monoclonal antibody (AP93886) at 1:150 dilution.



Immunohistochemical staining of paraffin-embedded Human pancreas tissue within the normal limits using anti-MICAL1 mouse monoclonal antibody (AP93886) at 1:150 dilution.