

**MICAL1 (3K2) Mouse Monoclonal antibody**  
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**Catalog # AP93889****Specification**

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**MICAL1 (3K2) Mouse Monoclonal antibody - Product Information**

Application	<b>WB, IF</b>
Primary Accession	<a href="#">Q8TDZ2</a>
Reactivity	<b>Human</b>
Clonality	<b>Monoclonal</b>
Calculated MW	<b>117875</b>

**MICAL1 (3K2) 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 (3K2) 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](http://www.uniprot.org/citations/29343822)). In the absence of actin, it also functions as a NADPH oxidase producing H<sub>2</sub>O<sub>2</sub> (PubMed: [21864500](http://www.uniprot.org/citations/21864500), PubMed: [26845023](http://www.uniprot.org/citations/26845023), PubMed: [29343822](http://www.uniprot.org/citations/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:<a href="http://www.uniprot.org/citations/32344433" target="\_blank">32344433</a>).

#### 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

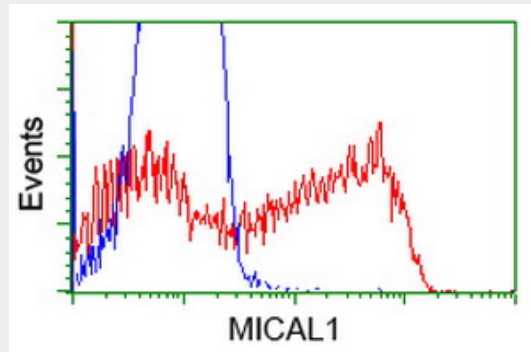
Expressed in the thymus, lung, spleen, kidney, testis and hematopoietic cells.

### MICAL1 (3K2) Mouse Monoclonal antibody - Protocols

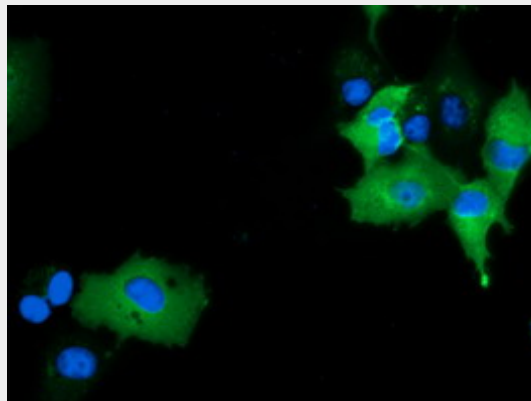
Provided below are standard protocols that you may find useful for product applications.

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

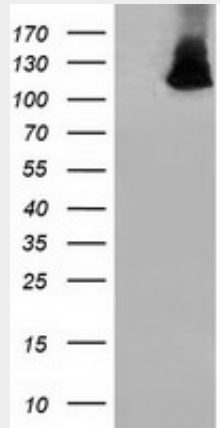
### MICAL1 (3K2) Mouse Monoclonal antibody - Images



HEK293T cells transfected with either overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-MICAL1 antibody (AP93889), and then analyzed by flow cytometry.



Anti-MICAL1 mouse monoclonal antibody (AP93889) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY MICAL1 .



HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY MICAL1 (Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MICAL1. Positive lysates (100ug) and (20ug) can be purchased separately from biodragon.

#### **MICAL1 (3K2) Mouse Monoclonal antibody - Background**

May be a cytoskeletal regulator that connects NEDD9 to intermediate filaments