

# MICAL1 (3K2) Mouse Monoclonal antibody

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Catalog # AP93889

## Product Information

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

## Additional Information

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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 IF~~1:50~200
Storage Conditions	-20°C

## Protein Information

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Name	MICAL1
Synonyms	MICAL, NICAL
Function	<p>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:<a href="#">29343822</a>). In the absence of actin, it also functions as a NADPH oxidase producing H<sub>2</sub>O<sub>2</sub> (PubMed:<a href="#">21864500</a>, PubMed:<a href="#">26845023</a>, PubMed:<a href="#">29343822</a>). 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</p>

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.

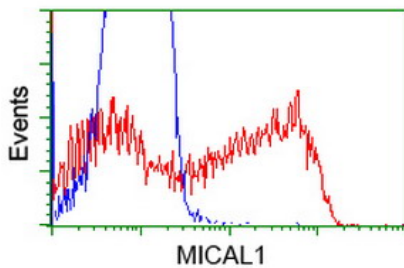
## Background

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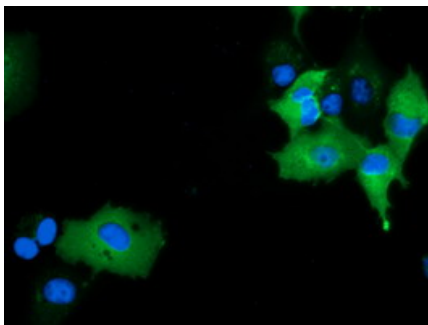
May be a cytoskeletal regulator that connects NEDD9 to intermediate filaments

## Images

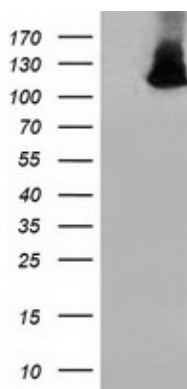
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HEK293T cells transfected with either overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-MICAL1 antibody (AP93889), and then analyzed by flow cytometry.



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.

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