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MICAL1 (18N18) Mouse Monoclonal antibody

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Catalog # AP93887

Product Information

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

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 IHC~~1:100~500 IF~~1:50~200
Storage Conditions	-20℃

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).

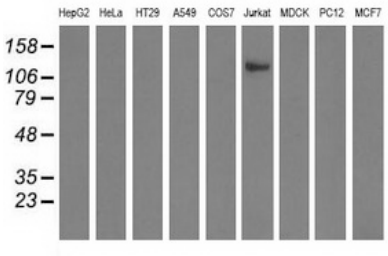
Cellular Location

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)

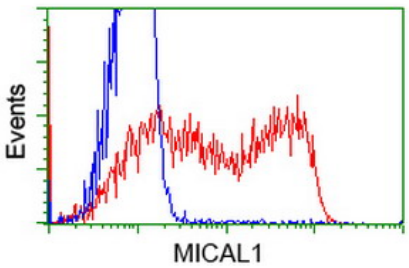
Tissue Location

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

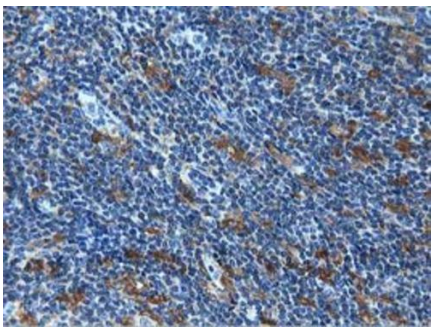
Images



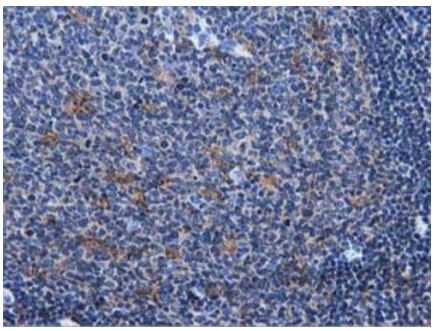
Western blot analysis of extracts (35ug) from 9 different cell lines by using anti-MICAL1 monoclonal antibody.



HEK293T cells transfected with either overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-MICAL1 antibody (AP93887), and then analyzed by flow cytometry.

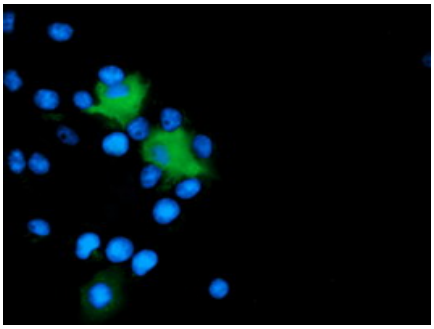


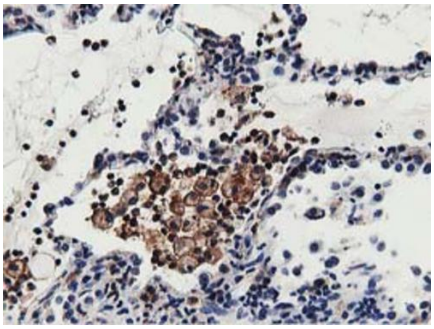
Immunohistochemical staining of paraffin-embedded Human lymphoma tissue using anti-MICAL1 mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 100°C for 10min, AP93887)



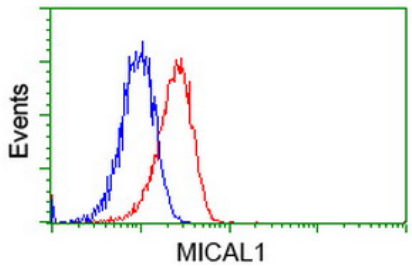
Immunohistochemical staining of paraffin-embedded Human lymph node tissue within the normal limits using anti-MICAL1 mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 100°C for 10min, AP93887)

Anti-MICAL1 mouse monoclonal antibody (AP93887) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY MICAL1 .





Immunohistochemical staining of paraffin-embedded Carcinoma of Human lung tissue using anti-MICAL1 mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 100°C for 10min, AP93887)



Flow cytometric Analysis of Jurkat cells, using anti-MICAL1 antibody (AP93887), (Red), compared to a nonspecific negative control antibody , (Blue).