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MICAL2 Rabbit pAb

Catalog # AP98464

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	O94851
Other Accession	O94851
Predicted	Rat, Human, Mouse, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	219061
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human MICAL2
Epitope Specificity	601-700/1124
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the Mical family. Contains 1 CH (calponin-homology) domain. Contains 1 LIM zinc-binding domain.
SUBUNIT	Interacts with VIM and PLXNA4 By similarity. Interacts with RAB1B.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	MICAL2 is a 1,124 amino acid protein that localizes to both the cytoplasm and the cytoskeleton and contains one LIM zinc-binding domain and one calponin-homology domain. Using FAD as a cofactor, MICAL2 interacts with Rab 1B, plexin-A4 and Vimentin and, via these interactions, may play a role in cytoskeletal regulation, specifically at intermediate filaments. MICAL2, which exists as two alternatively spliced isoforms, is expressed at high levels in heart and brain and at lower levels in ovary, skeletal muscle, liver, testis and kidney tissue.

Additional Information

Gene ID	9645
Other Names	MICAL-2; Ebitein1; MICAL2PV1; MICAL2PV2; MICALCL; mical-cL; 4921517J23Rik; 5330438E18Rik; 9530064J02; mKIAA0750; RGD1311773; RSB-11-77; MICA2_BOVIN; MICAL2; Molecule interacting with CasL protein 2 (MICAL-2); 1.14.13.225; MICA2_HUMAN; MICAL C-terminal-like protein (Mical-cL); KIAA0750; MICA2_MOUSE; ERK2-binding testicular protein 1; Molecule interacting with CasL protein 2 (MICAL-2 | mMical2); microtubule associated monooxygenase, calponin and LIM domain containing 2; MICAL C-terminal like
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	MICAL2 (HGNC:24693)
Function	Methionine monooxygenase that promotes depolymerization of F- actin by mediating oxidation of residues 'Met-44' and 'Met-47' on actin to form methionine-sulfoxide, resulting in actin filament disassembly and preventing repolymerization (PubMed:24440334, PubMed:29343822). Regulates the disassembly of branched actin networks also by oxidizing ARP3B-containing ARP2/3 complexes leading to ARP3B dissociation from the network (PubMed:34106209). Acts as a key regulator of the SRF signaling pathway elicited by nerve growth factor and serum: mediates oxidation and subsequent depolymerization of nuclear actin, leading to increase MKL1/MRTF-A presence in the nucleus and promote SRF:MKL1/MRTF-A-dependent gene transcription. Does not activate SRF:MKL1/MRTF-A through RhoA (PubMed:24440334).
Cellular Location	Nucleus. Cytoplasm {ECO:0000250|UniProtKB:Q8BML1}

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