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MUL1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12811b

Product Information

Application	WB, E
Primary Accession	Q969V5
Other Accession	Q4R7G8, NP_078820.2
Reactivity	Human
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32336
Calculated MW	39800
Antigen Region	272-301

Additional Information

Gene ID	79594
Other Names	Mitochondrial ubiquitin ligase activator of NFKB 1, 632-, E3 SUMO-protein ligase MUL1, E3 ubiquitin-protein ligase MUL1, Growth inhibition and death E3 ligase, Mitochondrial-anchored protein ligase, MAPL, Putative NF-kappa-B-activating protein 266, RING finger protein 218, MUL1, C1orf166, GIDE, MAPL, MULAN, RNF218
Target/Specificity	This MUL1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 272-301 amino acids from the C-terminal region of human MUL1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MUL1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MUL1

Synonyms	C1orf166, GIDE, MAPL, MULAN, RNF218
Function	Exhibits weak E3 ubiquitin-protein ligase activity (PubMed: 18591963, PubMed:19407830, PubMed:22410793). E3 ubiquitin ligases accept ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfer the ubiquitin to targeted substrates (PubMed:18591963, PubMed:19407830, PubMed:22410793). Can ubiquitinate AKT1 preferentially at 'Lys-284' involving 'Lys-48'-linked polyubiquitination and seems to be involved in regulation of Akt signaling by targeting phosphorylated Akt to proteasomal degradation (PubMed:22410793). Mediates polyubiquitination of cytoplasmic TP53 at 'Lys-24' which targets TP53 for proteasomal degradation, thus reducing TP53 levels in the cytoplasm and mitochondrion (PubMed:21597459). Proposed to preferentially act as a SUMO E3 ligase at physiological concentrations (PubMed:19407830). Plays a role in the control of mitochondrial morphology by promoting mitochondrial fragmentation, and influences mitochondrial localization (PubMed:18207745, PubMed:18213395, PubMed:19407830). Likely to promote mitochondrial fission through negatively regulating the mitochondrial fusion proteins MFN1 and MFN2, acting in a pathway that is parallel to the PRKN/PINK1 regulatory pathway (PubMed:24898855). May also be involved in the sumoylation of the membrane fission protein DNM1L (PubMed:18207745, PubMed:19407830). Inhibits cell growth (PubMed:18591963, PubMed:22410793). When overexpressed, activates JNK through MAP3K7/TAK1 and induces caspase-dependent apoptosis (PubMed:23399697). Involved in the modulation of innate immune defense against viruses by inhibiting RIGI-dependent antiviral response (PubMed:23399697). Can mediate RIGI sumoylation and disrupt its polyubiquitination (PubMed:23399697).
Cellular Location	Mitochondrion outer membrane; Multi-pass membrane protein. Peroxisome. Note=Transported in mitochondrion- derived vesicles from the mitochondrion to the peroxisome
Tissue Location	Widely expressed with highest levels in the heart, skeletal muscle, placenta, kidney and liver. Barely detectable in colon and thymus.

Background

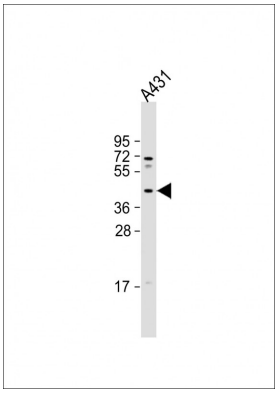
E3 ubiquitin-protein ligase that plays a role in the control of mitochondrial morphology. Promotes mitochondrial fragmentation and influences mitochondrial localization. Inhibits cell growth. When overexpressed, activates JNK through MAP3K7/TAK1 and induces caspase-dependent apoptosis. E3 ubiquitin ligases accept ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfer the ubiquitin to targeted substrates.

References

Laure, L., et al. FEBS J. 277(20):4322-4337(2010)
Braschi, E., et al. EMBO Rep. 10(7):748-754(2009)
Venkatesan, K., et al. Nat. Methods 6(1):83-90(2009)
Zhang, B., et al. Cell Res. 18(9):900-910(2008)
Zhang, H., et al. Biochem. Biophys. Res. Commun. 366(4):898-904(2008)

Images

Anti-MUL1 Antibody (C-term) at 1:1000 dilution + A431 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase



conjugated at 1/10000 dilution. Predicted band size : 40 kDa Blocking/Dilution buffer: 5% NFDM/TBST.