10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# MUL1 Rabbit pAb

Catalog # AP97958

## Product Information

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| **Application** | WB, IHC-P, IHC-F, IF |
| **Primary Accession** | Q969V5 |
| **Other Accession** | Q969V5 |
| **Reactivity** | Rat, Human, Mouse |
| **Predicted** | Pig, Rabbit, Dog |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 39800 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human MUL1/RNF218 |
| **Epitope Specificity** | 1-100/352 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Contains 1 RING-type zinc finger. |
| **SUBUNIT** | Homooligomer. Interacts with MAP3K7/TAK1. Interacts with UBC9. Interacts with and sumoylates DNM1L. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | 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. |

## Additional Information

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| **Gene ID** | 79594 |
| **Other Names** | C1orf166; GIDE; MAPL; MULAN; RNF218; 0610009K11Rik; RGD1309944; MUL1_HUMAN; MUL1; E3 SUMO-protein ligase MUL1; E3 ubiquitin-protein ligase MUL1; Growth inhibition and death E3 ligase; Mitochondrial-anchored protein ligase; Protein Hades; Putative NF-kappa-B-activating protein 266; RING finger protein 218; RING-type E3 ubiquitin transferase NFKB 1; 2.3.2.27; MUL1_MOUSE; mitochondrial E3 ubiquitin protein ligase 1; chromosome 1 open reading frame 166; mitochondria-anchored protein ligase; mitochondrial ubiquitin ligase activator of NFKB 1 |
| **Dilution** | WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug/test |

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| **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

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| **Name** | MUL1 |
| **Synonyms** | C1orf166, GIDE, MAPL, MULAN, RNF218 |
| **Function** | E3 ubiquitin-protein ligase activity, which accepts 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 p53/TP53 at 'Lys-24' which targets TP53 for proteasomal degradation, thus reducing TP53 levels in the cytoplasm and mitochondrion (PubMed:21597459). Also involved in antiviral immunity by mediating 'Lys-63'-linked ubiquitination of STING1, promoting production of type I interferon (IFN-alpha and IFN-beta), whitout activating STING1- dependent NF-kappa-B signaling (PubMed:28763789). Proposed to preferentially act as a SUMO E3 ligase at physiological concentrations (PubMed:19407830). 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). 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). |
| **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. |

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