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Product datasheet for RC204038

E3 ubiquitin protein ligase MUL1 (MUL1) (NM_024544) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	E3 ubiquitin protein ligase MUL1 (MUL1) (NM_024544) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	E3 ubiquitin protein ligase MUL1
Synonyms:	C1orf166; GIDE; MAPL; MULAN; RNF218
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC204038 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGAGCGGAGGGCGGCCCTCGCTGTGCCAGTTCATCCTCCTGGGCACCACCTCTGTGGTCACCGCCG
CCCTGTACTCCGTGTACCGGCAGAAGGCCCGGGTCTCCCAAGAGCTCAAGGGAGCTAAAAAAGTTCATTT
GGGTGAAGATTTAAAGAGTATTCTTTCAGAAGCTCCAGGAAAATGCGTGCCTTATGCTGTTATAGAAGGA
GCTGTGCGGTCTGTTAAAGAAACGCTTAACAGCCAGTTTGTGGAAAACTGCAAGGGGGTAATTCAGCGGC
TGACACTTCAGGAGCACAAGATGGTGTGGAATCGAACCACCCACCTTTGGAATGATTGCTCAAAGATCAT
TCATCAGAGGACCAACACAGTGCCCTTTGACCTGGTGCCCCACGAGGATGGCGTGGATGTGGCTGTGCGA
GTGCTGAAGCCCCTGGACTCAGTGGATCTGGGTCTAGAGACTGTGTATGAGAAGTTCCACCCCTCGATTC
AGTCCTTCACCGATGTCATCGGCCACTACATCAGCGGTGAGCGGCCCAAAGGCATCCAAGAGACCGAGGA
GATGCTGAAGGTGGGGGCCACCCTCACAGGGGTTGGCGAACTGGTCCTGGACAACAACTCTGTCCGCCTG
CAGCCGCCCAAACAAGGCATGCAGTACTATCTAAGCAGCCAGGACTTCGACAGCCTGCTGCAGAGGCAGG
AGTCGAGCGTCAGGCTCTGGAAGGTGCTGGCGCTGGTTTTTGGCTTTGCCACATGTGCCACCCTCTTCTT
CATTCTCCGGAAGCAGTATCTGCAGCGGCAGGAGCGCCTGCGCCTCAAGCAGATGCAGGAGGAGTTCCAG
GAGCATGAGGCCCAGCTGCTGAGCCGAGCCAAGCCTGAGGACAGGGAGAGTCTGAAGAGCGCCTGTGTAG
TGTGTCTGAGCAGCTTCAAGTCCTGCGTCTTTCTGGAGTGTGGGCACGTTTGTTCCTGCACCGAGTGCTA
CCGCGCCTTGCCAGAGCCCAAGAAGTGCCCTATCTGCAGACAGGCGATCACCCGGGTGATACCCCTGTAC
AACAGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC204038 protein sequence
Red=Cloning site Green=Tags(s)

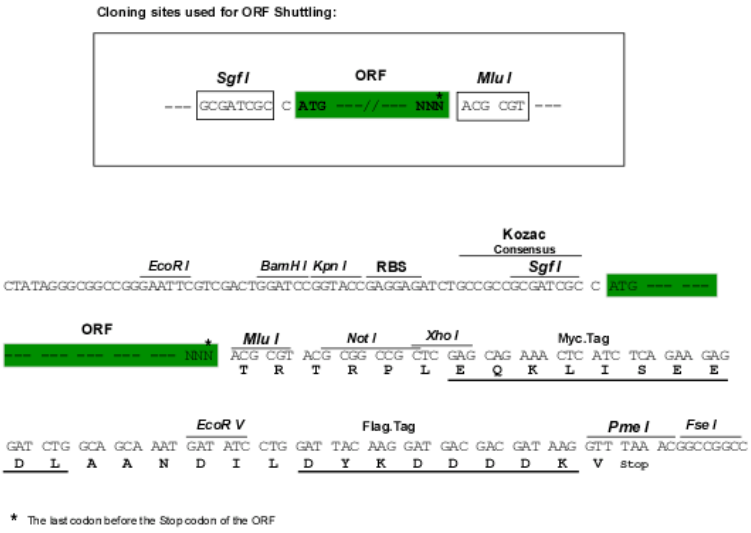
MESGGRPSLCQFILLGTTSVVTAALYSVYRQKARVSQELKGAKKVHLGEDLKSILSEAPGKCVPYAVIEG
AVRSVKETLNSQFVENCKGVIQRLTLQEHKMVWNRTTHLWNDCSKIIHQRTNTVPFDLVPHEDGVDVAVR
VLKPLDSVDLGLETVYEKFHPSIQSFTDVIGHYISGERPKGIQETEEMLKVGATLTGVGELVLDNNSVRL
QPPKQGMQYYLSSQDFDSLLQRQESSVRLWKVLALVFGFATCATLFFILRKQYLQRQERLRLKQMQEEFQ
EHEAQLLSRAKPEDRESLKSACVVCLSSFKSCVFLECGHVCSCTECYRALPEPKKCPICRQAITRVIPLY
NS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6422_d09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_024544

ORF Size: 1056 bp

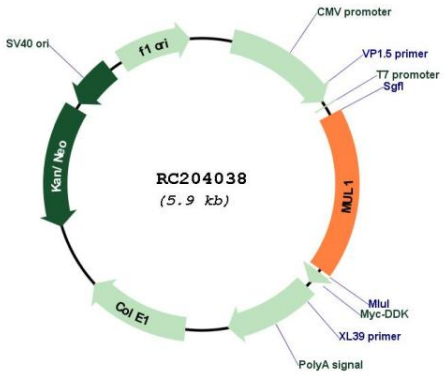
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

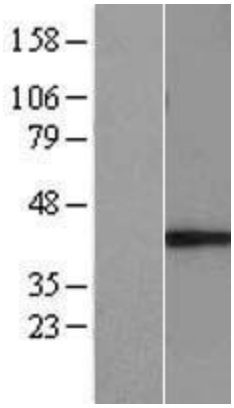
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_024544.3
RefSeq Size:	2474 bp
RefSeq ORF:	1059 bp
Locus ID:	79594
UniProt ID:	Q969V5
Cytogenetics:	1p36.12
Protein Families:	Druggable Genome, Transmembrane
MW:	39.8 kDa
Gene Summary:	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 proteosomal degradation (PubMed:22410793). 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:19407830, PubMed:18207745, PubMed:18213395). 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 DDX58-dependent antiviral response (PubMed:23399697). Can mediate DDX58 sumoylation and disrupt its polyubiquitination (PubMed:23399697).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RC204038



Western blot validation of overexpression lysate (Cat# [LY411243]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204038 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).