

Product datasheet for **SC321149**

E3 ubiquitin protein ligase MUL1 (MUL1) (NM_024544) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	E3 ubiquitin protein ligase MUL1 (MUL1) (NM_024544) Human Untagged Clone
Tag:	Tag Free
Symbol:	E3 ubiquitin protein ligase MUL1
Synonyms:	C1orf166; GIDE; MAPL; MULAN; RNF218
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

Fully Sequenced ORF:

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>OriGene sequence for NM_024544.1
GAGAGTCGGGGTACCAGGCCTATCCTTGGCGCCACAGTCGGCCACCGGGCTCGCCG
CGTCATGGAGAGCGGAGGGCGGCCCTCGCTGTGCCAGTTCATCCTCTGGGCACCACTC
TGTGGTCAACCGCCCGCTGTACTCCGTGTACCGGCAGAAAGGCCCGGGTCTCCCAAGAGCT
CAAGGGAGCTAAAAAGTTCATTTGGGTGAAGATTTAAAGAGTATTCTTTTCAAGAGCTCC
AGGAAAATGCGTGCCTTATGCTGTTATAGAAGGAGCTGTGCGGTCTGTTAAAGAAACGCT
TAACAGCCAGTTTGTGGAAAATGCAAGGGGTAATTACGCGGCTGACACTTCAGGAGCA
CAAGATGGTGTGGAATCGAACCCACCTTTGGAATGATTGCTCAAAGATCATTATCA
GAGGACCAACACAGTGCCCTTTGACCTGGTGCCCCACGAGGATGGCGTGGATGTGGCTGT
GCGAGTGTGAAGCCCCTGGACTCAGTGGATCTGGGTCTAGAGACTGTGTATGAGAAGTT
CCACCCCTCGATTAGTCTTACCGATGTCATCGGCCACTACATCAGCGGTGAGCGGCC
CAAAGGCATCAAAGAGACCGAGGAGATGCTGAAGGTGGGGCCACCTCACAGGGTTGG
CGAACTGGTCTGGACAACAACCTGTCCGCTGCAGCCGCCAAACAAGGCATGCAGTA
CTATCTAAGCAGCCAGGACTTCGACAGCCTGCTGCAGAGGCAGGAGTCGAGCGTCAGGCT
CTGGAAGGTGCTGGCGCTGGTTTTTGGCTTTGCCACATGTCCACCTCTTCTTATTCT
CCGGAAGCAGTATCTGCAGCGGCAGGAGCGCTGCGCCTCAAGCAGATGCAGGAGGAGTT
CCAGGAGCATGAGGCCAGCTGTGAGCCGAGCCAAGCCTGAGGACAGGGAGAGTCTGAA
GAGCGCTGTGTAGTGTCTGAGCAGCTTCAAGTCTGCGTCTTCTGGAGTGTGGCA
CGTTTTGTCTGCACCGAGTGTACCGCGCCTTGCCAGAGCCAAAGAAGTGCCTATCTG
CAGACAGGCGATCACCGGGTGATACCCCTGTACAACAGCTAATAGTTTGGAAAGCCGCAC
AGCTTGACCTGGAAGCACCCCTGCCCTTTTTCAGGGATTTTTATCTCGAGGCTTTGGA
GGAGCAGTGGTGGGGTAGCTGTACCTCCAGGTATGATTGAGGGAGGAATTGGGTAGAA
ACTCTCCAGACCCATGCCTCCAATGGCAGGATGCTGCCTTTCCACCTGAGAGGGGACCC
TGTCCATGTGCAGCCTCATCAGAGCCTCACCTGGGAGGATGCCGTGGCGTCTCCTCCCA
GGAGCCAGATCAGTGCGAGTGTGACTGAAAATGCCTCATCACTTAAGCACCAAAGCCAGT
GATCAGCAGCTCTTCTGTCTGTCTTCTGTTTTTTCTGGTGAATCGTTGCTTGCTG
TGGACTTGGTGGAGGACTCAGAGGGGAGGAAAGGCTGGGCCCGAGTACAACGGATGCCT
TGGGTGCTGCCTCCAAGAGACTCTGCCGAGCTTTTCTTCTTTTCTCATGCCCGGG
AAACAGTCTTTCTCAGAATTGTCAGGCTGGGCAGGCAACTTGTGTTCCCTTTCCCTCA
CCTGCTTGCCCTTAACGCCTGCACGTGTGTAGAGGACAAAAGAAAGTGAAGTCAGC
ACATCCGCTTCTGCCAGATGGTCGGGGCCCGGGCAACAGATTGAAGAGAGATCATGTG
AAGGGCAGTTGGTCAGGCAGGCCTCCTGTTTTGCCACTGGCCCTGATTTGAACTCCTGC
CACTTGGGAGAGCTCGGGGTGGTCCCTGGTTTTCCCTCCTGGAGAATGAGGCGCAGAGGC
CTCGCCTCCTGAAGGACGCAGTGTGGATGCCACTGGCCTAGTGTCTGGCCTCACAGCTT
CCTTGCAAGGCTGTACAAGGAAAAGCAGCCGGCTGGCACCTGAGCATATGCCCTCTTG
GGGCTCCCTCATCCAGCCCGTCGAGCTTTGACATCTTGGTGTACTCATGTGCTTCTCC
TTGTGTTACCCCTCCAGTATTACCATTTGCCCTCACCTGCCCTTGGTGGAGCCTTTTA
GTGCAAGACAGATGGGGCTGTTTTCCCCACCTCTGAGTAGTTGGAGGTCACATACACAG
CTCTTTTTTTTATTGCCCTTTTCTGCCTCTGAATGTTTCTCTCTCGTCTCCTTTGTGCA
GGCGAGGAAGGGGTGCCCTCAGGGGCCGACACTAGTATGATGACAGTGTCCAGTGTGAACA
GCAGAAATTAACATGTTGCAACCAAAAAAAAAAAAAAAAAAAAA
    
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Restriction Sites:

Please inquire

ACCN:

NM_024544

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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.

RefSeq: [NM_024544.1](#), [NP_078820.1](#)

RefSeq Size: 2442 bp

RefSeq ORF: 1059 bp

Locus ID: 79594

UniProt ID: [Q969V5](#)

Cytogenetics: 1p36.12

Protein Families: Druggable Genome, Transmembrane

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]