

## Product datasheet for **MC201069**

### Atg3 (NM\_026402) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Atg3 (NM\_026402) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Atg3  
**Synonyms:** 2610016C12Rik; APG3; Apg3l; Atg3l; PC3-96  
**Mammalian Cell Selection:** Neomycin  
**Vector:** PCMV6-Kan/Neo (PCMV6KN)  
**E. coli Selection:** Kanamycin (25 ug/mL)

**Fully Sequenced ORF:** >BC010809 sequence for NM\_026402  
 CGGACCGGTGGGCGGGAAGAGAGACAGCTTGGAGAAGGCCGGGGCTGCGCGGCACCCGCTCTCGT  
 CAGCCGGCTTGGGCGCTCTGCGGTGGCGCCAGGTGACAGCTGGGCGGGCTCCGCGTGTGCGCGCCC  
 TCCCCCGCGCCGGCGGTGCCGCTGCGAGTTCGATGCCAGTCGGGCACGTCCGGGGCAGTTTTTGAC  
 TCCCTGTGGCCGGATTGCGACAGTCCCTCCGTGCCCTATCGTGCTCCAGCCCCAGGATGCAGAAATGT  
 GATCAACACGGTGAAGGAAAGGCTCTGGAAGTGGCCAGTACCTGACCCGGTCTCAAGGAATCAAAA  
 TTTAAGGAAACGGGTGTAATCACTCCAGAAGAGTTTGTGGCAGCTGGAGATCACTTAGTCCACCACTGTC  
 CAACATGGCAATGGGCTACAGGGGAAGAATTGAAAGTGAAGGCATATCTCCGACAGACAAACAATTTT  
 GGTAAACAAAAATGTTCCATGCTACAAGCGGTGTAACAGATGGAGTATTCGGATGAATTGGAAGCTATC  
 ATTGAAGAAGATGATGGTATGGGGATGGGTAGATACATATCACAACACAGGTATTACAGGAATTACTG  
 AAGCAGTTAAGGAGATTACACTGGAAGCAAGGACAGTATAAACTCCAAGATTGCTCAGCACTGTGTGA  
 TGAAGAAGACGAGGAAGATGAAGGGGAAGCTGCAGACATGGAAGAATATGAAGAGAGTGGATTGTTGAA  
 ACAGATGAGGCTACCCTAGACACAAGGAAAATAGTGAAGCCTGCAAAGCTAAGGCTGACGCTGGAGGTG  
 AAGATGCTATTTTACAAACGAGAACATACGATCTGTACATCACTTACGACAAATATTACCAGACACCACG  
 GCTATGTTGTTTGGCTATGATGAGCAACGGCAGCCTTTAACAGTTGAGCACATGTATGAAGACATCAGT  
 CAAGATCATGTGAAGAAAACAGTGACCATTGAAAACCTCCTCATCTCCCACCACCTCCTATGTGTTTCA  
 TTCACCATGCAGGCATGCTGAAGTATGAAGAAAATTTGAGACAGTTGCAGAAGCGGGGGAGAGCT  
 TGGTGTTTCATATGTATCTTTTAAATTTTTTGAATTTGTTCAAGCTGTCATTCCAACAATAGAATATGAC  
 TACACAAGACACTTCACAATGTAGTGGAGAGGCTATAGAGTCTATCCTAATTACTGCTTCTGATTTTTAA  
 AGAATTAATACATAGCTGTGACCATTGACCATATTTACCAATAAGAATAATTTCTCTAATAATGGGATTA  
 TATGTTTTATGCATTAATAAAAACCTGTTCTACTACCAAAAAAAAAAAAAAAAAA

**Restriction Sites:** RsrII-NotI  
**ACCN:** NM\_026402  
**Insert Size:** 945 bp



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<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">BC010809</a> , <a href="#">AAH10809</a>
<b>RefSeq Size:</b>	1381 bp
<b>RefSeq ORF:</b>	945 bp
<b>Locus ID:</b>	67841
<b>UniProt ID:</b>	<a href="#">Q9CPX6</a>
<b>Cytogenetics:</b>	16 B5
<b>Gene Summary:</b>	<p>E2 conjugating enzyme required for the cytoplasm to vacuole transport (Cvt), autophagy, and mitochondrial homeostasis. Responsible for the E2-like covalent binding of phosphatidylethanolamine to the C-terminal Gly of ATG8-like proteins (GABARAP, GABARAPL1, GABARAPL2 or MAP1LC3A). The ATG12-ATG5 conjugate plays a role of an E3 and promotes the transfer of ATG8-like proteins from ATG3 to phosphatidylethanolamine (PE). This step is required for the membrane association of ATG8-like proteins. The formation of the ATG8-phosphatidylethanolamine conjugates is essential for autophagy and for the cytoplasm to vacuole transport (Cvt). Preferred substrate is MAP1LC3A. Also acts as an autocatalytic E2-like enzyme, catalyzing the conjugation of ATG12 to itself, ATG12 conjugation to ATG3 playing a role in mitochondrial homeostasis but not in autophagy. ATG7 (E1-like enzyme) facilitates this reaction by forming an E1-E2 complex with ATG3. ATG12-ATG3 conjugate is also formed upon vaccinia virus infection, leading to the disruption the cellular autophagy which is not necessary for vaccinia survival and proliferation. Promotes primary ciliogenesis by removing OFD1 from centriolar satellites via the autophagic pathway. [UniProtKB/Swiss-Prot Function]</p>