

## Product datasheet for **RC210563**

### ATG5 (NM\_004849) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ATG5 (NM_004849) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ATG5
Synonyms:	APG5; APG5-LIKE; APG5L; ASP; hAPG5; SCAR25
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210563 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGC**C

ATGACAGATGACAAAGATGTGCTTCGAGATGTGTGGTTTGGACGAATCCAATTGTTTCACGCTATATC  
 AGGATGAGATAACTGAAAGGGAAGCAGAACCATACTATTTGCTTTTGCCAAGAGTAAGTTATTTGACGTT  
 GGTAAGTACAAAGTGAAAAAGCACTTTCAGAAGGTTATGAGACAAGAAGACATTAGTGAGATATGGTTT  
 GAATATGAAGGCACACCACTGAAATGGCATTATCCAATTGGTTTGCTATTTGATCTTCTTGCATCAAGTT  
 CAGCTCTTCCTTGAACATCACAGTACATTTTAAGAGTTTTCCAGAAAAAGACCTTCTGCACTGTCCATC  
 TAAGGATGCAATTGAAGCTATTTTATGTCATGTATGAAAGAAGCTGATGCTTTAAACATAAAGTCAA  
 GTAATCAATGAAATGCAGAAAAAGATCACAAGCAACTCTGGATGGGATTGCAAAATGACAGATTTGACC  
 AGTTTTGGGCCATCAATCGGAACTCATGGAATATCCTGCAGAAGAAAATGGATTTGTTATATCCCTT  
 TAGAATATATCAGACAACGACTGAAAGACCTTTCATTGAGAAGCTGTTTCGTCCTGTGGCTGCAGATGGA  
 CAGTTGCACACTAGGAGATCTCCTCAAAGAAGTTTGTCTTCTGCTATTGATCCTGAAGATGGGGAAA  
 AAAAGAATCAAGTGATGATTCATGGAATTGAGCCAATGTTGGAACACCTCTGCAGTGGCTGAGTGAACA  
 TCTGAGCTACCCGATAATTTTCTCATATTAGTATCATCCCACAGCCAACAGAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA


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**Protein Sequence:** >RC210563 protein sequence  
 Red=Cloning site Green=Tags(s)

MTDDKDVLRDVFGRIPCTFTLYQDEITEREAEPYLLLPVSYLTLVTDKVKKHFQKVMRQEDISEIWF  
 EYEGTPLKWHYPIGLLDLLASSALPWNITVHFKSFEKDLLHCPKSDAIEAHFMSCMKEADALKHKSQ  
 VINEMQKKDHKQLWMGLQDRFDQFWAINRKLMEYPAEENGFRYIPFRIYQTTTERPFIQKLFPRVAADG  
 QLHTLGDLLKEVCPAIDPEDGEKKQVMIHGIEPMLETPLQWLSEHLSYPDNFLHISIIPQTD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6004\\_e07.zip](https://cdn.origene.com/chromatograms/mk6004_e07.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_004849

**ORF Size:** 825 bp

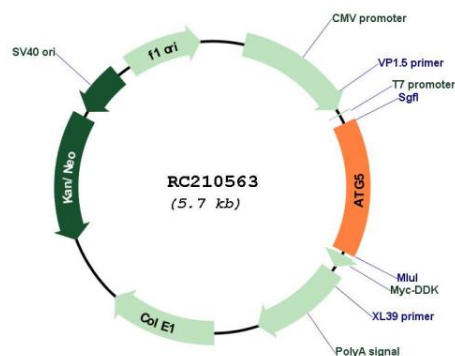
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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](#)

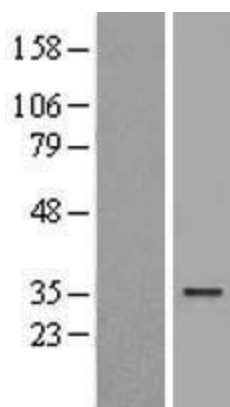
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_004849.4</a>
<b>RefSeq Size:</b>	3260 bp
<b>RefSeq ORF:</b>	828 bp
<b>Locus ID:</b>	9474
<b>UniProt ID:</b>	<a href="#">Q9H1Y0</a>
<b>Cytogenetics:</b>	6q21
<b>Domains:</b>	APG5
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Regulation of autophagy, RIG-I-like receptor signaling pathway
<b>MW:</b>	32.4 kDa
<b>Gene Summary:</b>	The protein encoded by this gene, in combination with autophagy protein 12, functions as an E1-like activating enzyme in a ubiquitin-like conjugating system. The encoded protein is involved in several cellular processes, including autophagic vesicle formation, mitochondrial quality control after oxidative damage, negative regulation of the innate antiviral immune response, lymphocyte development and proliferation, MHC II antigen presentation, adipocyte differentiation, and apoptosis. Several transcript variants encoding different protein isoforms have been found for this gene. [provided by RefSeq, Sep 2015]

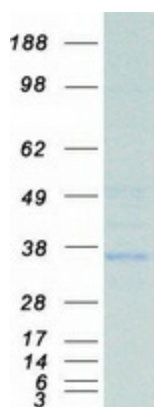
## Product images:



Circular map for RC210563



Western blot validation of overexpression lysate (Cat# [LY401532]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210563 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ATG5 protein (Cat# [TP310563]). The protein was produced from HEK293T cells transfected with ATG5 cDNA clone (Cat# RC210563) using MegaTran 2.0 (Cat# [TT210002]).