

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)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGACAGATGACAAAGATGTGCTTCGAGATGTGTGGTTTGGACGAATCCAACCTGTTTCACGCTATATC
AGGATGAGATAACTGAAAGGGAAGCAGAACCATACTATTTGCTTTTGCCAAGAGTAAGTTATTTGACGTT
GGTAACTGACAAAGTAAAAAGCACTTTCAGAAGGTTATGAGACAAGAAGACATTAGTGAGATATGGTTT
GAATATGAAGGCACACCACTGAAATGGCATTATCCAATTGGTTTGCTATTTGATCTTCTGCATCAAGTT
CAGCTCTTCCTTGAACATCACAGTACATTTTAAGAGTTTTCCAGAAAAAGACCTTCTGCACTGTCCATC
TAAGGATGCAATTGAAGCTCATTTTATGTCATGTATGAAAGAAGCTGATGCTTTAAAACATAAAAGTCAA
GTAATCAATGAAATGCAGAAAAAGATCACAAGCAACTCTGGATGGGATTGCAAAATGACAGATTTGACC
AGTTTTGGCCATCAATCGGAACTCATGGAATATCCTGCAGAAGAAAATGGATTTTCGTTATATCCCTT
TAGAATATATCAGACAACGACTGAAAGACCTTTCATTGAGAAGCTGTTTCGTCCTGTGGCTGCAGATGGA
CAGTTGCACACTAGGAGATCTCCTCAAAGAAGTTTGTCTTCTGCTATTGATCCTGAAGATGGGGAAA
AAAAGAATCAAGTGATGATTCATGGAATTGAGCCAATGTTGGAACACCTCTGCAGTGGCTGAGTGAACA
TCTGAGCTACCCGATAATTTTCTCATATTAGTATCATCCCACAGCCAACAGAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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

MTDDKDVLRDVFGRIPTCFTLYQDEITEREAEPYLLLPVSYLTLVTDKVKKHFKQKVMRQEDISEIWF
 EYEGTPLKWHYPIGLLFDLLASSALPWNITVHFKSFPEKDLLHCPKDAIEAHFMSCMKEADALKHKSQ
 VINEMQKKDHKQLWMGLQDRFDQFWAINRKLMEYPAEENGFRIYIPFRIYQTTTERPFIQKLFPRVAADG
 QLHTLGDLLKEVCPAIDPEDGEKKNQVMIHGIEPMLETPLQWLEHLSYPDNFLHISIIIPQPTD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

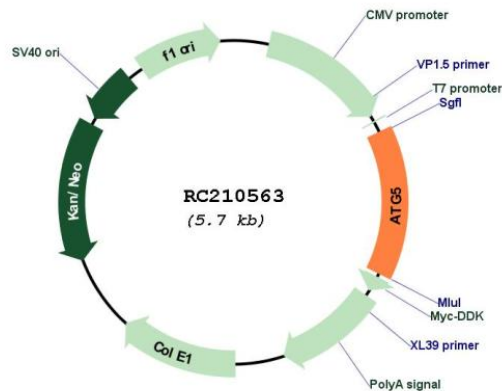
Chromatograms: https://cdn.origene.com/chromatograms/mk6004_e07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



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 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.

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_004849.4](#)

RefSeq Size: 3260 bp

RefSeq ORF: 828 bp

Locus ID: 9474

UniProt ID: [Q9H1Y0](#)

Cytogenetics: 6q21

Domains: APG5

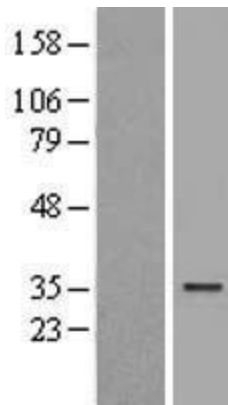
Protein Families: Druggable Genome

Protein Pathways: Regulation of autophagy, RIG-I-like receptor signaling pathway

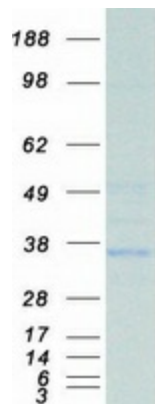
MW: 32.4 kDa

Gene Summary:

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:

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]).