

Product datasheet for **SC128244**

ATG5 (NM_004849) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATG5 (NM_004849) Human Untagged Clone
Tag:	Tag Free
Symbol:	ATG5
Synonyms:	APG5; APG5-LIKE; APG5L; ASP; hAPG5; SCAR25
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC128244 sequence for NM_004849 edited (data generated by NextGen Sequencing)

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ATGACAGATGACAAAGATGTGCTTCGAGATGTGTGGTTTGGACGAATTCCAACCTGTTTC
ACGCTATATCAGGATGAGATAACTGAAAGGGAAGCAGAACCATACTATTTGCTTTTGCCA
AGAGTAAGTTATTTGACGTTGGTAACTGACAAAGTGAAAAAGCACTTTCAGAAGTTATG
AGACAAGAAGACATTAGTGAGATATGGTTTGAATATGAAGGCACACCACTGAAATGGCAT
TATCCAATTGGTTTGCTATTTGATCTTCTTGCATCAAGTTCAGCTCTTCCTTGAACATC
ACAGTACATTTTAAGAGTTTTCCAGAAAAAGACCTTCTGCACTGTCCATCTAAGGATGCA
ATTGAAGCTCATTTTATGTCATGTATGAAAGAAGCTGATGCTTTAAAACATAAAAGTCAA
GTAATCAATGAAATGCAGAAAAAAGATCACAAGCAACTCTGGATGGGATTGCAAAATGAC
AGATTTGACCAGTTTTGGCCATCAATCGGAAACTCATGGAATATCCTGCAGAAGAAAAT
GGATTTTCGTTATATCCCCTTTAGAAATATATCAGACAACGACTGAAAGACCTTTCATTGAG
AAGCTGTTTCGTCTGTGGCTGCAGATGGACAGTTGCACACACTAGGAGATCTCCTCAA
GAAGTTTGTCTTCTGCTATTGATCCTGAAGATGGGGAAAAAAGAATCAAGTGATGATT
CATGGAATTGAGCCAATGTTGGAAACACCTCTGCAGTGGCTGAGTGAACATCTGAGCTAC
CCGGATAATTTTCTTCATATTAGTATCATCCCACAGCCAACAGATTGA

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Clone variation with respect to NM_004849.2



[View online »](#)

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004849 unedited
 GGGGGGGNGGGGGGAANNNNNNTTTTCNNNNNNNNGGTCAGNATTTGTNATACGAC
 TCACTATAGGCGGCCGCGNAATTCGCACGAGGCTTCTGGNATCCTGCTACCGCGTCCCC
 GCAGAACAGTGTGTCAGGCGGGCAGCTTGCCCCGCCGCCACCAGGAGCGCGAATCTGG
 GCGTCCCCACAGTGCAGGGGAGCCGGAAGGAGGAGCCATAGCTTGGAGTAGGTTTGGCTT
 TGGTTGAAATAAGAATTTAGCCTGTATGTAAGTCTTAACTCCTGGAAGAATGACAGATG
 ACAAAGATGTGCTTCGAGATGTGTGGTTTGGACGAATTCCTGTTTACGCTATATC
 AGGATGAGATAACTGAAAGGGAAGCAGAACCATACTATTTGCTTTTGCCAAGAGTAAGTT
 ATTTGACGTTGGTAACTGACAAAGTGAAAAAGCACTTTCAGAAGGTTATGAGACAAGAAG
 ACATTAGTGAGATATGGTTTGAATATGAAGGCACACCACTGAAATGGCATTATCCAATTG
 GTTTGCTATTTGATCTTCTTGCATCAAGTTCAGCTCTTCTTGGAAACATCACAGTACATT
 TTAAGAGTTTTCCAGAAAAAGACCTTCTGCACTGTCCATCTAAGGATGCAATTGAAGCTC
 ATTTTATGTCATGTATGAAAGAAGCTGATGCTTTAAAACATAAAAAGTCAAGTAATCAATG
 AAATGCAGANAAGATCACAAGCAACTCTGGATGGGATTGCAAAATGACAGATTTGACC
 AGTTTTGGCCATCAATCGNAACTCATGNNATATCCTGCAGAAGAAAATGGATTTGCTT
 ATATCCCCTTTAGATATATCANACNACGACTGANAGACCTTTCATTGAGAAGCTGTTTCG
 TCCTGTGGCTGCANATGGCAGTTGCCACACTAN

3' Read Nucleotide Sequence:

>Forward primer walk for NM_004849 unedited
 NAAGGTTCAATTTNAAAATTTCCANAAAAACCTCTGCCTGTCCACTAAGGATGCAATTG
 AAGCTCATTTTATGTCATGTATGAAAGAAGCTGATGCTTTAAAACATAAAAAGTCAAGTAA
 TCAATGAAATGCAGAAAAAGATCACAAGCAACTCTGGATGGGATTGCAAAATGACAGAT
 TTGACCAGTTTTGGGCCATCAATCGGAACTCATGGAATATCCTGCAGAAGAAAATGGAT
 TTCGTTATATCCCCTTTAGAATATATCAGACAACGACTGAAAGACCTTTCATTGAGAAGC
 TGTTTCGTCTGTGGCTGCAGATGGACAGTTGCACACACTAGGAGATCTCCTCAAAGAAG
 TTTGTCCTTCTGCTATTGATCCTGAAGATGGGAAAAAAGAATCAAGTATGATTGATG
 GAATTGAGCCAATGTTGGAAACCTCTGCAGTGGCTGAGTGAACATCTGAGCTACCCGG
 ATAATTTCTTCATATTAGTATCATCCCACAGCCAACAGATTGAAGGATCAACTATTTGC
 CTGAACAGAATCATCCTTAAATGGGATTATCAGAGCATGTCACCCTTTTGTTCATCA
 GGTTTGGTGGAGGCAACTGACCAGAAACACTTCGCTGCTGCAAGCCAGACAGGAAAAAG
 ATTCATGTCAGATAAGGCAACTGGGCTGGTCTTACTTTGCATCACCTCTGCTTTCTCC
 ACTGCCATCATTAAACCTCAGCTGTGACATGAAAGACTTACCGGACCACTNGAAGGTCTT
 CTGNTAAATATAATGAAGCTGANACCTTTGGCCTAAGAAGAAATGGNAGTATGTGCCACT
 CGATTTGTATTTCTGATTAATAAATAACAGGGGATTTTCTAANGTGACCATGGNTTGAA
 CTTAGCTCATG

Restriction Sites:

NotI-NotI

ACCN:

NM_004849

Insert Size:

3400 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](#)

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_004849.2](#), [NP_004840.1](#)

RefSeq Size: 3244 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

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]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (a). Both variants 1 and 2 encode isoform a.