

Product datasheet for **RC226545**

ATG7 (NM_001144912) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATG7 (NM_001144912) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ATG7
Synonyms:	APG7-LIKE; APG7L; GSA7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC226545 representing NM_001144912
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGCAGCTACGGGGATCCTGGACTCTCTAAACTGCAGTTGCCCTTTAGTAGTGCCTTGATG
 TTGGGTTTTGGCATGAGTTGACCCAGAAGAAGCTGAACGAGTATCGGCTGGATGAAGCTCCAAGGACAT
 TAAGGGTTATTACTACAATGGTACTCTGCTGGGCTGCCAGCTCGCTTAACATTGGAGTTCAGTGCCTTT
 GACATGAGTGCTCCACCCAGCCGTTGCTGCCAGCTATTGGAACACTGTATAACACCAACACACTCG
 AGTCTTTCAAGACTGCAGATAAGAAGCTCTTTTGAACAAGCAGCAAATGAGATATGGGAATCCATAAA
 ATCAGGCACTGCTCTGAAAACCCTGTACTCTCAACAAGTTCCTCTTGGACATTTGCAATTGAAGCA
 CTAGAGTGTGCATATGATAATCTTTGTCAAACAGAAGGAGTCACAGCTCTTCTTACTTCTTAATCAAGT
 ATGATGAGAACATGGTGTGTTTCTTGTCTTAAACTACAGTGATTTCTTCAAGGTCAAAGGACGAA
 GATAACAATTGGTGTATATGATCCCTGTAACCTAGCCAGTACCCTGGATGGCCTTTGAGGAATTTTTTG
 GTCTAGCAGCCACAGATGGAGTAGCAGTTTCCAGTCTGTTGAAGTTGTTTGTCTCCGTGACCGTACCA
 TGCAGGGGGCAGAGACGTTGCCACAGCATCATCTTCAAGTGAAGCTTCCAGAAATGGCATTTAGCCC
 AGATTGCTCTAAAGCAGTTGGATGGGAAAAGAACCAGAAAGGAGGCATGGGACCAAGGATGGTGAACCTC
 AGTGAATGTATGGACCCTAAAAGTTAGCTGAGTCATCAGTGGATCTAAATCTCAAACCTGATGTGTTGGA
 GATTGGTCTACTTTAGACTTGGACAAGGTTGTGTCTGTCAAATGTCTGCTGCTGGAGCCGGCACCTT
 GGGTTGCAATGTAGCTAGGACGTTGATGGGTTGGGGCGTGAGACACATCACATTTGTGGACAATGCCAAG
 ATCTCTACTCCAATCTGTGAGGCAGCCTCTCTATGAGTTTGAAGATTGCCTAGGGGGTGGTAAAGCCCA
 AGGCTCTGGCAGCAGCGGACCGGCTCCAGAAAATATCCCGGTGTGAATGCCAGAGGATTCAACATGAG
 CATACTATGCCTGGGCATCCAGTGAACCTTCTCCAGTGTCACTCTGGAGCAAGCCCGCAGAGATGTGGAG
 CAACTGGAGCAGCTCATCGAAAGCCATGATGTCGTCTTCTATTGATGGACACCAGGAGAGCCGGTGGC
 TTCCTGCCGTCATTGCTGCAAGCAAGAGAAAGCTGGTCATCAATGCTGCTTTGGGATTTGACACATTTGT
 TGTGATGAGACATGGTCTGAAGAAACCAAGCAGCAAGGAGCTGGGGACTTGTGTCCAAACCACCCTGTG
 GCATCTGCTGACCTCTGGGCTCATCGTTTTTGGCAACATCCCTGGTTACAAGCTTGGCTGCTACTTCT
 GCAATGATGTGGTGGCCCCAGGAGATTAACCAGAGACCGGACCTTGACCAGCAGTGCCTGTGAGTGC
 TCCAGGACTGGCCGTGATTGCAGGAGCCCTGGCCGTGGAATTGATGGTATCTGTTTTGCAGCATCCAGAA
 GGGGGCTATGCCATTGCCAGCAGCAGTACGATCGGATGAATGAGCCTCCAACTCTCTTGGGCTTGTGC
 CTACCAGATCCGGGGATTTCTTTCACGGTTTGATAATGTCCTTCCCGTCAAGCCTGGCATTGACAAATG
 TACAGTTGTTCTTCAAATCTGGGACATGAGCGATGATGAGACCATC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC226545 representing NM_001144912
 Red=Cloning site Green=Tags(s)

MAAATGDPGLSKLQFAPFSSALDVGFWHELQKLLNEYRLDEAPKDIKGYYYNGDSAGLPARLTLEFSAF
 DMSAPTPARCCPAIGTL YNTNTLESFKTADKLLLEQAANEIWESIKSGTALENPVLLNKFLLLTFAIEA
 LECAYDNLQTEGVTALPYFLIKYDENMVLVSLKHYSDFFQGQRTKITIGVYDPCNLAQYPGWPLRNFL
 VLAHRWSSSFQSVVCFRDRMQGARDVAHSIIFEVKLPEMAFSPDCPKAVGWEKNQKGGMGPVMVNL
 SECMDPKRLAESSVDLNLKLMCWRLVPTLDLKVSVKCLLLGAGTLGCVARTLMGWGVRHITFVDNAK
 ISYSNPVRQPLYEFEDCLGGGPKALAAADRLQKIFPGVNARGFNMSIPMPGHPVNFSSVTLEQARRDVE
 QLEQLIESHDVVFLLMDTRESRWLPAVIAASKRKLVINAAALGFDTFVVMRHGLKPKQAGDLCPNHPV
 ASADLLGSSSLFANIPGYKLCYFCNDVVAPGDSTRDRTLDDQCTVSRPGLAVIAGALAVELMVSVLQHPH
 GGYAIASSSDDRMNEPPTSLGLVPHQIRGFLSRFDNVLVSLAFDKCTACSSKIWDMSSDETI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8070_c06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001144912

ORF Size: 1869 bp

OTI Disclaimer: 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

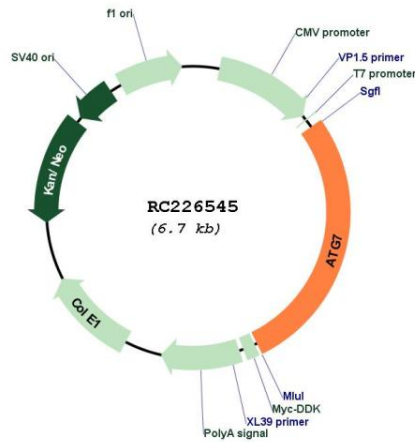
RefSeq: [NM_001144912.2](#)

RefSeq ORF: 1872 bp

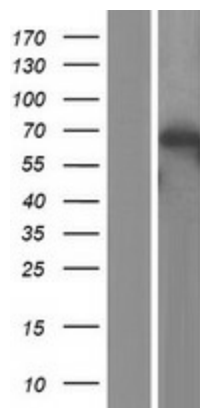
Locus ID: 10533
UniProt ID: [O95352](#)
Cytogenetics: 3p25.3
Protein Pathways: Regulation of autophagy
MW: 68.4 kDa

Gene Summary: This gene encodes an E1-like activating enzyme that is essential for autophagy and cytoplasmic to vacuole transport. The encoded protein is also thought to modulate p53-dependent cell cycle pathways during prolonged metabolic stress. It has been associated with multiple functions, including axon membrane trafficking, axonal homeostasis, mitophagy, adipose differentiation, and hematopoietic stem cell maintenance. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Sep 2015]

Product images:



Circular map for RC226545



Western blot validation of overexpression lysate (Cat# [LY428569]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC226545 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).