

Product datasheet for **MR231033**

Atg7 (NM_001253717) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Atg7 (NM_001253717) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Atg7
Synonyms:	1810013K23Rik; Agp7; Apg7l; Atg7l; Gm21553
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide
Sequence:

>MR231033 representing NM_001253717
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCATACAGGCCTCTGAAAAATCCCACGAGCACAGTGGTGAGGCCAACTCCACTGCTTTCCTGCCA
TGAGGCTTTCCTCATCTGGATGTGAGCACCTGACAGTGAGGCTGGTAAGAACAGTAGCCATGGGGGACCC
TGGACTGGCCAAGTTGCAGTTCGCCCCCTTTAATAGTGCCTGGACGTTGGCTTCTGGCAGAACTGACC
CAGAAGAAGTTGAACGAGTACCGCCTGGACGAGGCACCCAAAGACATCAAGGGCTATTACTACAATGGTG
ACTCTGCTGGTCTGCCACCCGCTTGACGTTGGAGTTCAGTGCTTTTGACATGAGTGCTCCACGCCTGC
CCACTGCTGCCCGCCATGGGAACCTGCACAACACCAACACACTTGAGGCTTTAAGACAGCAGACAAG
AAGCTCCTTCTGGAGCAGTCAGCAAATGAGATCTGGGAAGCCATAAAGTCAGGTGCTGCTCTCGAAAACC
CCATGCTCCTCAACAAGTTTCTGCTCCTGACCTTCGCGGACCTAAAGAAGTACCCTTCTACTACTGGTT
TTGCTGCCCGCCCTCTGTCTTCTGAGAGCATCCCTCTAATCCGGGGACCTGTGAGCTTGATCAAAGG
CTTTCACCAAAACAGATCCAGGCCCTGGAGCATGCCTATGATGATCTGTGTCGAGCCGAAGGCGTACCG
CCCTGCCCTACTTCTTATTCAAGTACGATGACGACACTGTTCTGGTCTCCTTGCTCAAACACTACAGTGA
TTTCTTCAAGGTCAAAGGACAAAGATAACAGTTGGTGTGTACGATCCCTGTAACCTAGCCAGTACCCT
GGATGGCCTTTGAGGAATTTTTGGTCTGGCAGCCACAGATGGAGCGGAGTTTCCAGTCCGTTGAAG
TCCTCTGCTTTCGGGACCGCACCATGCAGGGAGCTAGAGACGTGACACATAGCATCATCTTTGAAGTGA
ACTTCCAGAAATGGCATTAGCCAGATTGTCTAAAGCTGTTGGCTGGGAGAAGAACCAGAAAGGAGGC
ATGGGTCGAGGATGGTGAACCTCAGTGGATGTATGGACCCAAAAGGCTGGCTGAGTCATCTGTGGATC
TGAATCTCAAGCTGATGTGCTGGCATTGGTCCCACCTTGACTTGACAAGGTCGTGTCTCAAGT
CCTGCTGCTGGGAGCTGGTACCTTGGGGTGAATGTGGCTAGGACACTGATGGGCTGGGGCGTCAGACAT
GTCACCTTTGTGGATAACGCCAAGATCTCCTACTCCAATCCCGTGGAGCAGCCTCTGTATGAATTTGAAG
ATTGTCTAGGGGGTGGCAAGCCCAAGGCCCTGGCTGCAGCAGAGCGGCTACAGAAAATATTTCCGGAGT
GAATGCCAGAGGGTTCAACATGAGCATCCCATGCCAGGACACCCTGTGAACCTTCTGACGTCACGATG
GAGCAGGCGCCGAGAGATGTGGAGCAGCTGGAGCAGCTCATTGATAACCATGATGTCATCTTCTGCTAA
TGGACACCAGGGAGAGCCGGTGGCTTCTACTGTTATTGCAGCCAGCAAGCGAAAGCTGGTCATCAACGC
TGCCTTGGGGTTTGATACCTTTGTGTCATGAGACATGGCCTGAAGAAACCAAGCAGCAGGAGCCGGA
GACCTCTGCCAAGCCATCTGTAGCACCTGCTGACCTGGGCTCCTCACTTTTTGCAACATCCCTGGAT
ACAAGCTTGGCTGCTACTTCTGCAATGATGTGGTGGCTCCAGGAGATTAACCAGAGACCGGACTCTGGA
CCAGCAGTGCACAGTGAAGCCGCGCCAGGCCCTGGCCGTGATTGCAGGTGCCCTGGCTGTGGAGCTGATGGTC
TCTGCTCCTGCAGCATCCTGAGGGGGGCTACGCCATCGCCAGCAGCAGTGTGACCGCATGAATGAGCCTC
CCACCTCGCTGGGACTTGTGCCTCACCAGATCCGGGGTTTTCTGTACGGTTCGATAATGTTCTTCTGT
CAGCCTGGCATTGATAAATGTACAGCCTGTTACCCAAAGTCTTGTATCAGTACGAGCGAGAAGGATTC
ACCTTCTAGCGAAGGTTTTAACTCCTCACATTCCTTCTAGAAGACTTGACCGGCTTACCCTGCTCC
ATCAAGAGACCAAGCTGCTGAGATCTGGGACATGAGTGACGAGGAGACTGTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231033 representing NM_001253717
 Red=Cloning site Green=Tags(s)

MHTGLWKIPTSTVVRPTPHCFPAMRLSSSGCEHLTVRLVRTVAMGDPGLAKLQFAPFNSALDVGFWHELT
 QKKLNEYRLDEAPKDIKGYYYNGDSAGLPTRLTLEFSAFDMSASTPAHCCPAMGTLHNTNTLEAFKTADK
 KLLLEQSANEIWEAIKSGAALENPMLLNKFLLLTFADLKKYHYFYWFCCPALCLPESIPLIRGPVSLDQR
 LSPKQIQALEHAYDDL CRAEGVTALPYFLFKYDDDTVLVSLKHYSDFFQGQRTKITVGVYDPCNLAQYP
 GWPLRNFLVLAHRWSGSFQSVEVLCFRDRTMQGARDVTHSIIIFEVKLPEMAFSPDCPKAVGWKNQKGG
 MGPRMVNLSGCMDPKRLAESSVDNLKLMCWRLVPTLDLDKVVSVKCLLLGAGTLGCNVARTLMGWGVRH
 VTFVDNAKISYSNPVRQPLYEFEDCLGGGPKALAAAERLQKIFPGVNARGFNMSIPMPGHPVNFSDVTM
 EQARRDVEQLEQLIDNHDIIFLLMDTRESRWLPTVIAASKRKLVINAAALGFDTFVVMRHGLKPKQGGAG
 DLCPSHLVAPADLGSSLFANIPGYKLCYFCNDVVAPGDSTRDRTL DQQCTVSRPGLAVIAGALAVELMV
 SVLQHPGGYAIASSDDRMNEPPTSLGLVPHQIRGFLSRFDNVLVSLAFDKCTACSPKVL DQYEREGF
 TFLAKVFNSSHSFLEDLTGLTLLHQETQAAEIWMSDEETV

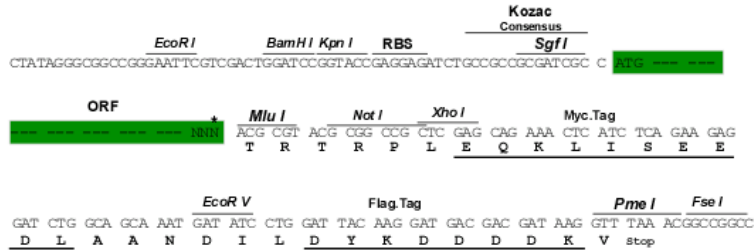
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

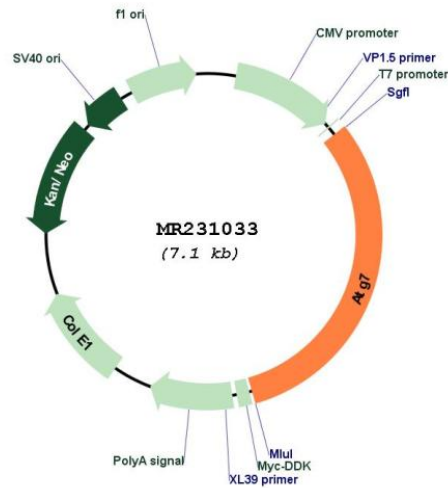
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_001253717

ORF Size: 2223 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.

RefSeq: [NM_001253717.2](#)

RefSeq Size: 3925 bp

RefSeq ORF: 2226 bp

Locus ID: 74244

UniProt ID: [Q9D906](#)

Cytogenetics: 6 E3

MW: 82.7 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]