

Product datasheet for **RR207011**

Atg14 (NM_001107258) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Atg14 (NM_001107258) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Atg14
Synonyms:	Atg14L; RGD1304610
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

ORF Nucleotide Sequence:

>RR207011 representing NM_001107258
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGTCTCCAGTGGGAAGGTTCTTGGACGCCGAGGCTCCTGGCTTGGGCCGCGGCTCTAGCAC
 CGGACCTGGTGGACTCGGTGGACGACGCCGAGGGCCTTTACGTGGCTGTTGAGCGGTGTCCTCTGTGCAA
 CACCACCTCGCCGCGGTTGACTTGCGCTAAGTGCCTCCAGAGCGGTGATTTCTGCTATTTTCGACGGCCGC
 GACCGGGAGAGGTTTATTGACAAGAAGGAAAGGCTTAGTCAACTGAAGAACAACAAGAAGAAATTTCAAA
 AAGAAGTACTAAAGGCCATGGAAGGAAAACGGCTAACAGATCAGTTGCGATGGAAAATAATGTCCTGCAA
 GATGAGGATTGAACAGCTGAAGCAAACGATATGTAAGGAAATGAGGAAATGAAGAAAAATTTCTGAAGGC
 CTCCTCAAGAACAAGGAAAAGAACCAGAAGCTTTACAGCCGAGCGCAGCGACACCAAGAGAAAAAGGAGA
 AGATTCAGCGGCACAACCGCAAGCTTGGGGACCTGGTGGAGAAGAAAACAGTGACCTGAGGGAACACTA
 CGATCGGTTGGCGTGTGGCGGAGTTACACATCTAGAGCTCACCTCTGTCATCTTCCCAATGGATGAA
 GTGAAGACTTCTGGGAGGACCTGCAGACGTGTCTCAGAGACTGACAGTGCCATGACCTCCAGCATGG
 TGAGCAAATGCTGAGGCCGAGGACGACATACCTCTCCGGAAGATGGGTCTGTGACGACCACACCGG
 CGACACCAGCATTAGCATCACGGGCCCTTGGATCAGCCTGCCGAACAATGGGGACTACTCTGCTTACTAT
 AACTGGGTAGAAGAGAAGAAAACAACCAAGGACCTGACATGGAGCATAACAACCTGCCTACACCATCA
 GCGCCGCGCTCGGCTATGCCACGCGAGCTGGTCAACATTGTGTCTCACATCCTTGACATCAACCTTCCCAA
 AAAGCTGTGCAACAGTGAGTTCTGTGGAGAAAACCTCAGCAAGCAGAGGCTGACCCGCGCAGTGAGGAAA
 CTGAACGCAAACATCCTTACCTTTGTTCTTCTCAGCATGTTAATTTAGATCAGTTGCAACCCCTGCACA
 CACTGAGGAACCTGATGCATCTGGTCAGCCCGACTCCGAGCACCTGGGCAGGTCAGGACCTTTTGAAT
 GCGAGCAGACCTCGAGGAGTCCATGGAATTTGTGGACCCTGGAGTTGCTGGGGAATCAGATGTGAGTGGA
 GATGAGCGTGTGAGCGATGAGGAGACTGACCTGGGCACAGACTGGGAGAACCTGCCAAGCCACGATTCT
 GTGACATCCCTTCCAGCCGGTGAAGTTTCCAGAGCCAGAGCACCCAGGCGTCCCTCCCATAGCCAG
 CAGCAGCGCTGGTGGGATGATCTCTGCTGCGGCCCTCAGTGACCTCCTGGTTCAAAGCTTACACTGGA
 CACCGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RR207011 representing NM_001107258
 Red=Cloning site Green=Tags(s)

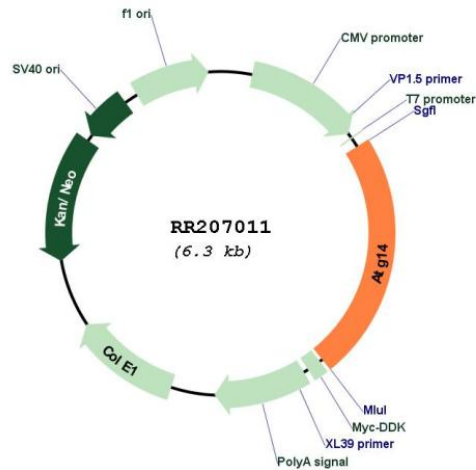
MASPSGKGSWTPEAPGFGPRALAPDLVDSVDDAEGLYVAVERCPLCNTTRRRLTCAKCVQSGDFVYFDGR
 DRERFIDKKERLSQLKNKQEEFQKEVLKAMEGKRLTDQLRWKIMSCKMRIEQLKQTI CKGNEEMKKNSEG
 LLKNKEKNQKLYSRAQRHQEKKEKIQRHNRKLGDLVEKKTSDLREHYDRLACLRLHILELTSVIFPMDE
 VKTSGRDPADVSETDSAMTSSMVSKLAEARRTTYLSGRWVCDHNGDTSISITGPWISLPNNGDYSAAY
 NWVEEKKTTQGPDMEHNNPAYTISAALGYATQLVNI VSHILDINLPKCLCNSEFCGENLSKQRLTRAVRK
 LNANILYLCSSQHVNL DQLQPLHLRLNMLVSPHSEHLGRSGPFVVRADLEESMEFVDPGVAGESDVS
 DERVSDEETDLGTDWENLPSPRFCDIPSPVEVVSQSSTQASPPAIASSAGGMISAAAASVTSWFKAYTG
 HR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Plasmid Map:



ACCN: NM_001107258

ORF Size: 1476 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_001107258.1](#), [NP_001100728.1](#)

RefSeq Size: 3409 bp

RefSeq ORF: 1479 bp

Locus ID: 305831

UniProt ID: [D4A4K3](#)

Cytogenetics: 15p14

MW: 55.3 kDa

Gene Summary: Required for both basal and inducible autophagy. Determines the localization of the autophagy-specific PI3-kinase complex. Plays a role in autophagosome formation and MAP1LC3/LC3 conjugation to phosphatidylethanolamine. Promotes BECN1 translocation from the trans-Golgi network to autophagosomes. Enhances PIK3C3 activity in a BECN1-dependent manner. Essential for the autophagy-dependent phosphorylation of BECN1. Stimulates the phosphorylation of BECN1, but suppresses the phosphorylation PIK3C3 by AMPK. Binds to STX17-SNAP29 binary t-SNARE complex on autophagosomes and primes it for VAMP8 interaction to promote autophagosome-endolysosome fusion. Modulates the hepatic lipid metabolism (By similarity).[UniProtKB/Swiss-Prot Function]