

Product datasheet for **RR205679**

Atg12 (NM_001038495) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Atg12 (NM_001038495) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Atg12
Synonyms: Apg12l
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR205679 representing NM_001038495
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

**ATGGCAGAAGACCCAGAGGCTGTGCTGCAGCTCCCGCGGCTCCGGCTGCTGCGGCGGGCGAGAGCCTTT
TGGAGCTCTCCCAGAAACAGCCATCCCAGAGCCCCGCTTCGTTGCAGTTTCGCCCGGTACGGAGGA
ACCTCCCGGAGACACCAAGAAAAAATTGACATCCTGCTGAAGGCTGTAGGAGACTCCATAATGAAA
ACGAAGAAATGGGCTGTGGAGCGGACCCGACTGTCCAAGCACTCATCGACTTCATCAGAAAATTCCTCA
GACTGCTGGCCTCGGAGCAGTTGTTATTTATGTGAATCAGTCCTTTGCCCTTCCCAGACCAAGAAGT
TGGGACTATATGAGTGTGGCAGTGATGGTAAACTGGTCTACATTACTGCAAATCACAGGCATGG
GGA**

**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA**

Protein Sequence: >RR205679 representing NM_001038495
Red=Cloning site Green=Tags(s)

MAEDPEAVLQLPAAPAAAAGESLLELSPETAIPPEPSSVAVSPGTEEPPGDTKKKIDILLKAVGDTPIMK
TKKWAVERTRTVQALIDFIRKFLRLLAASEQLFIYVQNQSFAPSPDQEVGTLYECFGSDGKLVLHYCKSQAW
G

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

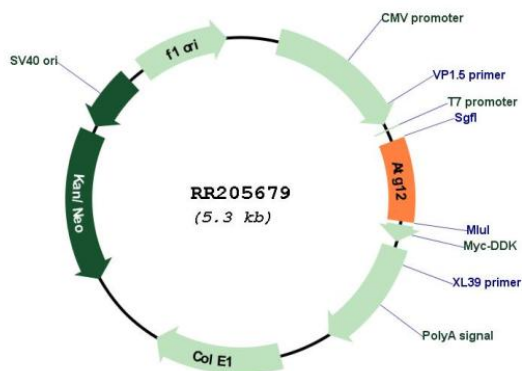


[View online »](#)

Cloning Scheme:



Plasmid Map:



ACCN: NM_001038495

ORF Size: 423 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:	<ol style="list-style-type: none">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:	<u>NM_001038495.1, NP_001033584.1</u>
RefSeq Size:	2590 bp
RefSeq ORF:	426 bp
Locus ID:	361321
UniProt ID:	<u>Q2TBJ5</u>
Cytogenetics:	18q11
MW:	15.3 kDa
Gene Summary:	Ubiquitin-like protein involved in autophagy vesicles formation. Conjugation with ATG5 through a ubiquitin-like conjugating system involving also ATG7 as an E1-like activating enzyme and ATG10 as an E2-like conjugating enzyme, is essential for its function. The ATG12-ATG5 conjugate acts as an E3-like enzyme which is required for lipidation of ATG8 family proteins and their association to the vesicle membranes. The ATG12-ATG5 conjugate also regulates negatively the innate antiviral immune response by blocking the type I IFN production pathway through direct association with RARRES3 and MAVS. Plays also a role in translation or delivery of incoming viral RNA to the translation apparatus (By similarity). [UniProtKB/Swiss-Prot Function]