

Product datasheet for **RR201285**

Atg9a (NM_001014218) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Atg9a (NM_001014218) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Atg9a
Synonyms:	RGD1310450
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RR201285 representing NM_001014218
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCACAGTTTGACACTGAATACCAGCGCTAGAGGCCTTTATAGCGATTACACCCAGGGGAAGAGG
 ACCTGTTGGTGCATGTGGCTGAGGGGAGCAAATCACCTTGGCACCACATTGAAAACCTTGACCTCTCTT
 CTCTCGAGTTTATAATCTACATCAGAAGAATGGGTTACATGTATGCTCATTGGAGAGATTTTGAACCT
 ATGCAGTTCCTCTTTGTGGTTGCCTTACCACCTTCTGGTTAGCTGTGTGGACTATGACATCCTATTTG
 CCAACAAGATGGTGAACCACAGTCTGCATCCTACCGAGCCTGTCAAGGTCACTCTGCCAGATGCCTTTT
 GCCTGCCAAGTTTGCAGTGCCAGGATTCAGGAAAACGGCTCCCTCATCACCATCCTGGTCATCGCTGGT
 GTCTTCTGGATCCACCGCTTATCAAGTTTATCTATAACATTTGTGCTATTGGGAGATCCACTCCTTCT
 ACCTACATGCTCTGCGGATCCCAATGTCTGCCCTCCGATTGCACGTGGCAGGAAGTGCAGGCCGGAT
 TGTGCAGACCCAGAAAGAGCATCAGATCTGCATCCACAAGCGTGAGCTGACAGAGTTGGACATCTACCAT
 CGCATCCTCCGTTTCCAGAACTACATGGTGGCACTGGTGAACAAATCCCTCTTGCCTCTGCGCTCCGTC
 TGCCCGGCTCGGAGAGTTGTCTTCTCACCCGTGGCCTCAAGTACAACCTTTGAGCTCATCCTCTTCTG
 GGGACCCGGCTCTCTGTTTCTCAATGAATGAGGCTCAAGGCCGAGTACAAACGTGGAGGGCAACGGCTA
 GAGCTGGCCAGCGTCTCAGCAACCGCATCCTGTGGATTGGCATCGCCAACCTTCTGCTCTGTCCCTCA
 TCCTCATCTGGCAGATCCTCTATGCCTTCTTACGATATGCCGAGGTGCTGAAGAGAGAGCCGGGAGCCCT
 GGGAGCGGTTGGTGGTCACTCTATGGCCGTTGCTACCTCCGCCACTTCAATGAGCTAGAACACGAGCTG
 CAGTCCCGCTCAACCGAGGATAACAAGCCCGCTCCAAGTACATGAATTGCTTCTTGTACCCTACTGA
 CTCTGTGGCAAGAATGGTGCCTTCTTCCGGGCTCTATCCTGGCCGTGCTTATTGCTCTCAGCATCTA
 CGATGAAGATGTGTTGGCTGTGGAGCATGTCCTACCACCTGTACCCCTACTGGGAGTACCGGTGACTGTG
 TGCAGGCTTTTATCCCAGACCAGCACATGGTGTCTGCCTGAGCAGCTGCTCCGAGTGATCCTTGCCC
 ACATCCACTACATGCCTGACCACTGGCAGGGTAATGCCACCCTCGCAGACCCGGGACGAGTTGCCCA
 GCTCTTCCAGTACAAGGCAGTGTTCATCTTGGAGGAGTTGCTGAGTCCCATTGTTACACCCCTCATTCTC
 ATCTTCTGCCTACGCCACGGCCCTGGAGATCATAGACTTCTTCCGAACTTTACTGTGGAGGTCGTCG
 GTGTGGGGACACCTGCTCCTTTCGCGAGATGGACGTTCCGCCAGCACGGTCATCCTCAGTGGCTGTCTGG
 AGGGCAGACTGAGGCTCAGTGTACCAGCAAGCCGAGGATGGGAAGACCGAGTTGCTCACTCATGCATTT
 GCCATACCAATCCTGGCTGGCAGCCCCCTCGTGAGAGCACAGCCTTCTGGGCTTCTCAAGGAGCAGG
 TGCAGCGAGATGGAGCGGCTGCTGGCCTTGCCAGGGTGGTCTGCTCCAGAGAATGCCCTTTTACATC
 CATCCAGTCTTACAGTCTGAGTCTGAGCCACTGAGCCTCATTGCAAATGTGGTAGCAGGCTCGTCTGC
 CGAGGACCCCACTGTCCAGAGACCTGCAGGGTCCAGGCACAGGGCTGATGTTGCTTCTGCCCTTAGAT
 CCTTCTCCCTCTACAGCCTGGACAGGCCCTCAAGGCCGTGTTCCAGTACCATGACAGGCTCTGGAGT
 GGACGCCAGGACAGCCAGCTCCGGGAGCAGCGTGTGGGAAGGACAGCTGCAAAGCCTGGTGTCTGAA
 TATGCGTCCACTGAGATGAGCCTTATGCCCTCTATATGCACCAGCTCCACAAGCAGCAGACCCAGGCTG
 AGCCCGAGCGCATGTGTGGCACCAGCGGGAGAGTGTGAGAGTGGAGAGAGTGGCCCTGAAGAGGGGG
 AGAGGGTGGCCGGGCCCCCAACCCATCCACGCTCTGCCAGCTATCCCTGTGCTACTCCCGGCCTGGA
 GCACCTGAGACCACCGCCCTGCATGGGGGCTTCCAGAGGCGCTACGGGGGATCACAGATCCTGGCACAG
 TGCCCCGTGCTCCTCTCACTTCTCAGGCTGCCCTTGGGAGGATGGGCAGAAGATGGGCAGCCAGCATC
 AAGACCCAGAGCCGGTCCAGAGGAGGGCTCAGAGGATGAACTGCCCCCTCAAGTGCACAAGGTA

ACGGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR201285 representing NM_001014218
Red=Cloning site Green=Tags(s)

MAQFDTEYQRLEASYSPPGEEEDLLVHVAEGSKSPWHHIENLDLFFSRVYNLHQKNGFTCMLIGEIFEL
MQFLFVVAFTTFLVSCVDYDILFANKMVNHSHPTEPVKVTLPDAFLPAQVCSARIQENGLITILVIAG
VFWIHRLIKFIYNICCYWEIHSFYHLALRIPMSALPYCTWQEVQARIVQTQKEHQICIHKRELTELDIYH
RILRFQNYMVALVNKSLPLRFRLPGLGEVVFTRGLKYNFELILFWGPGSLFLNEWSLKAHEYKGGQRL
ELAQRLSNRILWIGIANFLLCPLILIWQILYAFFSYAEVLKREPGALGARCWSLYGRCYLRFNELEHEL
QSRLNRGYKPASKYMNCFLSPLLTLAKNGAFFAGSILAVLIALTIYDEDVLAVEHVLTTVTLLGVTVTV
CRSFIPDQHMVFCPEQLLRVILAHIHYPDHWQGNHRSTQTRDEFAQLFQYKAVFILLELLSPIVTPILIL
IFCLRPRALEIIDFFRNFTVEVVGVDTCFAQMDVRQHGHPQWLGGQTEASVYQQAEDGKTELSLMHF
AITNPGWQPPRESTAFLGFLKEQVQRDGAAGLAQGGLLPENALFTSIQSLQSESEPLSLIANVVAGSSC
RGPPLSRDLQGSRRADVASALRSFSPLQPGQAPQGRVPSTMTGSGVDARTASSGSSVWEGQLQSLVSE
YASTEMSLHALYMHQLHKQQTQAEPERHVWHRRESDESSESAPEEGGEGARAPQPIPRSASYPATPRPG
APETALHGGFQRRYGGITDPGTVPRAPSHFSRLPLGGWAEDGQPASRHPEPVPEEGSEDELPPQVHKV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

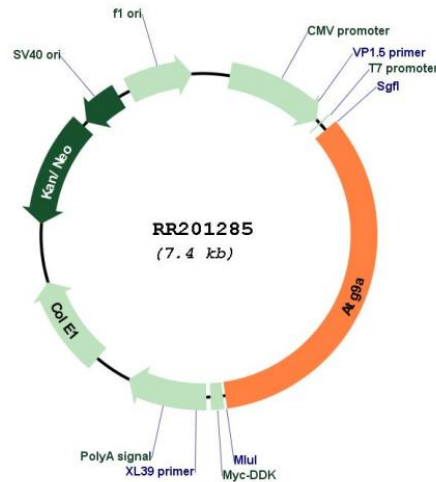
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001014218

ORF Size: 2517 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_001014218.1](#), [NP_001014240.1](#)

RefSeq Size: 4134 bp

RefSeq ORF: 2520 bp

Locus ID: 363254

UniProt ID: [Q5FWU3](#)

Cytogenetics: 9q33

MW: 94.5 kDa

Gene Summary: Involved in autophagy and cytoplasm to vacuole transport (Cvt) vesicle formation. Plays a key role in the organization of the preautophagosomal structure/phagophore assembly site (PAS), the nucleating site for formation of the sequestering vesicle. Cycles between a juxta-nuclear trans-Golgi network compartment and late endosomes. Nutrient starvation induces accumulation on autophagosomes. Starvation-dependent trafficking requires ULK1, ATG13 and SUPT20H (By similarity).[UniProtKB/Swiss-Prot Function]