

Product datasheet for RN204962

Atg3 (NM_134394) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Atg3 (NM_134394) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Atg3
Synonyms:	Apg3l; PIG-1; Pig1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>RN204962 representing NM_134394 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGCAGAATGTGATCAACACGGTGAAGGAAAGGCTCTGGAAGTGGCCGAGTACCTGACCCCGTCTCA
AGGAATCAAATTTAAGGAAACAGGTGTAATCACCCAGAAGAGTTTGTGGCAGCTGGAGATCACTTAGT
CCACCCTGTCCAACATGGCAATGGGCTACAGGGGAAGAATTGAAAGTGAAGGCATATCTACCAACAGGG
AAACAGTTTTTGGTAACCAAAAATGTTCCATGCTACAAGCGGTGTAACAGATGGAGTATTCGGATGAAT
TGGAGGCTATCATTGAAGAAGATGATGGTATGGGGCTGGGTAGACACGTACCATAACACAGGTATTAC
AGGAATTAAGCAGTTAAGGAGATTACACTGGAAAGCAAGGACAGTATAAACTCCAAGACTGCTCA
GTGCTGTGCGATGAAGAGGAGGAGGAAGAGGAAGGGAAGCTGCAGACATGGAAGAATAGAAGAGAGTG
GATTGTTGAAACAGATGAGGCTACCCTAGACACCAGAAGAATAGTGAAGCTTGTAAAGCTAAAGCTGA
TGCTGGGGTGAAGACGCCATTCTGCAACAAGAACCTATGACCTGTACATCACTTACGACAAGTACTAC
CAGACGCCACGGCTCTGGCTGTTTGGCTATGATGAGCAACGCAGCCTTTAACAGTTGAGCACATGTATG
AAGACATCAGTCAAGATCATGTGAAGAAAACAGTGACCATTGAAAACCATCCTCACCTCCACCACCTCT
TATGTGTTCAAGTTACCCCTGCAGGCATGCTGAAGTGAAGAAAATTATTGAGACCGTTGCAGAAGGC
GGGGGAGAGCTTGGTGTTCATATGTATCTTTTAAATTTTTTTGAAATTTGTTCAAGCTGTCATTCCAACAA
TAGAATATGACTACACAAGACACTTCACAATGTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	Sgfl-MluI
ACCN:	NM_134394
Insert Size:	945 bp



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OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	NM_134394.2 , NP_599221.1
RefSeq Size:	1423 bp
RefSeq ORF:	945 bp
Locus ID:	171415
UniProt ID:	Q6A750
Cytogenetics:	11q21
Gene Summary:	<p>E2 conjugating enzyme required for the cytoplasm to vacuole transport (Cvt), autophagy, and mitochondrial homeostasis. Responsible for the E2-like covalent binding of phosphatidylethanolamine to the C-terminal Gly of ATG8-like proteins (GABARAP, GABARAPL1, GABARAPL2 or MAP1LC3A). The ATG12-ATG5 conjugate plays a role of an E3 and promotes the transfer of ATG8-like proteins from ATG3 to phosphatidylethanolamine (PE). This step is required for the membrane association of ATG8-like proteins. The formation of the ATG8-phosphatidylethanolamine conjugates is essential for autophagy and for the cytoplasm to vacuole transport (Cvt). Preferred substrate is MAP1LC3A. Also acts as an autocatalytic E2-like enzyme, catalyzing the conjugation of ATG12 to itself, ATG12 conjugation to ATG3 playing a role in mitochondrial homeostasis but not in autophagy. ATG7 (E1-like enzyme) facilitates this reaction by forming an E1-E2 complex with ATG3 (By similarity). [UniProtKB/Swiss-Prot Function]</p>