

## Product datasheet for **MG222440**

### Atg14 (NM\_172599) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Atg14 (NM_172599) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Atg14
Synonyms:	4832427M01; Atg14L; D14Ertd114e; D14Ertd436e
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG222440 representing NM\_172599  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCGTCTCCAGTGGGAAGGGATCTTGACGCCCGAGGCTCCTGGTTTTGGGCCCGGGCGCTAGCAC  
 GGGACCTGGTGGACTCGGTGGACGACGCCGAGGGCCTTTACGTGGCTGTTGAGCGGTGTCCTCTGTGCAA  
 CACCACCTCGCCGGCGGTTGACTTGCGCCAAGTGCCTCCAGAGCGGTGATTTTCGTCTATTTTCGACGGCCG  
 GACCGGGAGAGGTTTATTGACAAGAAGGAAAGACTAAGCCAACCTAAGAACAAGCAAGAAGAATTCAGA  
 AAGAAGTACTAAAAGCTATGGAAGGAAAGCGGCTTACAGATCAGTTGAGATGGAAAATAATGTCATGCAA  
 GATGAGGATTGAACAGCTGAAGCAAACAATATGTAAGGAAATGAGGAAATGAAGAAAAATTCTGAAGGT  
 CTCCTCAAGAACAAGGAAAAGAACCAGAAGCTTTACAGCCGAGCACAGCGGCCACCAAGAGAAAAAGGAGA  
 AGATTCAGCGGCACAACCGCAAGCTTGGGGACCTGGTGGAGAAGAAGACCATTGACTTGAAGAGTACTA  
 TGAGCGGTTGGCGGGCTTCGAAGGTCACACATCTAGAGCTCACCTCCATCATATTTCCCAATCGACGAA  
 GTGAAGACTTCTGGGAGAGACCTGCAGACGTGTCTTCAGAGACTGACAGTGCCATGACCTCAAGCATGG  
 TGAGCAAGCTTGCTGAGGCCGGAGGACAACCTACCTCTCTGGAAGATGGGTCTGTGATGACCACAATGG  
 TGACACCAGCATTAGCATCACAGGCCCGTGGATTAGCCTACCAACAACGGGGACTACTCTGCTTACTAC  
 AATTGGGTAGAAGAGAAGAAAACAACCCAAGGACCTGACATGGAGCATAACAACCCCGCCTACACTATCA  
 GCGCCCGCTGGGCTACGCCACGCGACTCGTCAACATTGTGTCTCACATACTTGACATCAATCTTCCCAA  
 AAAGCTGTGAACAGCGAGTTCTGTGGCGAAAACCTCAGCAAGCAGAACTGACACGCGCAGTGAGGAAA  
 CTGAACGCAAACATCCTTTACCTTTGTTCTTCTCAGCATGTAATCTGGATCAGTTGCAACCACTGCACA  
 CACTCAGGAACCTGATGCACTTGGTCAGCCCGCTCTGAGCACCTAGGCAGGTCAGGACCTTTGAAGT  
 TCGAGCAGACCTCGAGGAGTCCATGGAATTTGTGGACCCTGGAGTTGCTGGAGAATCAGACGCGAGTGGA  
 GATGAGCGTGAAGCGATGAGGAGACTGACCTGGGCACAGACTGGGAGAACCTGCCAAGCCCGGATTCT  
 GTGACATCCCTTCCAGCCGGTGAAGTGTCCCAGAGCCAGAGCACCCAGGTGTCCCACCCATTGCCAG  
 CAGCAGCGCTGGTGGGATGATCTCCTCCGCTGCGGCTCGGTGACCTCTTGGTTCAAAGCTTACTGGA  
 CACCGC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG222440 representing NM\_172599  
 Red=Cloning site Green=Tags(s)

MASPSGKGSWTPEAPGFPRALARLDVDSVDDAEGLYVAVERCPLCNTTRRRLTCAKCVQSGDFVYFDGR  
 DRERFIDKKERLSQLKNKQEEFQKEVLKAMEGKRLTDQLRWKIMSCKMRIEQLKQTIKGNEMKKNSEG  
 LLKNKEKNQKLYSRAQRHQEKKEKIQRHNRKLGDLVEKKTIDLKSHYERLARLRSHILELTSIIFPIDE  
 VKTSGRDPADVSSETDSAMTSSMYSKLAEARRTTYLSGRWVCDDHNGDTSISITGPWISLPNNGDYSA  
 YNWVEEKTTQGPDMHNNPAYTISAALGYATQLVNIIVSHILDINLPKCLCNSEFCGENLSKQKLTRAVR  
 LNANILYLCSQHVNLQPLHLRLMHLVSPRSEHLGRSGPFVVRADLEESMEFVDPGVAGESDASG  
 DERVSDEETDLGTDWENLPSRPFCDIPSPVEVSQSSTQVSPPIASSSAGGMISAAASVTSWFKAYTG  
 HR

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_172599

**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\\_172599.4](#), [NP\\_766187.1](#)

**RefSeq Size:** 3466 bp

**RefSeq ORF:** 1479 bp

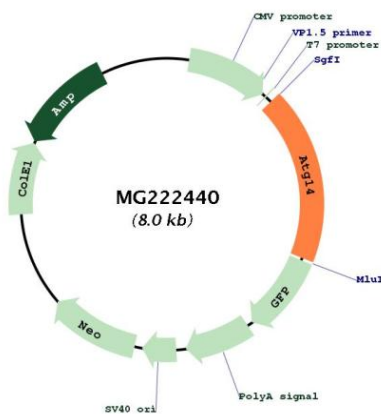
**Locus ID:** 100504663

**UniProt ID:** [Q8CDJ3](#)

**Cytogenetics:** 14 24.6 cM

**Gene Summary:**

Required for both basal and inducible autophagy (PubMed:19270696, PubMed:19270693). Determines the localization of the autophagy-specific PI3-kinase complex PI3KC3-C1 (By similarity). Plays a role in autophagosome formation and MAP1LC3/LC3 conjugation to phosphatidylethanolamine (PubMed:19270696, PubMed:19270693). Promotes BECN1 translocation from the trans-Golgi network to autophagosomes (By similarity). Enhances PIK3C3 activity in a BECN1-dependent manner. Essential for the autophagy-dependent phosphorylation of BECN1 (By similarity). Stimulates the phosphorylation of BECN1, but suppresses the phosphorylation of PIK3C3 by AMPK (PubMed:23332761). Binds to STX17-SNAP29 binary t-SNARE complex on autophagosomes and primes it for VAMP8 interaction to promote autophagosome-endolysosome fusion (By similarity). Modulates the hepatic lipid metabolism (PubMed:22992773).[UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for MG222440