

Product datasheet for **MR222440**

Atg14 (NM_172599) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Atg14 (NM_172599) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Atg14
Synonyms:	4832427M01; Atg14L; D14Ertd114e; D14Ertd436e
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR222440 representing NM_172599
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGTCTCCAGTGGGAAGGGATCTTGGACGCCGAGGCTCCTGGTTTTGGGCCGCGGGCGCTAGCAC
 GGGACCTGGTGGACTCGGTGGACGACGCCGAGGGCCTTTACGTGGCTGTTGAGCGGTGTCCTCTGTGCAA
 CACCACCTCGCCGCGGTTGACTTGCGCCAAGTGCCTCCAGAGCGGTGATTTCTGCTATTTTCGACGGCCGC
 GACCGGGAGAGGTTTATTGACAAGAAGGAAAGACTAAGCCAACCTAAGAACAAGCAAGAAGAAATTCAGA
 AAGAAGTACTAAAAGCTATGGAAGGAAAGCGGCTTACAGATCAGTTGAGATGGAAAATAATGTCATGCAA
 GATGAGGATTGAACAGCTGAAGCAAACAATATGTAAGGAAATGAGGAAATGAAGAAAAATCTGAAGGT
 CTCCTCAAGAACAAGGAAAAGAACCAGAAGCTTTACAGCCGAGCACAGCGGCCACCAAGAGAAAAAGGAGA
 AGATTCAGCGGCACAACCGCAAGCTTGGGGACCTGGTGGAGAAGAAGACCATTGACTTGAAGAGTACTA
 TGAGCGGTTGGCGCGCTTCAAGGTACACATCTAGAGCTCACCTCCATCATATTCCTCAATCGACGAA
 GTGAAGACTTCTGGGAGAGACCTGCAGACGTGTCTTACAGACTGACAGTGCCATGACCTCAAGCATGG
 TGAGCAAGCTTGCTGAGGCCGGAGGACAACCTACCTCTCTGGAAGATGGGTCTGTGATGACCACATGG
 TGACACCAGCATTAGCATCACAGGCCCGTGGATTAGCCTACCAAACAACGGGGACTACTCTGCTTACTAC
 AATTGGGTAGAAGAGAAGAAAACAACCCAAGGACCTGACATGGAGCATAACAACCCCGCCTACACTATCA
 GCGCCGCGCTGGGCTACGCCACGCAGCTCGTCAACATTGTGTCTCACATACTTGACATCAATCTTCCCAA
 AAAGCTGTGCAACAGCGAGTTCTGTGGCGAAAACCTCAGCAAGCAGAACTGACACGCGCAGTGAGGAAA
 CTGAACGCAAACATCCTTTACCTTTGTTCTTCTCAGCATGTAATCTGGATCAGTTGCAACCACCTGCACA
 CACTCAGGAACCTGATGCACCTTGGTCAGCCCGCTCTGAGCACCTAGGCAGGTCAGGACCCTTTGAAGT
 TCGAGCAGACCTCGAGGAGTCCATGGAATTTGTGGACCCTGGAGTTGCTGGAGAATCAGACGCGAGTGGA
 GATGAGCGTGTAAAGCGATGAGGAGACTGACCTGGGCACAGACTGGGAGAACCTGCCAAGCCCGGATTCT
 GTGACATCCCTTCCAGCCGGTGAAGTGTCCCAGAGCCAGAGCACCCAGGTGTCCCACCCATTGCCAG
 CAGCAGCGCTGGTGGGATGATCTCTCCGCTGCGGCTCGGTGACCTCTTGGTTCAAAGCTTACTGGA
 CACCGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR222440 representing NM_172599
 Red=Cloning site Green=Tags(s)

MASPSGKGSWTPEAPGFGPRALARDLVDSVDDAEGLYVAVERCPLCNTTRRRLTCAKCVQSGDFVYFDGR
 DRERFIDKKERLSQLKNKQEEFQKEVLKAMEGKRLTDQLRWKIMSCKMRIEQLKQTIKGNEMMKNSEG
 LLKNKEKNQKLYSRAQRHQEKKEKIQRHNRKLGDLVEKKTIDLKSHYERLARLRSHILELTSIIFPIDE
 VKTSGRDPADVSSETDSAMTSSMVSKLAEARRTYL SGRWVCDDHNGDTSISITGPWISLPNNGDYSAAY
 NWVEEKTTQGPDMHNNPAYTISAALGYATQLVNIIVSHILDINLPKCLNSEFCGENLSKQKLTRAVRK
 LNANILYLCSQHVNLQQLPLHLRNLMLVSPRSEHLGRSGPFVVRADLEESMEFVDPGVAGESDASG
 DERVSDEETDLGTDWENLPSRPFCDIPSQPVEVSQSSTQVSPPIASSSAGGMISAAASVTSWFKAYTG
 HR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mm9081_e05.zip

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

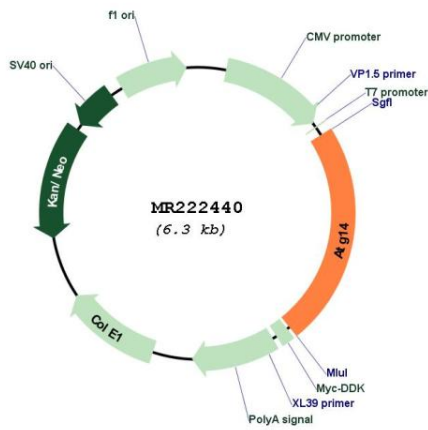
UniProt ID: [Q8CDJ3](#)

Cytogenetics: 14 24.6 cM

MW: 55.4 kDa

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 MR222440