

Product datasheet for RC216453

ATG4B (NM_178326) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATG4B (NM_178326) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ATG4B
Synonyms:	APG4B; AUTL1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC216453 representing NM_178326 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGACGCAGCTACTCTGACCTACGACACTCTCCGTTTGTGAGTTTGAAGATTTCTGAGACCTCAG
AGCCCGTTTGGACTGGGTAGAAAATACAGCATTTTACAGAAAAGGACGAGATCTTGTCTGATGTGGC
ATCTAGACTTTGGTTTACATACAGGAAAACCTTCCAGCCATTGGGGGGACAGGCCCCACCTCGGACACA
GGCTGGGGCTGCATGCTGCGGTGTGGACAGATGATCTTTGCCAAGCCCTGGTGTCCGGCACCTAGGCC
GAGATTGGAGGTGGACACAAAGGAAGAGGCAGCCAGACAGCTACTTCAGCGTCTCAACGCATTCATCGA
CAGGAAGGACAGTTACTACTCCATTACCAGATAGCGCAAATGGGAGTTGGCGAAGGCAAGTCCATAGGC
CAGTGGTACGGGCCAACACTGTCGCCAGGTCCTGAAGAAGCTTGTCTTTCGATACGTGGAGCTCCT
TGGCGGTCCACATTGCAATGGACAACACTGTTGTGATGGAGGAAATCAGAAGTTGTGCAGGACCAGCGT
TCCCTGTGCAGGCCCACTGCGTTTCTGCAGATTCGACCGGCACTGCAACGGATTCCCTGCCGGAGCT
GAGGTCACCAACAGGCCGTGCGCATGGAGACCCCTGGTACTTCTCATTCCCCTGCGCCTGGGGCTCACGG
ACATCAACGAGGCCTACGTGGAGACGCTGAAGCACTGCTTCATGATGCCCCAGTCCCTGGGCGTCATCGG
AGGGAAGCCCAACAGCGCCCACTACTTCATCGGCTACGTTGGTGGAGAGCTCATCTACCTGGACCCCAAC
ACCACGCAGCCAGCCGTGGAGCCCACTGATGGCTGCTTCATCCCGACGAGAGCTTCCACTGCCAGCACC
CGCCGTGCCGCATGAGCATGCGGAGCTTGACCCGTCCATCGCTGTGGGGTTTTCTGTAAGACTGAAGA
TGACTTCAATGATTGGTGCCAGCAAGTCAAAAAGCTGTCTCTGCTTGGAGGTGCCCTGCCATGTTTGAG
CTGGTGGAGCTGCAGCCTTACATCTGGCTGCCCGACGTCCTGAACCTGTCCCTAGGTGAGAGCTGCC
AAGTCCAGATTCTCTGATG

ACGCGTACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC216453 representing NM_178326
Red=Cloning site Green=Tags(s)

MDAATLYDTLRFAEFEDFPETSEPVWILGRKYSIFTEKDEILSDVASRLWFTYRKNFPAIGGTGPTS
 SDTGWGCMRLCGQMIFAQALVCRHLGRDWRWTQRKRQPSYF SVLNAFIDRKDSYYSIHQIAQMGVGE
 GKSIGQWYGPNTVAQVLKLA VFDTWSSSLAVHIAMDNTVVMEEIRRLCRTSVPCAGATAFPADSDR
 HCNGFPAGAEVTNRPSWPRPLVLLIPLRLGLTDINEAYVETLKHCFMMPQSLGVIGGKPN
 SAHYFIGYVGEELIYLDPH TTQPAVEPTDGGCFIPDES FHCQHPPCRMSIAELDPSIAVGFF
 CKTEDDFNDWCQVQVKKLSLLGGALPMFELVELQPSHLACPDVNLNLSLGESCQVQILLM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6080_f06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_178326

ORF Size: 1140 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_178326.3](#)

RefSeq Size: 2912 bp

RefSeq ORF: 1143 bp

Locus ID: 23192

UniProt ID: [Q9Y4P1](#)

Cytogenetics: 2q37.3

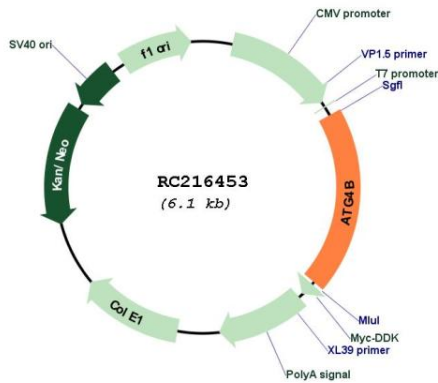
Protein Families: Protease

Protein Pathways: Regulation of autophagy

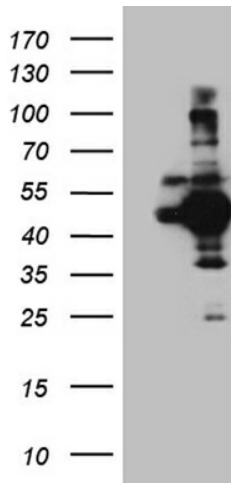
MW: 42.4 kDa

Gene Summary: Autophagy is the process by which endogenous proteins and damaged organelles are destroyed intracellularly. Autophagy is postulated to be essential for cell homeostasis and cell remodeling during differentiation, metamorphosis, non-apoptotic cell death, and aging. Reduced levels of autophagy have been described in some malignant tumors, and a role for autophagy in controlling the unregulated cell growth linked to cancer has been proposed. This gene encodes a member of the autophagin protein family. The encoded protein is also designated as a member of the C-54 family of cysteine proteases. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jul 2008]

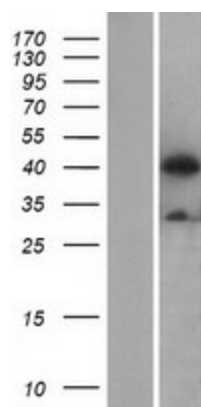
Product images:



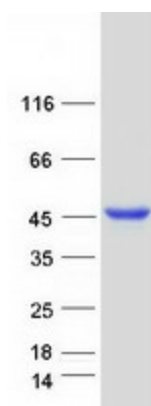
Circular map for RC216453



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ATG4B (Cat# RC216453, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ATG4B (Cat# [TA810189])(1:2000). Positive lysates [LY403600] (100ug) and [LC403600] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY403600]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216453 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ATG4B protein (Cat# [TP316453]). The protein was produced from HEK293T cells transfected with ATG4B cDNA clone (Cat# RC216453) using MegaTran 2.0 (Cat# [TT210002]).