

## Product datasheet for **RG226204**

### ATP6V0A1 (NM\_001130021) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ATP6V0A1 (NM_001130021) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ATP6V0A1
Synonyms:	a1; ATP6N1; ATP6N1A; Stv1; Vph1; VPP1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RG226204 representing NM\_001130021  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGGGAGCTTTTCCGGAGTGAAGAAATGACACTGGCCAGCTTTTCTACAGTCAGAGGCTGCTTATT  
 GTTGTGTCAGTGAATTAGGAGAAGTTGAAAGGTTTCAGTTTCGTGACTTAAATCCAGATGTGAATGTTTT  
 CCAACGGAAATTTGTGAATGAAGTTAGAAGATGTGAAGAAATGGATCGAAAGCTTCGATTTGTTGAGAAA  
 GAGATAAGAAAAGCTAACATTCCGATTATGGACACCGGTGAAAACCCAGAGGTTCCCTTCCCCGGGACA  
 TGATTGACTTAGAGGCCAATTTTGAAGAAGTTGAAAATGAACTGAAGGAAATCAACACAAACCAGGAAGC  
 TCTGAAGAGAACTTCTGGAAGTACCAGAAATTAATTTATACTTCGAAAACCTCAGCAATTTTTTGTGAT  
 GAGATGGCGGATCCAGACTTGTGGAAGAGTCTCATCCCTCTGGAGCCAAGTGAGATGGGAAGAGGCA  
 CTCCTTTAAGACTTGGCTTCGTGGCTGGTGTATTAAACCGGGAGCGCATCCCTACTTTTGGAGCGCATGCT  
 TTGGCGGGTATGCCGGGAAATGTGTTCTGCGACAGGCTGAAATCGAGAACCCCTGGAGGATCCTGTG  
 ACTGGCGACTACGTGCACAAGTCTGTGTTTATCATTTTTCTTCAAAGGCGATCAGCTGAAAAACAGAGTCA  
 AGAAAATCTGTGAAGGGTCCGAGCCTCACTCTATCCCTGTCTGAGACACCACAGGAGAGGAAGGAAAT  
 GGCTTCTGGAGTGAATACCAGGATTGATGATCTCCAAATGGTTCTGAATCAAACGGAGGATCACCGCCAG  
 AGGGTTCTGCAGGCAGCTGCTAAGAACATCCGTGTCTGGTTTCAAAAGTGCAGGAAAGTGAAGGCCATCT  
 ATCACACCCTGAACCTGTGCAACATAGATGTGACTCAGAAATGCTTGATTGCAGAGGCTGGTGCCTGT  
 CACCGACTTGACTCCATCCAGTTTGCCTCAGAAAGGGGACGGAACACAGTGGTCCACTGTACCTTCC  
 ATTTTGAACAGGATGCAGACAAACCAGACTCCCCAACCTATAACAAAACCAACAAGTTTACCTATGGCT  
 TTCAGAACATAGTATGCTTATGGAATTGGAACCTACCAGAGAGATAAATCCAGCTCCGATCCTATATTAT  
 CAGGTTCCCTTTTCTATTTGCTGTGATGTTGGAGACTTCGGTTCATGGCATTAAATGACCTTTTTGCT  
 GTGTGGATGTTACTGAGGAGAGCCGGATCCTTTCCAGAAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT  
 TCAGTGGTTCGATACATTATTTTATTGATGGGTGTGTTCTCCATGTACTGGCCTCATCTACAATGATTG  
 CTTTTCAAGTCTCTAATATCTTTGGGTATCCTGGAGTGTACGGCCGATGTTTACTTATAAATTGGACT  
 GAAGAGACGCTTCGGGGAAACCCTGTTCTACAGCTGAACCCAGCCCTCCCTGGAGTGTGGTGGACCAT  
 ACCCTTTGGCATTGATCCAATTTGGAACATTGCTACCAATAAACTGACGTTCTTGAACCTCTTAAAGT  
 GAAGATGTCTGTTATCCTTGGTATCATCCATATGCTGTTGGAGTCAGCCTGAGTCTGTTCAACCATATC  
 TATTTCAAGAAGCCCCTGAATATCTACTTTGGATTTATCCTGAAATAATCTTCATGACCTTTTGTGTTG  
 GCTATTTGGTTATCCTTATTTTTACAAGTGGACGGCCTATGATGCTCATACCTCTGAGAATGCACCAAG  
 CCTTCTGATCCATTTATAAACATGTTCTCTTTTCTACCCAGAGTCTGGTTATTCAATGTTGATTCT  
 GGACAGAAAGGAATTCAGTGTTCCTGGTGTGTTGCACTACTGTGTACCTTGGATGCTGCTGTTTA  
 AACCATTTGGTCTTCGCCGTCAGTATTTGAGGAGAAAGCATTGGGAACTCTCAACTTTGGTGGGATCAG  
 GGTGGGCAACGGACCGACAGAGGAGGATGCTGAGATTATTCAGCATGACCAGCTCTCCACCCACTCAGAG  
 GACGCAGACGAGCCTCCGAGGACGAAGTGTGACTTTGGGGACACCATGGTCCACCAGGCCATCCACA  
 CCATCGAGTACTGCCTGGGCTGCATCTCAACTGCTCCTACTTGGGCTCTGGGCCCTCAGCCTCGC  
 TCATGCGCAGCTGTCTGAGGTGCTTTGGACCATGGTATCCACATCGGCCTGAGCGTGAAGAGCTTGGCG  
 GGAGGTTTGGTGTGTTCTTCTTCTTCACTGCCTTTGCCACCCTGACCGTGGCCATCCTCCTGATCATGG  
 AGGGCCTCTCGCCTTTCTCCACGCACTGCGCTTACACTGGGTTGAGTTCAGAAATAAATCTACAGCGG  
 GACCGGTTTCAAGTCTTACCCTTCTCCTTCGAGCATATTCGGGAAGGGAAGTTTGAAGAG

**ACCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG226204 representing NM\_001130021  
Red=Cloning site Green=Tags(s)

MGELFRSEEMTLAQLFLQSEAAYCCVSELGELGKVQFRDLNPDVNVFQRKFNVEVRRCEEMDRKLRFVEK  
EIRKANIPIMDTGENPEVPFPRDMIDLEANFEKIENELKEINTNQEALKRNFLTELKFI LRKTQQFFD  
EMADPDLL EESSLLEPSEMGRGTPLRLGFVAGVINRERIPTFERMLWRVCRGNVFLRQAEIENPLEDPV  
TGDYVHKSVFIIFFQGDQLKNRVKKICEGFRASLYPCPETPQERKEMASGVNTRIDDLQMVLNQTEDHRQ  
RVLQAAAKNIRVWFIVKVRMKAIYHTLNL CNIDVTQKCLIAEVWCPVTDLDSIQFALRRGTEHSGSTVPS  
ILNRMQTNQTPPTYNKTNKFTYGFQNIVDAYGIGTYREINPAPYTIITFPFLFAVMFGDFGHGILMTLFA  
VWMLRESRILSQKNENEMFSTVFSGRYIILLMGVFSMYTGLIYNDCFSKSLNIFGSSWSVRPMFTYNWT  
EETLRGNPVLQLNPALPGVFGPYFGIDPIWNIATNKL TFLNSFKMKMSVILGIHMLFGVSLSLFNHI  
YFKKPLNIYFGFIP EII FMTSLFGYL VILIFYKWTAYDAHTSENAPSLLIHF INMFLFSYPESGYSMLYS  
GQKGIQCFLVVVALLCVPWMLL FKPLVLRROYLRRKHLGTLNFGGIRVGNPTEEDAEIIQHDLSTHSE  
DADEPSEDEVDFDGMTVMHQAIHTIEYCLGCISNTASYLRWALSLAHAQLSEVLWTMVIHIGLSVKSLA  
GGLV L F F F F T A F A T L T V A I L L I M E G L S A F L H A L R L H W V E F Q N K F Y S G T G F K F L P F S F E H I R E G K F E E

TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-MluI



**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_001130021.3](#)

**RefSeq Size:** 4205 bp

**RefSeq ORF:** 2514 bp

**Locus ID:** 535

**UniProt ID:** [Q93050](#)

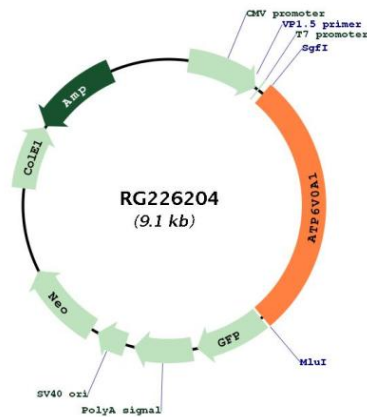
**Cytogenetics:** 17q21.2

**Protein Families:** Transmembrane

**Protein Pathways:** Epithelial cell signaling in Helicobacter pylori infection, Lysosome, Metabolic pathways, Oxidative phosphorylation, Vibrio cholerae infection

**Gene Summary:**

This gene encodes a component of vacuolar ATPase (V-ATPase), a multisubunit enzyme that mediates acidification of eukaryotic intracellular organelles. V-ATPase dependent organelle acidification is necessary for such intracellular processes as protein sorting, zymogen activation, receptor-mediated endocytosis, and synaptic vesicle proton gradient generation. V-ATPase is composed of a cytosolic V1 domain and a transmembrane V0 domain. The V1 domain consists of three A and three B subunits, two G subunits plus the C, D, E, F, and H subunits. The V1 domain contains the ATP catalytic site. The V0 domain consists of five different subunits: a, c, c', c", and d. Additional isoforms of many of the V1 and V0 subunit proteins are encoded by multiple genes or alternatively spliced transcript variants. This gene encodes one of three A subunit proteins and the encoded protein is associated with clathrin-coated vesicles. Three transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

**Product images:**


Circular map for RG226204