

## Product datasheet for **SC116892**

### ATP6V0A1 (NM\_005177) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ATP6V0A1 (NM_005177) Human Untagged Clone
Tag:	Tag Free
Symbol:	ATP6V0A1
Synonyms:	a1; ATP6N1; ATP6N1A; Stv1; Vph1; VPP1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC116892 sequence for NM\_005177 edited (data generated by NextGen Sequencing)

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ATGGGGGAGCTTTTCCGGAGTGAAGAAATGACACTGGCCAGCTTTTTCTACAGTCAGAG
GCTGCTTATTGTTGTGTCAAGTGAATTAGGAGAAGTTGGAAAGGTTCAAGTTTCGTGACTTA
AATCCAGATGTGAATGTTTTCCAACGGAAATTTGTGAATGAAGTTAGAAGATGTGAAGAA
ATGGATCGAAAGCTTCGATTTGTTGAGAAAGAGATAAGAAAAGCTAACATTCCGATTATG
GACACCGGTGAAAACCCAGAGGTTCCCTTCCCCGGGACATGATTGACTTAGAGGCCAAT
TTTGAGAAGATTGAAAATGAACTGAAGGAAATCAACACAAACCAGGAAGCTCTGAAGAGA
AACTTCTGGAAGTACCGAATTAATAATTTATACTTCGCAAAAAGTCAAGCAATTTTTTGT
GAGATGGCGGATCCAGACTTGTGGAAGAGTCTCATCCCTCTGGAGCCAAGTGAAGATG
GGAAGAGGCACTCCTTAAGACTTGGCTTCGTGGCTGGTGTCTTAACCGGGAGCGCATC
CCTACTTTTGGCGCATGCTTTGGCGGTATGCCGGGAAATGTGTTCTGCGACAGGCT
GAAATCGAGAACCCCTGGAGGATCCTGTGACTGGCGACTACGTGCACAAGTCTGTGTTT
ATCATTCTTCCAAGGCGATCAGCTGAAAAACAGAGTCAAGAAAATCTGTGAAGGGTTC
CGAGCCTCACTCTATCCCTGTCTGAGACACCACAGGAGAGGAAGGAAATGGCTTCTGGA
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AGGGTTCTGCAGGCAGCTGCTAAGAACATCCGTGTCTGGTTCATCAAAGTGCAGGAAGATG
AAGGCCATCTATCACACCTGAACCTGTGCAACATAGATGTGACTCAGAAATGCTTGATT
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CCCCAACCTATAACAAAACCAACAAGTTACCTATGGCTTTTGAACATAGTAGATGCT
TATGGAATTGGAAGTACCGAGAGATAAATCCAGCTCCGTATACTATTATCACGTTCCCT
TTTCTATTGCTGTGATGTTGGAGACTTCGGTTCATGGCATTATTAATGACCTTTTTGCT
GTGTGGATGGTACTGAGGAGAGCCGGATCCTTTCCAGAAAGTGAAGATGAGATGTTT
AGCACTGTGTTCAAGTGGTTCGATACATTATTTTATTGATGGGTGTGTTCTCCATGTACACT
GGCCTCATCTACAATGATTGCTTTTCCAAGTCTCTTAATATCTTTGGGTATCCTGGAGT
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CAGCTGAACCCAGCCCTCCCTGGAGTGTGTTGGTGGACCATACCCTTTTGGCATTGATCCA
ATTTGGAACATTGCTACCAATAAACTGACGTTCTTGAACCTCTTAAGATGAAGATGTCT
GTTATCCTTGGTATCATCCATATGCTGTTTGGAGTCAAGCTGAGTCTGTTCAACCATATC
TATTTCAAGAAGCCCTGAATATCTACTTTGGATTTATCCTGAAATAATCTTCATGACC
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ACCTCTGAGAATGCACCAAGCCTTCTGATCCATTTCAAAACATGTTCTCTTTTCTAC
CCAGAGTCTGGTATTCAATGTTGATTCTGGACAGAAAGGAATTCAGTGTTCCTGGTA
GTGGTTGCACTACTGTGTGTACCTGGATGCTGCTGTTTAAACCATTGGTCTTCGCCGT
CAGTATTTGAGGAGAAAGCATTGGGAACTCTCAACTTTGGTGGGATCAGGGTGGGCAAC
GGACCGACAGAGGAGGATGCTGAGATTATCAGCATGACCAGCTCTCCACCCACTCAGAG
GACGCAGACGAGTTTACTTTGGGACACCATGGTCCACCAGGCCATCCACACCATCGAG
TACTGCTGGGCTGCATCTCAACACTGCCTCCTACTTGGGCTCTGGGCCCTCAGCCTC
GCTCATGCGCAGCTGTCTGAGGTGCTTTGGACCATGGTATCCACATCGGCCTGAGCGTG
AAGAGCTTGGCGGGAGGTTTGGTGTGTTCTTCTTCTTACTGCCTTTGCCACCCTGACC
GTGGCCATCCTCTGATCATGGAGGCCTCTCGCCTTTCTCCACGCACTGCGCTTACAC
TGGGTTGAGTTCCAGAATAAATTCTACAGCGGGACCGGTTTCAAGTTCTTACCCTTCTCC
TTCGAGCATATTCGGAAGGGAAGTTTGAAGAGTGA

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Clone variation with respect to NM\_005177.3

**5' Read Nucleotide Sequence:** >OriGene 5' read for NM\_005177 unedited  
 GACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGCGGTTGCTGTGGCGGAGTTTGG  
 AGGTTGGAGAGAAATCCAGGTACTACTAGACTGGTACCTTCTGCCACCATGGGGGAGCT  
 TTTCCGGAGTGAAGAAATGACTGCCCCAGCTTTTTCTACAGTCAGAGGCTGCTTATTG  
 TTGTGTCAGTGAATTAGGAGAAGCTTGGAAAGGTTCAAGTTTCGTGACTTAAATCCAGATGT  
 GAATGTTTTCCAACGGAAATTTGTGAATGAAGTTAGAAGATGTGAAGAAATGGATCGAAA  
 GCTTCGATTTGTTGAGAAAGAGATAAGAAAAGCTAACATTCCGATTATGGACACCGGTGA  
 AAACCCAGAGGTTCCCTTCCCCGGGACATGATTGACTTAGAGGCCAATTTTGAGAAGAT  
 TGAAAATGAAGTGAAGGAAATCAACACAAAACAGGAAGCTCTGAAGAGAACTTCTCGGA  
 ACTGACCGAATTAATAATTTATACTTCGCAAACTCAGCAATTTTTTGTGAGATGGCGGA  
 TCCAGACTTGTGGAGAGTCTCATCCCTCTTGGAGCCAAGTGAGATGGGAAGAGGCAC  
 TCCTTTAAGACTTGGCTTCGTGGCTGGTGCATTAACCGGGAGCGCATCCCTACTTTTGA  
 GCGCATGCTTTGGCGGTATGCCGGGAAATGTGTTCTCGCACAGGCTGAAATCGAGAA  
 CCCCTGGAGGATCCTGTGACTGGCGACTACGTGCC

**3' Read Nucleotide Sequence:** >OriGene 3' read for NM\_005177 unedited  
 NNTTTAGCTCTGNNACCGCGCCGAATCTAGNGATCGGTTTTTTTTTTTTTTTTTTTCC  
 GGGGAAGTCAAACATACTTTATTCAACATAGGAATGTCTGAACAGGAGGACCTTGGGCAG  
 GGTTCCCTGAAGTCTGCTTCAAACCCCACTGAAAACAGAGCAAAGATCATCACGAAAACC  
 CAGGACACCAGGGCAGGGGGCTGCACAAGGTCGGGTCAAGTACAGTGGCCAGCACAC  
 AGTGGCCCCGCCAGGGCAGCCAGCCTGGGAGAGGGGATGAGGGCTCCAGGCAGCTCA  
 CTCAGAAAAGCCAGGGTAGGAGGAGGGCACCAGCCTGGCCCACTCAGGGAATTTCTTA  
 CCACTGAAAGCGGTGGGGATTAAGTTAGCCAGGGCTGCCACGCCAGCACACGATTACAAG  
 GTTCGGGGTGACAAGGAGGAAGCCCTTGGCAGGACTGTGCAGCCCTCACAGCCACATGC  
 ACGGCAGCCCTGCCAATGGCTTCAAACAGCAAACCATCAGTGACACTGACCTTCCCTGC  
 CCAGGACACCCCTCTGAGACCTGGGGCAGTGTGGTGAGGAGGGGGCACTAGGGGCGGA  
 GCCAGGCAGGCTGCAGGCAGAACCAAGAGGACCCCACTCCACACTGAAGACATCATGAT  
 TGGGGGTGGGGAAGATCTCAGGGTCTCCATCAGGGAAGAGCATCAGTCTGCACCCCTGGC  
 CTGAGGGTGTGCTTGTGGCAGGGCCATGNCAGGCCTGNGAAGAAGCCAACCCGAGAG  
 AGGGAAGCCCTGTGCACTGCGGAGCAGCCAAGGCCTCTGTCCAAGCATCCNGCTGTGCT  
 ATGTANTGCAGGNATGAAACGGGAAAGAGGAAAGATGGGAGTGCAGGNNTGGGTCAAAA  
 AAGGCGTGTAATACTATGACCCTGGGGGG

**Restriction Sites:** NotI-NotI

**ACCN:** NM\_005177

**Insert Size:** 4230 bp

**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:**

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\\_005177.2](#), [NP\\_005168.2](#)

**RefSeq Size:** 4139 bp

**RefSeq ORF:** 2496 bp

**Locus ID:** 535

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

**Cytogenetics:** 17q21.2

**Domains:** V\_ATPase\_sub\_a

**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]

Transcript Variant: This variant (3) uses an alternate in-frame splice junction compared to variant 1. The resulting isoform (c) has the same N- and C-termini but is shorter compared to isoform a.