

## Product datasheet for **MG211461**

### Atp1a2 (NM\_178405) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Atp1a2 (NM_178405) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Atp1a2
Synonyms:	Atpa-3; AW060654; mKIAA0778
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG211461 representing NM_178405 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGTCGTGGGGCAGGGCGTGAGTACTCGCCTGCTGCCACCACTGCGGAAAATGGGGTGGCAAGAAGA  
AACAGAAAAGAGAAGGAGCTCGATGAGCTGAAGAAGGAGTTGCCATGGATGACCACAAGCTGTCTTGGG  
TGAGCTGGGCCGAAAATACCAAGTGGATCTGTCTAAGGGCCTACCAATCAGCGAGCTCAGGACATTCTG  
GCTAGAGATGGACCAACGCCCTACTCCGCCCCCACTCCTGAGTGGGTCAAGTTCTGTCTGTCAGC  
TTTTTGGGGCTTCTCTATCCTGCTGTGGATTGGGGCACTCCTCTGCTTCTTAGCCTACGGTATCCTGGC  
CGCATGGAAGACGAACCATCCAATGATAATTTATATCTAGGTATCGTGTAGCGGCTGTAGTTATCGTC  
ACCGGCTGCTTCTCTACTACCAGGAAGCCAAGAGCTCCAAGATCATGGACTCCTTCAAGAACATGGTGC  
CTCAGCAAGCTCTGGTATCCGAGAGGGGAGAAAAGATGCAGATCAATGCAGAGGAGGTGGTGGTGGGAGA  
CCTGGTGGAGGTGAAGGGTGGAGACCGTGTCCCTGCTGACCTCCGGATCATCTCTTCCCACGGTTGCAAG  
GTGGATAACTCATCCCTAACAGGGGAGTCGGAGCCCCAGACCCGTTCTCCTGAGTTCACCCACGAGAACC  
CCTTGGAGACCCGCAATATCTGTTTCTTCTACCAACTGCGTGGAGGGCACTGCCAGGGGCAATTGTGAT  
TGCCACAGGTGACCGGACAGTGTGGCCGCATAGCCACTTTGCCTCTGGCCTAGAGGTGGGACAGACA  
CCCATAGCCATGGAGATCGAGCATTTTCATCCAGCTGATCACAGGGGTGGCTGTGTTCTGGGGTCTCCT  
TCTTCGTTCTGTCCCTCATCCTGGGCTACAGCTGGCTGGAGGCAGTCATCTTCTCATCGGCATCATCGT  
AGCCAATGTGCCGAAGGTTGTTGGCCACCGTACTGTGTGCCTGACGCTGACAGCCAAGCGCATGGCT  
CGCAAAAAGTGCCTGGTGAAGAAGCTGGAGGCCGTGGAGACGCTGGGCTCCACGTCACCATCTGTCTCAG  
ACAAGACGGGCACCCTCACCCAGAACCAGTACAGTGGCTCACATGTGGTTTGACAACCAGATCCATGA  
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CGGATCGTGGTCTCTGCAATCGTGTCTTCAAGGCTGGACAAGAGAACATCTCCGTGTCTAAGCGGG  
ACACAGCTGGAGATGCTTCTGAGTCAGCTCTGCTCAAGTGCATTGAGCTGTCTGTGGCTCAGTGAGGAA  
GATGAGGGACAGGAACCCTAAGGTGGCAGAAATCCCTTCAACTCCACCAACAAATATCAGTCTCCATC



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CATGAGAGGGAAGACAGTCCCCAGAGCCATGTGCTGGTGATGAAAGGTGCCCCAGAGCGCATCCTGGACC  
 GATGCTCCACCATCCTGGTACAGGGCAAGGAGATCCCTCTTGACAAGGAGATGCAAGATGCTTTTCAAAA  
 CGCCTACATGGAGCTGGGAGGACTTGGGGAACGAGTGTGGGCTTCTGTGAGTGAACCTGCCTTCTGGA  
 AAGTTTCTCGGGGCTTCAAATTTGATACAGATGAGCTGAACTTTCCACAGAGAAGCTCTGTTTTGTGG  
 GGCTCATGTCTATGATTGATCCCCCAGAGCAGCCGTGCCGATGCCGTGGGCAAGTGCCGAAGCGCGGG  
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 AGGCTGACATTGGCATTGCCATGGGCATCTCCGGCTCCGATGTCTCTAAGCAGGCGGCTGACATGATCCT  
 TCTCGACGACAACTTTGCCTCCATTGTGACAGGCGTGGAGGAGGGCCGCTGATCTTTGACAACTGAAG  
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 CTGGTGAACGAGAGGCTTATCAGCATGGCTTACGGACAGATTGGCATGATCCAGGCTCTGGGTGGCTTCT  
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 GGATGATCGGACTACCAACGACTTGAGAGCAGCTATGGACAAGAGTGGACCTACGAGCAGCGGAAGGTG  
 GTGGAGTTCACATGCCACACGGCCTTCTTTGCCAGCATCGTGGTGTGACAGTGGGCTGACCTCATCATCT  
 GCAAGACCCGTCGCAACTCAGTGTCCAGCAGGGCATGAAGAACAAGATCCTGATTTTTGGGCTGCTAGA  
 AGAGACGGCTTTGGTGCCTTTCTGTCTTACTGCCGGCATGGGGTTGCCCTCCGGATGTACCCACTC  
 AAGGTCACGTGGTGGTTCTGTGCCTTCCCTACAGTCTCCTCATCTTATGATGAAGTTCGGAAGC  
 TCATCTACGGCGGTACCCTGGGGCTGGGTGGAGAAGGAGACGTACTAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>MG211461 representing NM\_178405  
 Red=Cloning site Green=Tags(s)

MGRGAGREYSPAATTAENGGGKKKQKEKELDELKKEVAMDDHKLSDLDELGRKYQVDLSKGLTNQRAQDIL  
 ARDGNALTPPPTPEWVKFCRQLFGGFSILLWIGALLCFLAYGILAAEMEPEPSNDNLYLGIVLAAVVIV  
 TGCFSYQEAKSSKIMDSFKNMVPPQALVIREGEMQINAEVVGDLVEVKGGRVPADLRISSHGCK  
 VDNSSLTGESEPQTRSPEFTHENPLETRNICFFSTNCVEGTARGIVIATGDRTVMGRIATLASGLEVGQT  
 PIAMEIEHFIQLITGVAVFLGVSFFVLSLILGYSWLEAVIFLIGIIVANVPEGLLATVTVCLTLAKRMA  
 RKNCLVKNLEAVETL GSTSTICSDKTGTLTQNRMTVAHMMFDNQIHEADTTEDQSGATFDKRSPTWTALS  
 RIAGLCNRAVFKAGQENISVSKRDTAGDASESALLKCIELSCGSVRKMRDRNPKVAEIPFNSTNKYQLSI  
 HEREDSPQSHVL VMKGAPERILDRCSTILVQGKEIPLDKEMQDAFQAYMELGGLGERVLGFCQLNLP  
 SGKFPRGKFDTDLNFPEKLCFVGLMSMIDPPRAAVPDAVGKCRSAGIKVIMVTGDHPITAKAIAGVGI  
 ISEGNETVEDIAARLNIPVSQVNPREAKACVVHGSDLKDMTSEQLDEILRDHTEIVFARTSPQQLIIVE  
 GCQRQGAIVAVTGDGVNDSPALKKADIGIAMGISGSDVSKQAADMILLDDNFASIVTGVEEGRILFDNLK  
 KSIAYTLTNSIPEITPFLFIANIPLPLGTVTILCIDLGTDMVPAISLAYEAAESDIMKRQPRNSQTDK  
 LVNERLISMAYGQIGMIQALGGFFTYFVILAENGLPSRLLGIRLDWDRRTNDLEDSYGQEWTYEQRKV  
 VEFTCHTAFFASIVVVQWADLIICKTRRNSVVFQGMKNKILIFGLLEETALAAFLSYCPGMGVALRMYP  
 LKVTWWFCAFPYSLLIFIYDEVRKLILRRYPGGWVEKETY

TRTRPLE - GFP Tag - V

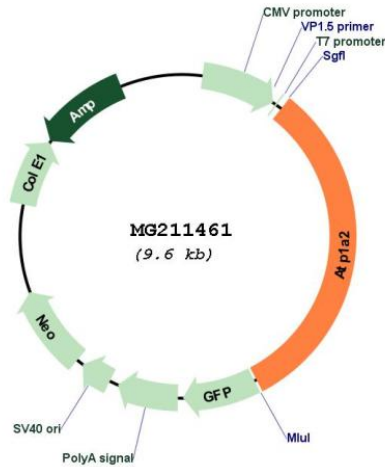
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_178405

ORF Size: 3060 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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_178405.2</a>
<b>RefSeq Size:</b>	6227 bp
<b>RefSeq ORF:</b>	3063 bp
<b>Locus ID:</b>	98660
<b>UniProt ID:</b>	<a href="#">Q6PIE5</a>
<b>Cytogenetics:</b>	1 79.6 cM
<b>Gene Summary:</b>	This is the catalytic component of the active enzyme, which catalyzes the hydrolysis of ATP coupled with the exchange of sodium and potassium ions across the plasma membrane. This action creates the electrochemical gradient of sodium and potassium ions, providing the energy for active transport of various nutrients (By similarity).[UniProtKB/Swiss-Prot Function]