

## Product datasheet for **RG208606**

### ATP1A2 (NM\_000702) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** ATP1A2 (NM\_000702) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** ATP1A2  
**Synonyms:** FHM2; MHP2  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG208606 representing NM\_000702  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGGCCGTGGGGCTGGCCGTGAGTACTCACCTGCCGCCACCACGGCAGAGAATGGGGCGGCAAGAAGA  
 AACAGAAGGAGAAGAACTGGATGAGCTGAAGAAGGAGGTGGCAATGGATGACCACAAGCTGTCTTGGG  
 TGAGCTGGGCCGCAAATACCAAGTGGACCTGTCCAAGGGCCTACCAACCAGCGGGCTCAGGACGTTCTG  
 GCTCGAGATGGGCCAACGCCCTCACACCCTCCACAACCCCTGAGTGGTCAAGTCTGCCGTCAGC  
 TTTTCGGGGGTCTCCATCCTGTGTGGATTGGGGCTATCCTCTGCTTCTGGCCTACGGCATCCAGGC  
 TGCCATGGAGGATGAACCATCCAACGACAATCTATATCTGGGTGTGGTGTGGCAGCTGTGGTCATTGTC  
 ACTGGCTGCTTCTCTACTACCAGGAGGCCAAGAGCTCCAAGATCATGGATTCTTCAAGAACATGGTAC  
 CTCAGCAAGCCCTTGTGATCCGGGAGGGAGAGAAGATGCAGATCAACGCAGAGGAAGTGGTGGTGGGAGA  
 CCTGGTGGAGGTGAAGGGTGGAGACCGCTCCCTGCTGACCTCCGGATCATCTTCTCATGGCTGTAAG  
 GTGGATAACTCATCCTTAACAGGAGAGTCGGAGCCCCAGACCCGCTCCCCGAGTTCACCCATGAGAACC  
 CCCTGGAGACCCGCAATATCTGTTTCTTCTCCACCAACTGTGTTGAAGGCACTGCCAGGGCATTGTGAT  
 TGCCACAGGAGACCGGACGGTATGGGCCGATAGCTACTCTCGCCTCAGGCCTGGAGGTGGGCCGACA  
 CCCATAGCAATGGAGATTGAACACTTCACTCCAGCTGATCACAGGGTGTGATTCTCTGGGGTCTCCT  
 TCTTCGTGCTCTCCCTCATCCTGGGCTACAGCTGGCTGGAGGCAGTCATCTTCTCATCGGCATCATAGT  
 GGCCAACGTGCCTGAGGGGCTTCTGGCCACTGTCACTGTGTGCCTGACCTGACAGCCAAGCGCATGGCA  
 CGGAAGAAGTGCCTGGTGAAGAAGTGGAGGCGGTGGAGACGCTGGGCTCCACGTCACCATCTGCTCGG  
 ACAAGACGGGCACCCTCACCCAGAACCAGTACCGTCCGCCCACATGTGGTTCGACAACCAATCCATGA  
 GGCTGACACCACCGAAGTCACTGCTGGGCCACTTTTGACAAACGATCCCTACGTGGACGGCCCTGTCT  
 CGAATTGCTGGTCTCTGCAACCGCGCCGCTTCAAGGCAGGACAGGAGAACATCTCCGTGTCTAAGCGGG  
 ACACAGCTGGTGTGCTCTGAGTCAGCTCTGCTCAAGTGCATTGAGCTCTCCTGTGGCTCAGTGAGGAA  
 AATGAGAGACAGAAACCCCAAGGTGGCAGAGATTCCTTTCAACTCTACCAACAAGTACCAGCTGTCTATC



CACGAGCGAGAAGACAGCCCCAGAGCCACGTGCTGGTATGAAGGGGGCCCCAGAGCGCATTCTGGACC  
 GGTGCTCCACCATCCTGGTGCAGGGCAAGGAGATCCCCTCGACAAGGAGATGCAAGATGCCTTTCAAAA  
 TGCTACATGGAGCTGGGGGACTTGGGGAGCGTGTGCTGGGATTCTGTCAACTGAATCTGCCATCTGGA  
 AAGTTTCTCGGGGCTTCAAATTCGACACGGATGAGCTGAACTTTCCACGGAGAAGCTTTGCTTTGTGG  
 GGCTCATGTCTATGATTGACCTCCCGGGTGTGTGCCAGATGCTGTGGGCAAGTGCCGAAGCGCAGG  
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 CCAGAGAAGCCAAGGCATGCGTGGTGCACGGCTCTGACCTGAAGGACATGACATCGGAGCAGCTCGATGA  
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 GGATGTGACAGGCAAGGAGCCATTGTGGCCGTGACGGGTGACGGGGTGAACGACTCCCCTGCATTGAAGA  
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 GCTGGATGACAACTTTGCTCCATCGTCACGGGGTGGAGGAGGGCCGCTGATCTTTGACAACTTGAAG  
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 CTGGTGAATGAGAGGCTCATCAGCATGGCTACGGACAGATCGGGATGATCCAGGCACTGGTGGCTTCT  
 TCACCTACTTTGTGATCCTGGCAGAGAACGGTTTCTGCCATCACGGCTACTGGGAATCCGCTCGACTG  
 GGATGACCGGACCATGAATGATCTGGAGGACAGCTATGGACAGGAGTGGACCTATGAGCAGCGGAAGGTG  
 GTGGAGTTCACGTGCCACACGGCATTCTTTGCCAGCATCGTGGTGGTGCAGTGGGCTGACCTCATCATCT  
 GCAAGACCCGCGCAACTCAGTCTTCCAGCAGGGCATGAAGAACAAGATCCTGATTTTTGGGCTCCTGGA  
 GGAGACGGCGTTGGTGCCTTTCTCTTACTGCCAGGCATGGGTGTAGCCCTCCGATGTACCCGCTC  
 AAAGTACCTGGTGGTTCTGCGCCTTCCCTACAGCCTCCTCATCTTATGATGAGGTCCGAAAGC  
 TCATCTGCGGGCATCCTGGTGGCTGGTGGAGAAGGAGACATACTAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG208606 representing NM\_000702  
 Red=Cloning site Green=Tags(s)

MGRGAGREYSPAATTAENGGGKKKQKEKELDELKKEVAMDDHKLSDLDELGRKYQVDLSKGLTNQRAQDVL  
 ARDGNALTPPPTPEWVKFCRQLFGGFSILLWIGAILCFLAYGIQAAMEDEPSNDNLYLGVVLAADVIV  
 TGCFSYQEAKSSKIMDSFKNMVPPQALVIREGKMQINAEVVDLVEVKGDRVPADLRISSHGCK  
 VDNSSLGESEPTRSPEFTHENPLETRNICFFSTNVEGTARGIVATGDRTVMGRIATLASGLEVGRT  
 PIAMEIEHFIQLITGVAVFLGVSFFVLSLILGYSWLEAVIFLIGIIVANVPEGLLATVTVCLTLAKRMA  
 RKNCLVKNLEAVETLGSSTICSDKTGTLTQNRMTVAHMMFDNQIHEADTTEDQSGATFDKRSPTWTALS  
 RIAGLCNRAVFKAGQENISVSKRDTAGDASESALLKCIELSCGSVRKMRDRNPKVAEIPFNSTNKYQLSI  
 HEREDSPQSHVLVMKGAPERILDRCSTILVQGEIPLDKEMQDAFQAYMELGGLGERVLGFCQLNLP  
 SGKFPGRGKFDDELNFPTEKLCFVGLMSMIDPPRAAVPDAVGKCRSAGIKVIMVTGDHPITAKAIAGVGI  
 ISEGNETVEDIAARLNIPMSQVNPREAKACVVHGSCLKDMTSEQLDEILKNHTEIVFARTSPQQLIIVE  
 GCQRQGAIVAVTGDGVNDSPALKKADIGIAMGISGSDVSKQAADMILLDDNFASIVTGVEEGRILFDNLK  
 KSIAYTLTNSIPEITPFLFIANIPLPLGTVTILCIDLGTDMVPAISLAYEAAESDIMKRQPRNSQTDK  
 LVNERLISMAYGQIGMIQALGGFFTYFVILAENGLPSRLLGIRLDWDRMNDLEDSYGQEWTYEQRKV  
 VEFTCHTAFFASIVVVQWADLIICKTRRNSVVFQGMKNKILIFGLLEETALAAFLSYCPGMGVALRMYP  
 LKVTWWFCAFPYSLLIIFIYDEVRKLILRRYPGGWVEKETY

TRTRPLE - GFP Tag - V

**Chromatograms:**

[https://cdn.origene.com/chromatograms/ja2455\\_b09.zip](https://cdn.origene.com/chromatograms/ja2455_b09.zip)

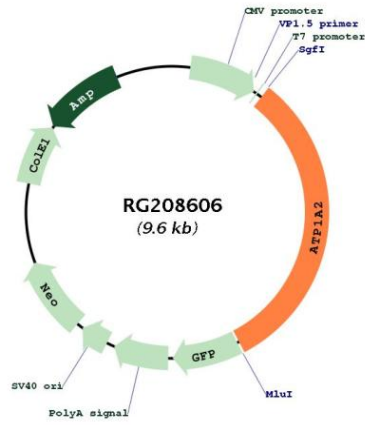
**Restriction Sites:**

Sgfl-MluI



<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_000702.4</a>
<b>RefSeq Size:</b>	5468 bp
<b>RefSeq ORF:</b>	3063 bp
<b>Locus ID:</b>	477
<b>UniProt ID:</b>	<a href="#">P50993</a>
<b>Cytogenetics:</b>	1q23.2
<b>Domains:</b>	E1-E2_ATPase, Cation_ATPase_N, Hydrolase, Cation_ATPase_C
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Cardiac muscle contraction
<b>Gene Summary:</b>	<p>The protein encoded by this gene belongs to the family of P-type cation transport ATPases, and to the subfamily of Na<sup>+</sup>/K<sup>+</sup> -ATPases. Na<sup>+</sup>/K<sup>+</sup> -ATPase is an integral membrane protein responsible for establishing and maintaining the electrochemical gradients of Na and K ions across the plasma membrane. These gradients are essential for osmoregulation, for sodium-coupled transport of a variety of organic and inorganic molecules, and for electrical excitability of nerve and muscle. This enzyme is composed of two subunits, a large catalytic subunit (alpha) and a smaller glycoprotein subunit (beta). The catalytic subunit of Na<sup>+</sup>/K<sup>+</sup> -ATPase is encoded by multiple genes. This gene encodes an alpha 2 subunit. Mutations in this gene result in familial basilar or hemiplegic migraines, and in a rare syndrome known as alternating hemiplegia of childhood. [provided by RefSeq, Oct 2008]</p>

Product images:



Circular map for RG208606