

## Product datasheet for **RG210547**

### **ATP1A4 (NM\_001001734) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ATP1A4 (NM_001001734) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ATP1A4
Synonyms:	ATP1A1; ATP1AL2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG210547 representing NM_001001734 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGGCTTTGGGGGAAGAAAGGGACAGTGGCTCCCCATGACCAGAGTCCAAGACGAAGACCTAAAAAAG  
GGCTTATCAAGAAAAAATGGTGAAGAGGGAAAAACAGAAAGCGCAATATGGAGGAACTGAAGAAGGAAGT  
GGTCATGGATGATCACAATTAACCTTGAAGAGCTGAGCACCAAGTACTCCGTGGACCTGACAAAGGGC  
CATAGCCACCAAAGGGCAAAGGAAATCCTGACTCGAGGTGGACCAATACTGTTACCCACCCCCACCA  
CTCCAGAATGGGTCAAATCTGTAAGCAACTGTTCCGAGGCTTCTCCCTCTACTATGGACTGGGGCCAT  
TCTCTGCTTTGTGGCCTACAGCATCCAGATATATTTCAATGAGGAGCCTACCAAAGACAACCTCTACCTG  
AGCATCGTACTGTCCGTGCTGGTTCATCGTCACTGGCTGCTTCTCCTATTATCAGGAGGCCAAGAGCTCCA  
AGATCATGGAGTCTTTAAGAACATGGTGCCTCAGCAAGCTCTGGTAATTCGAGGAGGAGAGAAGATGCA  
AATTAATGTACAAGAGGTGGTGTGGGAGACCTGGTGGAAATCAAGGGTGGAGACCGAGTCCCTGCTGAC  
CTCCGGCTTATCTCTGCACAAGGATGTAAGGTGGACAACCTCATCCTTGACTGGGGAGTGAAGACCCAGA  
GCCGCTCCCTGACTTCACCCATGAGAACCCTCTGGAGACCCGAAACATCTGCTTCTTTCCACCAACTG  
TGTGGAAGGAACCGCCCGGGTATTGTGATTGCTACGGGAGACTCCACAGTATGGGCAGAATTGCCTCC  
CTGAGCTCAGGCCTGGCGTTGGCCAGACACCTATCGCTGCTGAGATCGAACATTCATCCATGATCA  
CTGTGGTGGCCGCTTCCCTTGGTGTCACTTTTTTTCGCTCTCACTTCTCTTGGGCTATGGTTGGCTGGA  
GGCTATCATTTTTCTCATTGGCATCATTGTGGCAATGTGCCTGAGGGGCTGTTGGCTACAGTCACTGTG  
TGCTGACCTCAGCAAGCGCATGGCAGGAAAGAACTGCCTGGTGAAGAACCTGGAGCGGTGGAGA  
CGCTGGGCTCCACGTCCACCATCTGCTCAGACAAGACGGGACCCCTACCCAGAACCGCATGACCGTCGC  
CCACATGTGGTTTGATATGACCGTGTATGAGGCCGACACCACTGAAGAACAGACTGGAAAAACATTTACC  
AAGAGCTCTGATACCTGGTTTATGCTGGCCGAATCGCTGGCCTCTGCAACCGGGCTGACTTTAAGGCTA  
ATCAGGAGATCCTGCCATTGCTAAGAGGGCCACAACAGGTGATGCTTCCGAGTCAGCCCTCTCAAGTT  
CATCGAGCAGTCTACAGCTCTGTGGCGAGATGAGAGAGAAAAACCCCAAGGTGGCAGAGATTCCTTT



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AATTCTACCAACAAGTACCAGATGTCCATCCACCTTCGGGAGGACAGCTCCCAGACCCACGTACTGATGA  
 TGAAGGGTCTCCGGAGAGGATCTTGGAGTTTTGTTCTACCTTTCTTCTGAATGGCAGGAGTACTCAAT  
 GAACGATGAAATGAAGGAAGCCTTCCAAAATGCCTATTTAGAAGTGGGAGGTCTGGGGAAACGTGTGCTA  
 GGCTTCTGCTTCTTGAATCTGCCTAGCAGCTTCTCCAAGGGATCCCATTAAATACAGATGAAATAAATT  
 TCCCATGGACAACCTTTGTTTTGTGGGCCTCATATCCATGATTGACCCTCCCCGAGCTGCAGTGCCTGA  
 TGCTGTGAGCAAGTGTGCGAGTGCAGGAATTAAGGTGATCATGGTAACAGGAGATCATCCATTACAGCT  
 AAGGCCATTGCCAAGGGTGTGGGCATCATCTCAGAAGGCACTGAGACGGCAGAGGAAGTCGCTGCCCGGC  
 TTAAGATCCCTATCAGCAAGGTCGATGCCAGTGTGCCAAAGCCATTGTGGTGCATGGTGCAGAACTGAA  
 GGACATACAGTCCAAGCAGCTTGATCAGATCCTCCAGAACCACCCTGAGATCGTGTTTGCTCGGACCTCC  
 CCTCAGCAGAAGCTCATATTGTCGAGGGATGTCAGAGGCTGGGAGCCGTTGTGGCCGTGACAGGTGACG  
 GGGTGAACGACTCCCCTGCGCTGAAGAAGGCTGACATTGGCATTGCCATGGGCATCTCTGGCTCTGACGT  
 CTCTAAGCAGGCAGCCGACATGATCCTGCTGGATGACAACCTTGCCTCCATCGTCACGGGGTGGAGGAG  
 GGCCGCTGATCTTTGACAACCTGAAGAAATCCATCATGTACACCCTGACCAGCAACATCCCCGAGATCA  
 CGCCCTTCTGATGTTTCATCATCTCGGTATACCCTGCCTCTGGGAACCATAACCATCCTCTGCATTGA  
 TCTCGGCACTGACATGGTCCCTGCCATCTCCTTGGCTTATGAGTCAGCTGAAAGCGACATCATGAAGAGG  
 CTCCAAGGAACCCAAAGACGGATAATCTGGTGAACCACCGTCTCATTGGCATGGCTATGGACAGATTG  
 GGATGATCCAGGCTCTGGCTGGATTCTTACTACTTTGTAATCCTGGCTGAGAATGGTTTTAGGCCCTGT  
 TGATCTGCTGGGCATCCGCCTCCACTGGGAAGATAAATACTTGAATGACCTGGAGGACAGCTACGGACAG  
 CAGTGGACCTATGAGCAACGAAAAGTTGTGGAGTTCACATGCCAAACGGCCTTTTTTGTCAACCATCGTGG  
 TTGTGCAAGTGGGCGGATCTCATCATCTCCAAGACTCGCCGCAACTCACTTTCCAGCAGGGCATGAGAAA  
 CAAAGTCTTAATATTTGGGATCCTGGAGGAGACTCTTGGCTGCATTTCTGTCTACACTCCAGGCATG  
 GACGTGGCCCTGCGAATGTACCCACTCAAGATAACCTGGTGGCTCTGTGCCATTCCTACAGTATTCTCA  
 TCTTCGCTATGATGAAATCAGAAAACCTCTCATCCGTCAGCACCCGGATGGCTGGGTGGAAAGGGAGAC  
 GTACTAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG210547 representing NM\_001001734  
 Red=Cloning site Green=Tags(s)

MGLWGKGTVAPHDQSPRRRPKGLIKKKMKREKQKRNMEELKKEVVMDDHKLLEELSTKYSVDLTKG  
 HSHQRAKEILTRGPNVTPTPTPEWVKFCKQLFGFSLLLWTGAILCFVAYSIIQYFNPEPTKDNLYL  
 SIVLSVVIVTGCFSYYQEAKSSKIMESFKNMVPPQALVIRGGEKMQINVQEVVLGDLVEIKGGDRVPAD  
 LRLISAQCKVDNSSLTGESEPSRSPDFTHENPLETRNICFFSTNCVEGTARGIVIAATGDSTVMGRIAS  
 LTSGLAVGQTPIAAEIEHF IHLITVVAVFLGVTFALSLLLGYGWLEAIIFLIGIIVANVPEGLLATVTV  
 CLTLTAKRMARKNCLVKNLEAVETLGSTSTICSDKTGTLTQNRMTVAHMWFDMTVYEADTTEEQTGKFTT  
 KSSDTWFMRLARIAGLCNRADFKANQEILPIAKRATTGDASESALLKFIQSYSSVAEMREKNPKVAEIPF  
 NSTNKYQMSIHLREDSSQTHVLMKGPAPERILEFCSTFLLNGQEYSMNDEMKEAFQAYLELGGLGERVL  
 GFCFLNLPSSFSGFPFNTDEINFPMNLCFVGLISMIDPPRAAVPDAVSKCRSAGIKVIMVTDGHPITA  
 KAIKAGVGIISEGTETAEEVAARLKIPIKVDASAAKAIIVHGAELKDIQSKQLDQILQNHPEIVFARTS  
 PQQKLIIIEGQQLGAVVAVTGDGVNDSPALKKADIGIAMGISGSDVSKQAADMILLDDNFASIVTGVVEE  
 GRLIFDNLKKSIMYTLTSNIPEITPFLMFIILGIPLPLGTITILCIDLGTDMVPAISLAYESAESDMKR  
 LPRNPKTDNLVNHRLIGMAYGQIGMIQALAGFFTYFVILAENGFPRVDLLGIRLHWEDKYLNDLEDYSGQ  
 QWTYEQRKVVEFTCQTAFFVTIVVVQWADLIISKTRRNSLFQQGMRNKVLIFGILEETLLAAFLSYTPGM  
 DVALRMYPLKITWWLCAIPYSILIFVYDEIRKLLIRQHPDGWVERETYY

TRTRPLE – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI



<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_001001734.1</a> , <a href="#">NP_001001734.1</a>
<b>RefSeq Size:</b>	951 bp
<b>RefSeq ORF:</b>	498 bp
<b>Locus ID:</b>	480
<b>UniProt ID:</b>	<a href="#">Q13733</a>
<b>Cytogenetics:</b>	1q23.2
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Cardiac muscle contraction
<b>Gene Summary:</b>	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 4 subunit. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]