

## Product datasheet for **RG219880**

### beta 1 Sodium Potassium ATPase (ATP1B1) (NM\_001001787) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	beta 1 Sodium Potassium ATPase (ATP1B1) (NM_001001787) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	beta 1 Sodium Potassium ATPase
Synonyms:	ATP1B; MGC1798
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG219880 representing NM_001001787 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCCGCGGAAAGCCAAGGAGGAGGGCAGCTGGAAGAAATTCATCTGGAACCTCAGAGAAGAAGGAGT  
TTCTGGGCAGGACCGGTGGCAGTTGGTTAAGATCCTTCTATTCTACGTAATATTTATGGCTGCCTGGC  
TGGCATCTTCATCGGAACCATCCAAGTGATGCTGCTCACCATCAGTGAATTAAGCCACATATCAGGAC  
CGAGTGGCCCCGCCAGGATTAACACAGATTCCTCAGATCCAGAAGACTGAAATTTCTTTTCGTCCTAATG  
ATCCCAAGAGCTATGAGGCATATGTAAGCATAGTTAGGTTCTGGAAAAGTACAAAGATTCAGCCCA  
GAGGGATGACATGATTTTTGAAGATTGTGGCGATGTGCCAGTGAACCGAAAGAACGAGGAGACTTTAAT  
CATGAACGAGGAGAGCGAAAGGCTGTCAGATTCAGCTTGAATGGCTGGGAAATTGCTCTGGATTAATG  
ATGAACTTATGGCTACAAAGAGGGCAAACCGTGCATTATTATAAAGCTCAACCGAGTTCTAGGCTTCAA  
ACCTAAGCCTCCAAGAATGAGTCCTTGGAGACTTACCAGTGATGAAGTATAACCCAAATGTCCTTCCC  
GTTTCAGTGCACCTGGCAAGCGAGATGAAGATAAGGATAAAGTTGGAAATGTGGAGTATTTGGACTGGCA  
ACTCCCCTGGTTTTCTCTGCAGTATTATCCGTAATGGCAACTCCTGCAGCCAAATACCTGCAGCC  
CCTGCTGGCCGTACAGTTCACCAATCTTACCATGGACTGAAATTCGCATAGAGTGAAGGCGTACGGT  
GAGAACATTGGGTACAGTGAGAAAGACCGTTTTTCAGGGACGTTTTGATGTAAAAATTAATTT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG219880 representing NM\_001001787  
 Red=Cloning site Green=Tags(s)

MARGKAKEEGSWKKFIWNSEKKEFLGRTGGSWFKILLFYVIFYGCLAGIFIGTIQVMLLTISEFKPTYQD  
 RVAPPGLTQIPQIQKTEISFRPNPKSYEAYVLNIVRFLEKYKDSAQRDDMIFEDCGDVPSEPKERGDFN  
 HERGERKVCRFKLEWLGNCGLNDETYGYKEGKPCIIIKLNRVLGFKPKPPKNESLETYPVMKYNPNVLP  
 VQCTGKRDEDKDKVGNVEYFGLGNSPGFPLQYYPPYKLLQP KYLQPLLAVQFTNLTMDTEIRIECKAYG  
 ENIGYSEKDRFQGRFDVKIKF

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001001787

**ORF Size:** 903 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](#)

**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\\_001001787.1](#), [NP\\_001001787.1](#)

**RefSeq Size:** 1568 bp

**RefSeq ORF:** 905 bp

**Locus ID:** 481

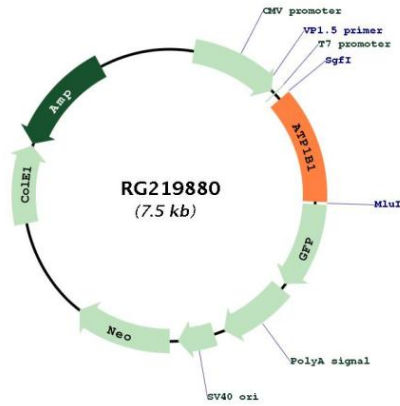
**Cytogenetics:** 1q24.2

**Protein Families:** Transmembrane

**Protein Pathways:** Cardiac muscle contraction

**Gene Summary:** The protein encoded by this gene belongs to the family of Na<sup>+</sup>/K<sup>+</sup> and H<sup>+</sup>/K<sup>+</sup> ATPases beta chain proteins, 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 beta subunit regulates, through assembly of alpha/beta heterodimers, the number of sodium pumps transported to the plasma membrane. The glycoprotein subunit of Na<sup>+</sup>/K<sup>+</sup> -ATPase is encoded by multiple genes. This gene encodes a beta 1 subunit. Alternatively spliced transcript variants encoding different isoforms have been described, but their biological validity is not known. [provided by RefSeq, Mar 2010]

Product images:



Circular map for RG219880