

## Product datasheet for **RG200500**

### beta 1 Sodium Potassium ATPase (ATP1B1) (NM\_001677) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	beta 1 Sodium Potassium ATPase (ATP1B1) (NM_001677) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	beta 1 Sodium Potassium ATPase
Synonyms:	ATP1B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG200500 representing NM_001677 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCCGCGGAAAGCCAAGGAGGAGGGCAGCTGGAAGAAATTCATCTGGAACCTCAGAGAAGAAGGAGT  
TTCTGGGCAGGACCGGTGGCAGTTGGTTAAGATCCTTCTATTCTACGTAATATTTATGGCTGCCTGGC  
TGGCATCTTCATCGGAACCATCCAAGTGATGCTGCTCACCATCAGTGAATTAAGCCACATATCAGGAC  
CGAGTGGCCCCCGCAGGATTAACACAGATTCCTCAGATCCAGAAGACTGAAATTTCTTTTCGTCCTAATG  
ATCCCAAGAGCTATGAGGCATATGTACTGAACATAGTTAGGTTCTGGAAAAGTACAAAGATTCAGCCCA  
GAGGGATGACATGATTTTTGAAGATTGTGGCGATGTGCCAGTGAACCGAAAGAACGAGGAGACTTTAAT  
CATGAACGAGGAGAGCGAAAGGTCTGCAGATTCAGCTTGAATGGCTGGGAAATTGCTCTGGATTAATG  
ATGAAACTTATGGCTACAAAGAGGGCAAACCGTGCATTATTATAAAGCTCAACCGAGTTCTAGGCTTCAA  
ACCTAAGCCTCCAAGAATGAGTCCTTGGAGACTTACCAGTGATGAAGTATAACCCAAATGTCCTTCCC  
GTTCACTGCACTGGCAAGCGAGATGAAGATAAGGATAAAGTTGGAAATGTGGAGTATTTGGACTGGGCA  
ACTCCCCTGGTTTTCTCTGCAGTATTATCCGTAATGGCAACTCCTGCAGCCAAATACCTGCAGCC  
CCTGCTGGCCGTACAGTTCACCAATCTTACCATGGACTGAAATTCGCATAGAGTGAAGGCATACGGT  
GAGAACATTGGGTACAGTGAGAAAGACCGTTTTTCAGGGACGTTTTGATGTAAAAATTGAAGTTAAGAGC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG200500 representing NM\_001677  
 Red=Cloning site Green=Tags(s)

MARGKAKEEGSWKKFIWNSEKKEFLGRTGGSWFKILLFYVIFYGCLAGIFIGTIQVMLLTISEFKPTYQD  
 RVAPPGLTQIPQIQKTEISFRPNPKSYEAYVLNIVRFLEKYKDSAQRDDMIFEDCGDVPSEPKERGDFN  
 HERGERKVCRFKLEWLGNCGLNDETYGYKEGKPCIIIKLNRVLGFKPKPPKNESLETYPVMKYNPNVLP  
 VQCTGKRDEDKDKVGNVEYFGLGNSPGFPLQYYPYGGKLLQP KYLQPLLAVQFTNLTMDTEIRIECKAYG  
 ENIGYSEKDRFQGRFDVKIEVKS

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001677

**ORF Size:** 909 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\\_001677.4](#)

**RefSeq Size:** 2212 bp

**RefSeq ORF:** 912 bp

**Locus ID:** 481

**UniProt ID:** [P05026](#)

**Cytogenetics:** 1q24.2

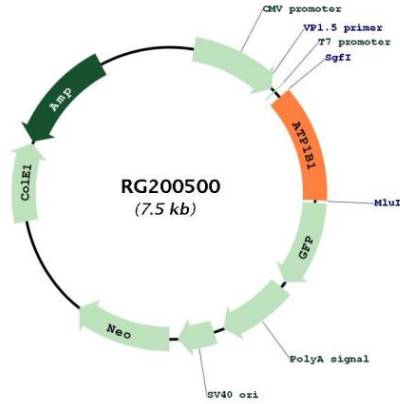
**Domains:** Na\_K-ATPase

**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 RG200500