

## Product datasheet for RC200500

### 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:	Myc-DDK
Symbol:	beta 1 Sodium Potassium ATPase
Synonyms:	ATP1B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200500 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCCGCGGAAAGCCAAGGAGGAGGGCAGCTGGAAGAAATTCATCTGGAACCTCAGAGAAGAAGGAGT  
TTCTGGGCAGGACCGGTGGCAGTTGGTTTAAGATCCTTCTATTCTACGTAATATTTATGGCTGCCTGGC  
TGGCATCTTCATCGGAACCATCCAAGTGATGCTGCTCACCATCAGTGAATTTAAGCCACATATCAGGAC  
CGAGTGGCCCCCGCAGGATTAACACAGATTCCTCAGATCCAGAAGACTGAAATTTCTTTTCGTCCTAATG  
ATCCCAAGAGCTATGAGGCATATGTAAGCATAGTTAGTTTCTGGAAAAGTACAAAGATTCAGCCCA  
GAGGGATGACATGATTTTTGAAGATTGTGGCGATGTGCCAGTGAACCGAAAGAACGAGGAGACTTTAAT  
CATGAACGAGGAGAGCGAAAGGTCTGCAGATTCAGCTTGAATGGCTGGGAAATTGCTCTGGATTAATG  
ATGAAACTTATGGCTACAAAGAGGGCAAACCGTGCATTATTATAAAGCTCAACCGAGTTCTAGGCTTCAA  
ACCTAAGCCTCCCAAGAATGAGTCTTGGAGACTTACCAGTGATGAAGTATAACCCAAATGTCCTTCCC  
GTTCAAGTGCAGTGGCAAGCGAGATGAAGATAAGGATAAAGTTGGAAATGTGGAGTATTTGGACTGGCA  
ACTCCCCTGGTTTTCTCTGCAGTATTATCCGTAATGGCAACTCCTGCAGCCAAATACCTGCAGCC  
CCTGCTGGCCGTACAGTTCACCAATCTTACCATGGACTGAAATTCGCATAGAGTGTAAAGCGTACGGT  
GAGAACATTGGGTACAGTGAGAAAGACCGTTTTTCAGGGACGTTTTGATGTAAAAATTGAAGTTAAGAGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC200500 protein sequence  
Red=Cloning site Green=Tags(s)

MARGKAKEEGSWKKFIWNSEKKEFLGRTGGSWFKILLFYVIFYGCLAGIFIGTIQVMLLTISEFKPTYQD  
 RVAPPGLTQIPQIQKTEISFRPNDPKSYEAYVLNIVRFLEKYKDSAQRDDMIFEDCGDVPSEPKERGDFN  
 HERGERKVCRFKLEWLGNCGLNDETYGYKEGKPCIIIKLNRVLGFKPKPPKNESLETYPVMKYNPNVLP  
 VQCTGKRDEKDKVGNVEYFGLGNSPGFPLQYYPPYGGKLLQPKYLQPLLAVQFTNLTMDTEIRIECKAYG  
 ENIGYSEKDRFQGRFDVKIEVKS

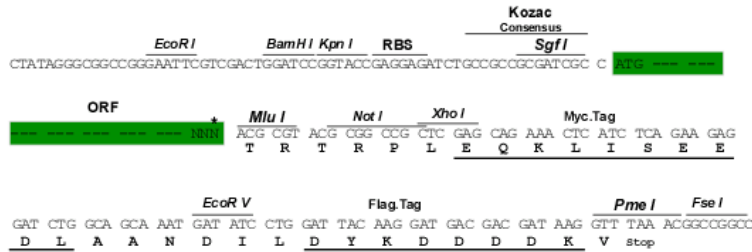
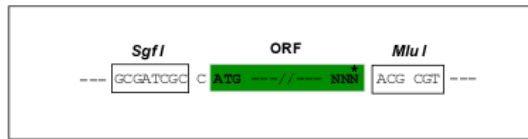
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6081\\_d02.zip](https://cdn.origene.com/chromatograms/mk6081_d02.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**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

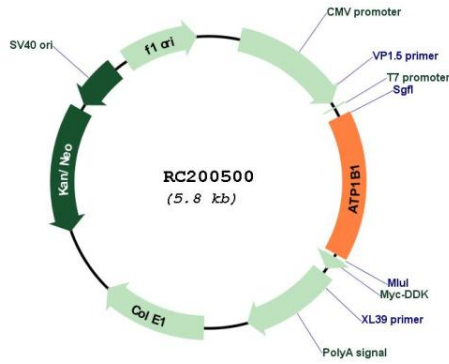
**Protein Families:** Transmembrane

**Protein Pathways:** Cardiac muscle contraction

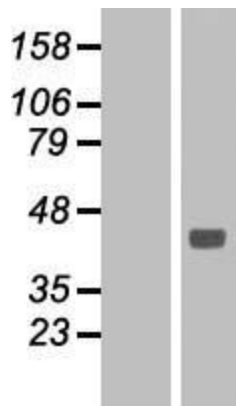
**MW:** 35.1 kDa

**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 RC200500



Western blot validation of overexpression lysate (Cat# [LY400361]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC219880] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).