

## Product datasheet for **SC327691**

### Sodium Potassium ATPase (ATP1A1) (NM\_001160234) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sodium Potassium ATPase (ATP1A1) (NM_001160234) Human Untagged Clone
Tag:	Tag Free
Symbol:	Sodium Potassium ATPase
Synonyms:	CMT2DD; HOMGSMR2
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001160234, the custom clone sequence may differ by one or more nucleotides

```

ATGGATGAACGAAGAAGTTTCTATGGATGATCATAAACTTAGCCTTGATGAACCT
CATCGTAAATATGGAACAGACTTGAGCCGGGGATTAACATCTGCTCGTGAGCTGAGATC
CTGGCGCGAGATGGTCCCAACGCCCTCACTCCCCCTCCCACTACTCCTGAATGGATCAAG
TTTTGTGCGCAGCTCTTTGGGGGTTCTCAATGTTACTGTGGATTGGAGCGATTCTTTGT
TTCTTGGCTTATAGCATCCAAGCTGCTACAGAAGAGGAACCTCAAACGATAATCTGTAC
CTGGGTGTGGTGTATCAGCCGTTGTAATCATAACTGGTTGCTTCTCCTACTATCAAGAA
GCTAAAAGTTCAAAGATCATGGAATCCTTCAAAAACATGGTCCCTCAGCAAGCCCTTGTC
ATTCGAAATGGTGAGAAAATGAGCATAAATGCGGAGGAAGTTGTGGTTGGGGATCTGGTG
GAAGTAAAAGGAGGAGACCGAATTCCTGCTGACCTCAGAATCATATCTGCAAATGGCTGC
AAGGTGGATAACTCCTCGCTCACTGGTGAATCAGAACCCAGACTAGGTCTCCAGATTTTC
ACAAATGAAAACCCCTGGAGACGAGGAACATTGCCTTCTTTCAACCAATTGTGTTGAA
GGCACCACGCTGGTATTGTTGTCTACACTGGGGATCGCACTGTGATGGGAAGAATTGCC
ACACTTGCTTCTGGGCTGGAAGGAGGCCAGACCCCATTTGCTGCAGAAATGAACATTTT
ATCCACATCATCACGGGTGTGGCTGTGTTCTGGGTGTGCTTTTCTTATCCTTTCTCTC
ATCCTTGAGTACACCTGGCTTGAGGCTGTATCTTCTCATCGGTATCATCGTAGCCAAT
GTGCCGGAAGGTTTGTGCTGGCCACTGTACGGTCTGTCTGACACTACTGCCAAACGCATG
GCAAGGAAAAACTGCTTAGTGAAGAACTTAGAAGCTGTGGAGACCTTGGGGTCCACGTCC
ACCATCTGCTCTGATAAACTGGAACCTTGACTCAGAACCGGATGACAGTGGCCACATG
TGGTTTGACAATCAAATCCATGAAGCTGATACGACAGAGAATCAGAGTGGTGTCTTTTT
GACAAGACTTCAGCTACCTGGCTTGCTCTGTCCAGAATTGCAGGTCTTTGTAACAGGGCA
GTGTTTTCAGGCTAACAGGAAAACCTACCTATTCTTAAGCGGGCAGTTGCAGGAGATGCC
TCTGAGTCAGCACTCTTAAAGTGCATAGAGCTGTGCTGTGGTTCCGTGAAGGAGATGAGA
GAAAGATACGCCAAAATCGTCGAGATACCCTTCAACTCCACCAACAAGTACCAGTTGTCT
ATTCATAAGAACCCCAACACATCGGAGCCCAACCTGTTGGTGTGATGAAGGGCGCCCA
GAAAGGATCCTAGACCGTTGCAGCTCTATCCTCCTCCACGGCAAGGAGCAGCCCTGGAT

```



[View online »](#)

GAGGAGCTGAAAGACGCCTTTCAGAACGCCTATTTGGAGCTGGGGGCCTCGGAGAACGA  
 GTCCTAGGTTTCTGCCACCTCTTCTGCCAGATGAACAGTTTCTGAAGGGTTCCAGTTT  
 GACACTGACGATGTGAATTTCCCTATCGATAATCTGTGCTTTGTTGGGCTCATCTCCATG  
 ATTGACCTCCACGGGCGGCCGTTTCTGATGCCGTGGGCAAAATGTGCAAGTGCTGGAATT  
 AAGGTCATCATGGTCACAGGAGACCATCCAATCACAGCTAAAGCTATTGCCAAAGGTGTG  
 GGCATCATCTCAGAAGGCAATGAGACCGTGAAGACATTGCTGCCCGCCTCAACATCCCA  
 GTCAGCCAGGTGAACCCAGGGATGCCAAGGCCGCGTAGTACACGGCAGTGATCTAAAG  
 GACATGACCTCCGAGCAGCTGGATGACATTTTGAAGTACCACACTGAGATAGTGTGGCC  
 AGGACCTCCCCTCAGCAGAAGCTCATCATTGTGGAAGGCTGCCAAAGACAGGGTGTATC  
 GTGGCTGTGACTGGTGACGGTGTGAATGACTCTCCAGCTTTGAAGAAAGCAGACATTGGG  
 GTTGCTATGGGGATTGCTGGCTCAGATGTGTCCAAGCAAGCTGCTGACATGATTCTTCTG  
 GATGACAACTTTGCCTCAATTGTGACTGGAGTAGAGGAAGGTCGCTGATCTTTGATAAC  
 TTGAAGAAATCCATTGCTTATACCTTAACCAGTAACATTTCCGAGATCACCCGTTCTG  
 ATATTTATTATTGCAAACATTCCACTACACTGGGGACTGTCACCATCCTCTGCATTGAC  
 TTGGGCACTGACATGGTTCTGCCATCTCCCTGGCTTATGAGCAGGCTGAGAGTGACATC  
 ATGAAGAGACAGCCAGAAATCCAAAACAGACAACTTGTGAATGAGCGGCTGATCAGC  
 ATGGCCTATGGGCAGATTGGAATGATCCAGGCCCTGGGAGGCTTCTTACTTACTTTGTG  
 ATTCTGGCTGAGAACGGCTTCTCCCAATTCACCTGTTGGGCCTCCGAGTGGACTGGGAT  
 GACCGCTGGATCAACGATGTGGAAGACAGCTACGGGCAGCAGTGGACCTATGAGCAGAGG  
 AAAATCGTGGAGTTCACCTGCCACACAGCCTTCTTCGTCAGTATCGTGGTGGTGCAGTGG  
 GCCGACTTGGTCATCTGTAAGACCAGGAGGAATTCGGTCTTCCAGCAGGGGATGAAGAAC  
 AAGATCTTGATATTTGGCCTCTTTGAAGAGACAGCCCTGGCTGCTTTCCTTCTACTGC  
 CCTGGAATGGGTGTTGCTTTAGGATGTATCCCCTCAAACCTACCTGGTGGTTCTGTGCC  
 TCCCCCTACTCTTCTCATCTTCGTATATGACGAAGTCAGAAAACCTCATCATCAGGCCA  
 CGCCCTGGCGGCTGGGTGGAGAAGGAACTACTAT

**Restriction Sites:**

Please inquire

**ACCN:**

NM\_001160234

**OTI Disclaimer:**

Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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\\_001160234.1](#), [NP\\_001153706.1](#)

**RefSeq Size:** 3587 bp

**RefSeq ORF:** 2979 bp

**Locus ID:** 476

**UniProt ID:** [P05023](#)

**Cytogenetics:** 1p13.1

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Cardiac muscle contraction

**Gene Summary:** 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 1 subunit. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2009]

Transcript Variant: This variant (4) represents use of an alternate promoter and uses a downstream start codon compared to variant 3. The resulting isoform (d) has a shorter N-terminus compared to isoform c.