

## Product datasheet for **SC119714**

### Sodium Potassium ATPase (ATP1A1) (NM\_000701) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sodium Potassium ATPase (ATP1A1) (NM_000701) 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)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_000701, the custom clone sequence may differ by one or more nucleotides

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ATGGGGAAGGGGTTGGACGTGATAAGTATGAGCCTGCAGCTGTTTCAGAACAAGGTGATAAAAAGGGCA
AAAAGGGCAAAAAAGACAGGGACATGGATGAAGTGAAGAAAGAAGTTTCTATGGATGATCATAAACTTAG
CCTTGATGAAGTTCATCGTAAATATGGAACAGACTTGAGCCGGGATTAACATCTGCTCGTGCAGCTGAG
ATCCTGGCGGAGATGGTCCCAACGCCCTCACTCCCCCTCCCACTACTCCTGAATGGATCAAGTTTTGTC
GGCAGCTCTTTGGGGGTTCTCAATGTTACTGTGGATTGGAGCGATTCTTTGTTTCTGGCTTATAGCAT
CCAAGTCTACAGAAGAGGAACCTCAAAACGATAATCTGTACCTGGGTGTGGTGTATCAGCCGTTGTA
ATCATAACTGGTTGCTTCTCTACTATCAAGAAGCTAAAAGTTCAAAGATCATGGAATCCTTCAAAAACA
TGGTCCCTCAGCAAGCCCTTGATTTCGAAATGGTGAGAAAATGAGCATAAATGCGGAGGAAGTTGTGGT
TGGGGATCTGGTGAAGTAAAAGGAGGAGACCGAATTCCTGCTGACCTCAGAATCATATCTGCAATGGC
TGCAAGGTGGATAACTCCTCGCTCACTGGTGAATCAGAACCCAGACTAGGTCTCCAGATTTCAAAATG
AAAACCCCTGGAGACGAGGAACATTGCCTTCTTTCAACCAATTGTGTTGAAGGCACCGCAGCTGGTAT
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CAGACCCCATGCTGCAGAAATTGAACATTTTATCCACATCATCACGGGTGTGGCTGTGTTCTGGGTG
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GCTCTGATAAACTGGAAGTCTGACTCAGAACCGGATGACAGTGGCCACATGTGGTTTGACAATCAAAT
CCATGAAGCTGATACGACAGAGAATCAGAGTGGTGTCTCTTTTGACAAGACTTCACTACCTGGCTGCT
CTGTCCAGAATTGCAGGCTTTTGAACAGGGCAGTGTTCAGGCTAACCCAGGAAAACCTACTATTTCTTA
AGCGGGCAGTTGCAGGAGATGCCTCTGAGTCAGCACTCTTAAAGTGCATAGAGCTGTGCTGTGGTTCCGT
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CTTTGAGAAGCCTATTTGGAGCTGGGGGGCTCGGAGAACGAGTCTAGGTTTCTGCCACCTCTTTCTG
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GCTTTGTTGGGCTCATCTCCATGATTGACCTCCACGGGCGCCGTTCTGATGCCGTGGGCAAATGTCG
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GTGGGCATCATCTCAGAAGGCAATGAGACCGTGAAGACATTGCTGCCCGCTCAACATCCCAAGTACGC
AGGTGAACCCAGGGATGCCAAGGCTGCGTAGTACACGGCAGTGTCTAAAGGACATGACCTCCGAGCA
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CATGATTTCTTGGATGACAATTTGCCTCAATTTGACTGGAGTAGAGGAAGGTCGTCTGATCTTTGAT
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TGGTCACTGTGAAGACCAGGAGGAATTCGGTCTCCAGCAGGGGATGAAGAACAAGATCTTGATATTTGG
CCTCTTTGAAGAGACAGCCCTGGCTGCTTCTTCTTCTACTGCCCTGGAATGGGTGTTGCTCTTAGGATG
TATCCCTCAAACCTACCTGGTGGTCTGTGCCTTCCCTACTCTTCTCATCTTCGTATATGACGAAG
TCAGAAAACCTCATCATCAGGCGACGCCCTGGCGGCTGGGTGGAGAAGGAAACCTACTATTAG
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000701 unedited  
 GCACATTTGTATACGACTCATATAGGGCGGCCGGAATTCGCACGAGGGCTCCCTCCCTT  
 GGCTCCCTGGTCCCCTCGCTCGGCGGGGAGCTGCTCTGTGCTTTTCTCTCTGATTCTC  
 CAGCGACAGGACCCGGCGCCGGGCACTGAGCACC GCCACCATGGGGAAGGGGTTGGACG  
 TGATAAGTATGAGCCTGCAGCTGTTTCAGAACAAGGTGATAAAAAGGGCAAAAAGGGCAA  
 AAAAGACAGGGACATGGATGAACTGAAGAAAGAAGTTTCTATGGATGATCATAAACTTAG  
 CCTTGATGAACTTCATCGTAAATATGGAACAGACTTGAGCCGGGATTAACATCTGCTCG  
 TGCAGCTGAGATCCTGGCGCGAGATGGTCCCAACGCCCTCACTCCCCTCCCCTACTCC  
 TGAATGGATCAAGTTTTGTGCGCAGCTCTTTGGGGGTTCTCAATGTTACTGTGGATTGG  
 AGCGATTCTTTGTTTCTGGCTTAGCATCCAAGCTGTACAGAAGAGGAACCTCAAAA  
 CGATAACTGTACCTGGGTGTGGTGTATCAGCCGTTGTAATCATAACTGGTTGCTTCTC  
 TACTATCAAGAAGCTAAAAGTTCAAAGATCATGGAATCCTTCAAAAACATGGTCCCTCA  
 GCAAGCCCTTGATTGAAAATGGTGAGAAAATGAGCATAAATGCGGAGGAAGTTGTGGT  
 TGGGGATCTGGTGAAGTAAAAGGGAGGAGACCGATTCTGCTGACCTCAGAATCATATC  
 TGCANATGGCTGCAAGGTGGATAACTCCTCGCTACTGGTGAATCAGAACCCAGACTAN  
 GTCTNNCAGATTCACAAATGANAAACCCCTGGAGACGAGAACATTGNCTTCTTTTNCAN  
 ANTGTGTTGAAGGCACGNACGTGGTATGTTGT

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_000701 unedited  
 GAACGCGCCGCAATCTANAGTCGAGTTTTTTTTTTTTTTTTTCCATTATAATAGCCAT  
 CTTTATTTGTA AAAATCCAGATATAAAATGTATTCTTTTCAGTCTTTCCGGGTGTTCCCTT  
 TTTACAAAACAAAAGGCACATAAAAACCTTCCCGCTGTCATTTCCACAGATGGATGG  
 TTTTCAGGCAGCCCTCCCCCTCCCCCATAGAGCTACATGCTTATTCCAGGACGTCTT  
 GCTTCCCACATGCTGCGGTGCTTCTACCAGGGTAGAGTTCCAACTCCAAGACTGAA  
 GTACACAAAGAGGGGGTGGGTGTCGGATGCAAAGTGTGTGGCCTGATGCTCCACGGCGTG  
 CAGGACGGGGGGCTAATAGTAGGTTTCTTCTCCACCCAGCCGCCAGGGCGTCGCTGAT  
 GATGAGTTTTCTGACTTCGTATATACGAAGATGACAAGAGAGTAGGGGAAGGCACAGAA  
 CCACCAGTAGGTTTGAGGGGATACATCCTAAGAGCAACCCATTCCAGGGCAGTAGGA  
 AAGGAAAGCAGCCAGGGCTGTCTTTTCAAAGAGGCCAAATATCAAGATCTTGTTCTTCA  
 TCCCCTGCCTGAAAGACCGAATTCCTCCTGGTCTAACAGATGACCAAGTCGGCCCACTGC  
 ACCACCAGATACTGACGAAGAAAGCTGTGTGGCAGGGGAACCTCAGATTTTCTTTGTT  
 ATAAGCCCTGCTGCCGAACCTGTTTTCCAATCGTTATCCAGCGCCATCCAGTCCCT  
 CCGGAGCCCCACAGGGGAATGGGAAGAAACCGTTTTCAACCCAAACACAAATAATTAA  
 AAATCCTCCCAGGCTGGATCTATCTATTTCCCTTAGGCCTGCTGAACAACCC

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_000701

**Insert Size:**

4040 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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\\_000701.6](#), [NP\\_000692.2](#)

**RefSeq Size:** 3713 bp

**RefSeq ORF:** 3072 bp

**Locus ID:** 476

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

**Cytogenetics:** 1p13.1

**Domains:** E1-E2\_ATPase, Cation\_ATPase\_N, Hydrolase, Cation\_ATPase\_C

**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 (1) represents use of an alternate promoter and 5' exon, compared to variant 3. The resulting isoform (a) is the same length but has a distinct N-terminus, compared to isoform c.