

## Product datasheet for RC201009

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sodium Potassium ATPase (ATP1A1) (NM_000701) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sodium Potassium ATPase
Synonyms:	CMT2DD; HOMGSMR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201009 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGCATCGCC

ATGGGGAAGGGGTTGGACGTGATAAGTATGAGCCTGCAGCTGTTTCAGAACAAGGTGATAAAAAGGGCA  
AAAAGGGCAAAAAGACAGGGACATGGATGAAGTGAAGAAAGAAGTTTCTATGGATGATCATAAACTTAG  
CCTTGATGAACCTCATCGTAAATATGGAACAGACTTGAGCCGGGATTAACATCTGCTCGTGCAGCTGAG  
ATCCTGGCGGAGATGGTCCCAACGCCCTCACTCCCCCTCCCACTACTCCTGAATGGATCAAGTTTTGTC  
GGCAGCTCTTTGGGGGTTCTCAATGTTACTGTGGATTGGAGCGATTCTTTGTTTCTGGCTTATAGCAT  
CCAAGCTGCTACAGAAGGGAACCTCAAACGATAATCTGTACCTGGGTGTGGTGTATCAGCCGTTGTA  
ATCATAACTGTTGCTTCTCCTACTATCAAAGCTAAAAGTTCAAAGATCATGGAATCCTTCAAAAACA  
TGGTCCCTCAGCAAGCCCTTGTGATTCGAAATGGTGAGAAAATGAGCATAAATGCGGAGGAAGTTGTGGT  
TGGGGATCTGGTGAAGTAAAAGGAGGAGACCGAATTCCTGCTGACCTCAGAATCATATCTGCAAAATGGC  
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AAAACCCCTGGAGACGAGGAACATTGCCTTCTTTCAACCAATTGTGTTGAAGGCACCGCAGTGGTAT  
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CAGACCCCATTTGCTGCAGAAATTGAACATTTTATCCACATCATCAGGGTGTGGTGTGTTCTCTGGGTG  
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CATCGTAGCCAATGTGCCGAAGGTTTGTGGCCACTGTCACGGTCTGTCTGACACTTACTGCCAACGC  
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CTGTCCAGAAATTCAGGTCTTTGTAACAGGGCAGTGTTCAGGCTAACCGAGAAAACCTACCTATTCTTA  
AGCGGGCAGTTGCAGGAGATGCCTCTGAGTCAGCACTCTTAAAGTGCATAGAGCTGTGCTGTGGTCCGT  
GAAGGAGATGAGAGAAAGATACGCCAAAATCGTCGAGATACCTTCAACTCCACCAACAAGTACCAGTTG



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TCTATTATAAGAACCCCAACACATCAGAGCCCCAACACCTGTTGGTGATGAAGGGCGCCCCAGAAAGGA  
 TCCTAGACCGTTGCAGCTCTATCCTCCTCCACGGCAAGGAGCAGCCCCTGGATGAGGAGCTGAAAGACGC  
 CTTTCAGAACGCCTATTTGGAGCTGGGGGGCTCGGAGAACGAGTCTAGGTTTCTGCCACCTCTTTCTG  
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 AAGTGTGGAATTAAGGTATCATGGTACAGGAGACCATCCAATCACAGCTAAAGCTATTGCCAAAGGT  
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC201009 protein sequence  
 Red=Cloning site Green=Tags(s)

MGKGVGRDKYEPAAVSEQGDKKGKGGKDRDMDLKEVSMDDHKLSDDELHRKYGTDLSRGLTSARAAE  
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 IITGCFSYQEAQSSKIMESFKNMVPQALVIRNGEKMSINAEEVVVDLVEVKGGDRIPADLRISANG  
 CKVDNSSLTGESEPQTRSPDFTNENPLETRNIAFFSTNCVEGTARGIVVYTGDRVMGRIATLASGLEGG  
 QTPIAAEIEHFIHIITGVAVFLGVSFFILSLILEYTWLEAVIFLIGIIVANVPEGLLATVTVCLTLTAKR  
 MARKNCLVKNLEAVETLSTSTICSDKTGTLTQNRMTVAHMFNDFNQIHEADTTENQSGVSFDKTSATWLA  
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 PDEQFPEGFQFDTDVNFPIDNLCFVGLISMIDPPRAAVPDAVGKCRSAGIKVIMVTGDHPITAKAIKAG  
 VGIISEGNETVEDIAARLNIPVSVQVNPDAKACVVHGSCLKDMTSEQLDDILKYHTEIVFARTSPQKLI  
 IVEGCQRQGAIVAVTGDGVNDSPALKKADIGVAMGIAGSDVSKQAADMILLDDNFASIVTGVEEGRILFD  
 NLKKSIAAYLTSNIPEITPFLIFIIANIPLPLGTVTILCIDLGTDMVPAISLAYEQAESDIMKRQPRNPK  
 TDKLVNERLISMAYGQIGMIQALGGFFTYFVILAENGFLPIHLLGLRVDWDRWINDVEDSYGQWQTYEQ  
 RKIVEFTCHTAFFVSIVVQWADLVICKTRRNSVFOQGMKNKILIFGLFEETALAALFSLYCPGMGVALRM  
 YPLKPTWWFCAPYSLLIFVYDEVKLIIRRRPGGWVEKETYY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6262\\_g05.zip](https://cdn.origene.com/chromatograms/mk6262_g05.zip)

**Restriction Sites:**

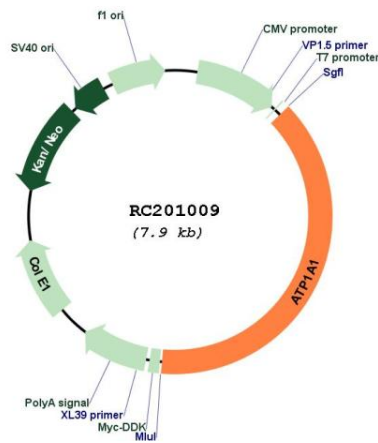
Sgfl-MluI



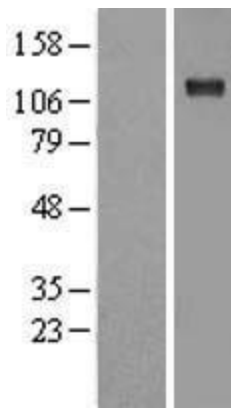
**RefSeq ORF:** 3072 bp  
**Locus ID:** 476  
**UniProt ID:** [P05023](#)  
**Cytogenetics:** 1p13.1  
**Domains:** E1-E2\_ATPase, Cation\_ATPase\_N, Hydrolase, Cation\_ATPase\_C  
**Protein Families:** Druggable Genome, Transmembrane  
**Protein Pathways:** Cardiac muscle contraction  
**MW:** 112.9 kDa

**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]

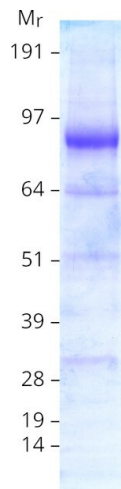
**Product images:**



Circular map for RC201009



Western blot validation of overexpression lysate (Cat# [LY431659]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC228631] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ATP1A1 protein (Cat# [TP301009]). The protein was produced from HEK293T cells transfected with ATP1A1 cDNA clone (Cat# RC201009) using MegaTran 2.0 (Cat# [TT210002]).