

Product datasheet for RC229056

Sodium Potassium ATPase (ATP1A1) (NM_001160234) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sodium Potassium ATPase (ATP1A1) (NM_001160234) 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:	>RC229056 representing NM_001160234 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGGGGAAGGGGTTGGACGTGATAAGTATGAGCCTGCAGCTGTTTCAGAACAAGGTGATAAAAAGGGCA
AAAAGGGCAAAAAGACAGGGACATGGATGAAGTGAAGAAAGAAGTTTCTATGGATGATCATAAACTTAG
CCTTGATGAACCTCATCGTAAATATGGAACAGACTTGAGCCGGGATTAACATCTGCTCGTCAGCTGAG
ATCCTGGCGGAGATGGTCCCAACGCCCTCACTCCCCCTCCCACTACTCCTGAATGGATCAAGTTTTGTC
GGCAGCTCTTTGGGGGTTCTCAATGTTACTGTGGATTGGAGCGATTCTTTGTTTCTTGCTTATAGCAT
CCAAGCTGCTACAGAAGGGAACCTCAAACGATAATCTGTACCTGGGTGTGGTGTATCAGCCGTTGTA
ATCATAACTGTTGCTTCTCCTACTATCAAAGCTAAAAGTTCAAAGATCATGGAATCCTTCAAAAACA
TGGTCCCTCAGCAAGCCCTTGTGATTCGAAATGGTGAGAAAATGAGCATAAATGCGGAGGAAGTTGTGGT
TGGGGATCTGGTGAAGTAAAAGGAGGAGACCGAATTCCTGCTGACCTCAGAATCATATCTGCAAAATGGC
TGCAAGGTGGATAACTCCTCGCTCACTGGTGAATCAGAACCCAGACTAGGTCTCCAGATTTACAAAATG
AAAACCCCTGGAGACGAGGAACATTGCCTTCTTTCAACCAATTGTGTTGAAGGCACCGCAGTGGTAT
TGTTGTCTACTGGGATCGCACTGTGATGGGAAGAATTGCCACACTTGCTTCTGGGCTGGAAGGAGGC
CAGACCCCATTTGCTGCAGAAATTGAACATTTTATCCACATCATCAGGGTGTGGTGTGTTCTCTGGGTG
TGCTTTCTTCATCCTTCTCATCCTTGAGTACACCTGGCTTGAGGCTGTCATCTTCTCATCGGTAT
CATCGTAGCCAATGTGCCGAAGGTTTGTGGCCACTGTCACGGTCTGTCTGACACTTACTGCCAACGC
ATGGCAAGGAAAACTGCTTAGTGAAGAACTTAGAAGCTGTGGAGACCTGGGGTCCACATCCACCATCT
GCTCTGATAAACTGGAACCTGACTCAGAACCGGATGACAGTGGCCACATGTGGTTTGACAATCAAAT
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CTGTCCAGAAATTCAGGTCTTTGTAACAGGGCAGTGTTCAGGCTAACCGAGAAAACCTACCTATTCTTA
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GAAGGAGATGAGAGAAAGATACGCCAAAATCGTCGAGATACCTTCAACTCCACCAACAAGTACCAGTTG



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TCTATTATAAGAACCCCAACACATCAGAGCCCCAACACCTGTTGGTGATGAAGGGCGCCCCAGAAAGGA
 TCCTAGACCGTTGCAGCTCTATCCTCCTCCACGGCAAGGAGCAGCCCCTGGATGAGGAGCTGAAAGACGC
 CTTTCAGAACGCCTATTTGGAGCTGGGGGGCTCGGAGAACGAGTCTAGGTTTCTGCCACCTCTTTCTG
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 AAGTGTGGAATTAAGGTATCATGGTACAGGAGACCATCCAATCACAGCTAAAGCTATTGCCAAAGGT
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 AGGTGAACCCAGGGATGCCAAGGCCTGCGTAGTACACGGCAGTGATCTAAAGGACATGACCTCCGAGCA
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 ATTGTGGAAGGCTGCCAAAGACAGGGTGTATCGTGGCTGTGACTGGTGACGGTGTGAATGACTCTCCAG
 CTTTGAAGAAAGCAGACATTGGGGTGTCTATGGGGATTGCTGGCTCAGATGTGTCCAAGCAAGCTGCTGA
 CATGATTCTTCTGGATGACAACCTTGCCTCAATTGTGACTGGAGTAGAGGAAGGTCGTCTGATCTTTGAT
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 TGGTACTCTGTAAGACCAGGAGGAATTCGGTCTCCAGCAGGGGATGAAGAACAAGATCTTGATATTTGG
 CCTCTTGAAGAGACAGCCCTGGCTGCTTTCCTTCTACTGCCCTGGAATGGGTGTTGCTCTTAGGATG
 TATCCCTCAAACCTACCTGGTGGTCTGTGCCTTCCCCTACTCTTCTCATCTCGTATATGACGAAG
 TCAGAAAACATCATCAGGCGACGCCCTGGCGGCTGGGTGGAGAAGGAAACCTACTAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC229056 representing NM_001160234
 Red=Cloning site Green=Tags(s)

MGKGVGRDKYEPAAVSEQGDKKGKGGKDRDMDLKEVSMDDHKLSDDELHRKYGTDLSRGLTSARAAE
 ILARDGNALTPPTTPEWIKFCRQLFGGFSMLLWIGAILCFLAYSIQAATEEPEQNDNL YLGVVLSAVV
 IITGCFSYQEAQSSKIMESFKNMVPQALVIRNGEKMSINAEEVVVDLVEVKGGDRIPADLRIISANG
 CKVDNSSLTGESEPQTRSPDFTNENPLETRNIAFFSTNCVEGTARGIVVYTGDRVMGRIATLASGLEGG
 QTPIAAEIEHFIHIITGVAVFLGVSFFILSLILEYTWLEAVIFLIGIIVANVPEGLLATVTVCLTLTAKR
 MARKNCLVKNLEAVETLSTSTICSDKTGTLTQNRMTVAHMFNDFNQIHEADTTENQSGVSFDKTSATWLA
 LSRIAGLCNRAVFQANQENLPILKRAVAGDASESALLKCIELCCGSVKEMRERYAKIVEIPFNSTNKYQL
 SIHKNPNTSEPHLLVMKGAPERILDRCSSILLHGKEQPLDEELKDAFQAYLELGGGGERVLFCHLFL
 PDEQFPEGFQFDVDFNFPIDNLCFVGLISMIDPPRAAVPDAVGKCRSAGIKVIMVTGDHPITAKAIAKG
 VGIISEGNETVEDIAARLNIPVSVQVNPDAKACVVHGSCLKDMTSEQLDDILKYHTEIVFARTSPQKLI
 IVEGCQRQGAIVAVTGDGVNDSPALKKADIGVAMGIAGSDVSKQAADMILLDDNFASIVTVEEGRLIFD
 NLKKSIAIYTLTSNIPEITPFLIFIIANIPLPLGTVTILCIDLGTDMVPAISLAYEQAESDIMKRQPRNPK
 TDKLVNERLISMAYGQIGMIQALGGFFTYFVILAENGFLPIHLLGLRVDWDRWINDVEDSYGQWQTYEQ
 RKIVEFTCHTAFFVSIIVVQWADLVICKTRRNSVFOGGMKNKILIFGLFEETALAALFSLYCPGMGVALRM
 YPLKPTWWFCAPYSLLIFVYDEVKLIIRRRPGGWVEKETYY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001160234

ORF Size: 3072 bp

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 or by calling 301.340.3188 option 3 for pricing and delivery.

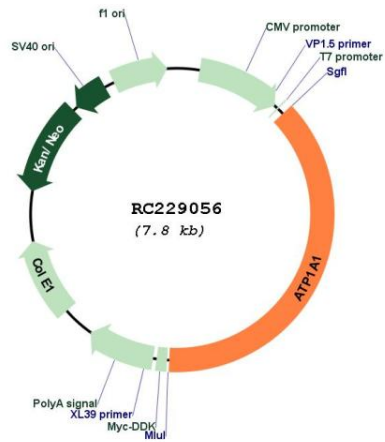
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This 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:	<ol style="list-style-type: none">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
MW:	112.9 kDa
Gene Summary:	<p>The protein encoded by this gene belongs to the family of P-type cation transport ATPases, and to the subfamily of Na⁺/K⁺ -ATPases. Na⁺/K⁺ -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⁺/K⁺ -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]</p>

Product images:



Circular map for RC229056