

Product datasheet for SC119715

ATP1A2 (NM_000702) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP1A2 (NM_000702) Human Untagged Clone
Tag:	Tag Free
Symbol:	ATP1A2
Synonyms:	FHM2; MHP2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC119715 sequence for NM_000702 edited (data generated by NextGen Sequencing)

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ATGGGCCGTGGGCTGGCCGTGAGTACTCACCTGCCGCCACCACGGCAGAGAATGGGGC
GGCAAGAAGAAACAGAAGGAGAAGGAAGTGGATGAGCTGAAGAAGGAGGTGGCAATGGAT
GACCACAAGCTGTCCCTTGATGAGCTGGGCCGCAATACCAAGTGGACCTGTCCAAGGGC
CTCACCAACCAGCGGGCTCAGGACGTTCTGGCTCGAGATGGGCCAACGCCCTCACACCA
CCTCCCACAACCCTGAGTGGGTCAAGTCTGCCGTGAGCTTTTCGGGGGGTTTCTCCATC
CTGCTGTGGATTGGGCTATCCTCTGCTTCTGGCCTACGGCATCCAGGCTGCCATGGAG
GATGAACCATCCAACGACAATCTATATCTGGGTGTGGTGTGGCAGCTGTGGTCATTGTC
ACTGGCTGCTTCTCCTACTACCAGGAGGCCAAGAGCTCCAAGATCATGGATTCTTCAAG
AACATGGTACCTCAGCAAGCCCTTGATCCGGGAGGGAGAGAAGATGCAGATCAACGCA
GAGGAAGTGGTGGTGGGAGACCTGGTGGAGGTGAAGGGTGGAGACCGCGTCCCTGCTGAC
CTCCGGATCATCTCTTCTCATGGCTGTAAGGTGGATAACTCATCCTTAACAGGAGAGTCC
GAGCCCCAGACCCGCTCCCCGAGTTTACCCATGAGAACCCCTGGAGACCCGCAATATC
TGTTTTCTTCTCCACCAACTGTGTTGAAGGCACTGCCAGGGGCAATTGTGATTGCCACAGGA
GACCGGACGGTGTGGGCCCATAGCTACTCTCGCCTCAGGCCTGGAGGTTGGGCGGACA
CCCATAGCAATGGAGATTGAACACTTCCAGCTGATCACAGGGGTCGCTGTATTCCTG
GGGTCTCCTTCTCGTGCTCTCCCTCATCCTGGGCTACAGCTGGCTGGAGGCAGTCATC
TTCTCATCGGCATCATAGTGGCCAACGTGCCTGAGGGGCTTCTGGCCACTGTCAGTGTG
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CAGAACCGCATGACCGTCCGCCACATGTGGTTCGACAACCAATCCATGAGGCTGACACC
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CGAATTGCTGGTCTCTGCAACCGCGCCGCTTCAAGGCAGGACAGGAGAACATCTCCGTG
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TCCTGTGGCTCAGTGAGGAAAATGAGAGACAGAAACCCCAAGGTGGCAGAGATTCCTTTC
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GTGCTGGTATGAAGGGGGCCCCAGAGCGCATTCTGGACCGGTGCTCCACCATCCTGGTG
 CAGGGCAAGGAGATCCCCTCGACAAGGAGATGCAAGATGCCTTTCAAATGCCTACATG
 GAGCTGGGGGACTTGGGGAGCGTGTGCTGGGATTCTGTCAACTGAATCTGCCATCTGGA
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 GTCTTCCAGCAGGGCATGAAGAACAAGATCCTGATTTTTGGGCTCCTGGAGGAGACGGCG
 TTGGTGCCTTTCTCTTACTGCCCAGGCATGGGTGTAGCCCTCCGCATGTACCCGCTC
 AAAGTCACTGGTGGTTCTGCGCCTTCCCCTACAGCCTCCTCATCTTCTATGATGAG
 GTCCGAAAGCTCATCCTGCGCGGTATCCTGGTGGCTGGGTGGAGAAGGAGACATACTAC
 TGA

Clone variation with respect to NM_000702.3

**5' Read Nucleotide
Sequence:**

>OriGene 5' read for NM_000702 unedited
 GGCACATTTGTATACGACTCACTATAGGCGGCCGGAATTCGCCGAGGTCTCCGACTGTC
 CCAGACGGGCTGGTGTGGGCTTGGGATCCTCCTGGTGACCTCTCCGCTAAGGTCCCTCA
 GCCACTTGCCCCAAGATGGGCCGTGGGCTGGCCGTGAGTACTCACCTGCCGCCACCAC
 GGCAGAGAATGGGGCGGCAAGAAGAAACAGAAGGAGAAGGAACTGGATGAGCTGAAGAA
 GGAGGTGGCAATGGATGACCACAAGCTGTCCTTGGATGAGCTGGGCCGCAATACCAAGT
 GGACCTGTCCAAGGCCCTACCAACCAGCGGGCTCAGGACGTTCTGGCTCGAGATGGGCC
 CAACGCCCTCACACCACCTCCCACAACCCTGAGTGGGTCAAGTTCTGCCGTGAGCTTTT
 CGGGGGTTCCTCATCCTGCTGTGGATTGGGGCTATCCTCTGCTTCTGGCCTACGGCAT
 CCAGGCTGCCATGGAGGATGAACCATCCAACGACAATCTATATCTGGGTGTGGTGTGGC
 AGCTGTGGTCATTGTCACTGGCTGCTTCTCCTACTACCAGGAGCCAAAGACTCCAAGAT
 CATGGATTCTTCAAGAACATGGTACCTCAGCAAGCCCTTGTGATCCGGGAGGGAGAGAA
 GATGCAGATCAACGCATAGGAAGTGGTGGTGGGAGAACTGGTGGAGGTGAAGGTGGAGA
 CCGCGTCCCTGCTGACCCCGGATCACCTCTTTATGGCTGTAAAGTGGAAACTCATCCT
 TACCAGAGAGTTCGACCCCGAGCCCGTCCCCGAGTTACCCATGAGAACCCTGGAGAC
 CCGGCATATCTGGTTTCTTCTCCCCACTGTGTTGAAAGCCCTGCCAGGCCCTTTGGGAT
 TGC

3' Read Nucleotide Sequence:	>OriGene 3' read for NM_000702 unedited CCGCGGCCGAATCTAAAGTCGAGTTTTTTTTTTTTTTTTTTTGTAGAGGAGTCTCACCCCTT TCGCCCAGGCTGGAGTGAATGGCACGATCTCAGCTCACTGCAACCTCTTCTCACAGGT TCAAGCAATTCTCCTGCCTCAGCCTCCTGAGTAGCTGAGATTACAGGCGTGTGCCACCAT GACTGGCTAATTTTTGTACTTTTAGTAGAGACAGGGTTTACCATGTTGGCCAGGCTCG CCTCGAACTCCTGACCTCATGCCACCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAG GCATGAGCCACCGCACCCAGAAAAAGCAAATCTTTAGTATTTTTCTCTTGTCCAAAGG TTCTGACCATGTTTCATGACCTAAGCTTGTCCCTGGAAGCATACATGTCCCTGGGAGACAG GAAGGTTCAAGGAACTTCTCCACCTGATTCTAGCCAATGGCCAGCGAACTCCTTTTCCA GGGTTGGCTTGGCAGTGTGGGGAATGATGCAGGTTTCATCGGGATGGGCATGAAAAGAAA GGGAATGGAAGAGGCTGGGAAAGAACTTGTGGCCATCCCTTTTCAGAACAGCATGGAGCTC TGANGACTTAGTATTACAGAAGGTGAAGTGTATTAAGTACATGAGTGACATCCGGACCT TGTGGACTAAGAAGGACCCTACCAAAGGTCAGCGGGAACTCTGTGCACACAAGGTGGCA TTTCTGGAGCCTCTGATTGCCTCTGGCCTGCTCTGCTGCACCCTGAGAGACTGAGTTTGT CTGCTGTGGGGATCTAAAAGTGGACGATAGCTGGATCCCCACTCTATTGGAAGTGTCA AAGCCCGCATGGCCACCTACTTCTTTTGTGGTCTCTCCACCG
Restriction Sites:	NotI-NotI
ACCN:	NM_000702
Insert Size:	5000 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
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_000702.2 , NP_000693.1
RefSeq Size:	5468 bp

RefSeq ORF: 3063 bp

Locus ID: 477

UniProt ID: [P50993](#)

Cytogenetics: 1q23.2

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⁺/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 2 subunit. Mutations in this gene result in familial basilar or hemiplegic migraines, and in a rare syndrome known as alternating hemiplegia of childhood. [provided by RefSeq, Oct 2008]