OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for SC117629

ATP5A (ATP5A1) (NM_004046) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP5A (ATP5A1) (NM_004046) Human Untagged Clone
Tag:	Tag Free
Symbol:	ATP5A
Synonyms:	ATP5A; ATP5A1; ATP5AL2; ATPM; COXPD22; hATP1; HEL-S-123m; MC5DN4; MOM2; OMR; ORM
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

Fully Sequenced ORF:

>OriGene ORF within SC117629 sequence for NM_004046 edited (data generated by NextGen Sequencing)

ATGCTGTCCGTGCGCGTTGCTGCGGCCGTGGTCCGCGCCCTTCCTCGGCGGGCCGGACTG
GTCTCCAGAAATGCTTTGGGTTCATCTTTCATTGCTGCAAGGAACTTCCATGCCTCTAAC
ACTCATCTTCAAAAGACTGGGACTGCTGAGATGTCCTCTATTCTTGAAGAGCGTATTCTT
GGAGCTGATACCTCTGTTGATCTTGAAGAAACTGGGCGTGTCTTAAGTATTGGTGATGGT
ATTGCCCGCGTACATGGGCTGAGGAATGTTCAAGCAGAAGAAATGGTAGAGTTTTCTTCA
GGCTTAAAGGGTATGTCCTTGAACTTGGAACCTGACAATGTTGGTGTTGTCGTGTTTGGA
AATGATAAACTAATTAAGGAAGGAGATATAGTGAAGAGGACAGGAGCCATTGTGGACGTT
CCAGTTGGTGAGGAGCTGTTGGGTCGTGTAGTTGATGCCCTTGGTAATGCTATTGATGGA
AAGGGTCCAATTGGTTCCAAGACGCGTAGGCGAGTTGGTCTGAAAGCCCCCGGTATCATT
CCTCGAATTTCAGTGCGGGAACCAATGCAGACTGGCATTAAGGCTGTGGATAGCTTGGTG
CCAATTGGTCGTGGTCAGCGTGAACTGATTATTGGTGACCGACAGACTGGGAAAACCTCA
ATTGCTATTGACACAATCATTAACCAGAAACGTTTCAATGATGGATCTGATGAAAAGAAG
AAGCTGTACTGTATTTATGTTGCTATTGGTCAAAAGAGATCCACTGTTGCCCAGTTGGTG
AAGAGACTTACAGATGCAGATGCCATGAAGTACACCATTGTGGTGTCGGCTACGGCCTCG
GATGCTGCCCCACTTCAGTACCTGGCTCCTTACTCTGGCTGTTCCATGGGAGAGTATTTT
AGAGACAATGGCAAACATGCTTTGATCATCTATGACGACTTATCCAAACAGGCTGTTGCT
TACCGTCAGATGTCTCTGTTGCTCCGCCGACCCCCTGGTCGTGAGGCCTATCCTGGTGAT
GTGTTCTACCTACACTCCCGGTTGCTGGAGAGAGCAGCCAAAATGAACGATGCTTTTGGT
GGTGGCTCCTTGACTGCTTTGCCAGTCATAGAAACACAGGCTGGTGATGTGTCTGCTTAC
ATTCCAACAAATGTCATTTCCATCACTGACGGACAGATCTTCTTGGAAACAGAATTGTTC
TACAAAGGTATCCGCCCTGCAATTAACGTTGGTCTGTCTGTATCTCGTGTCGGATCCGCT
GCCCAAACCAGGGCTATGAAGCAGGTAGCAGGTACCATGAAGCTGGAATTGGCTCAGTAT
CGTGAGGTTGCTGCTTTTGCCCAGTTCGGTTCTGACCTCGATGCTGCCACTCAACAACTT
TTGAGTCGTGGCGTGCGTCTAACTGAGTTGCTGAAGCAAGGACAGTATTCTCCCATGGCT
ATTGAAGAACAAGTGGCTGTTATCTATGCGGGTGTAAGGGGATATCTTGATAAACTGGAG
CCCAGCAAGATTACAAAGTTTGAGAATGCTTTCTTGTCTCATGTCGTCAGCCAGCACCAA
GCCTTGTTGGGCACTATCAGGGCTGATGGAAAGATCTCAGAACAATCAGATGCAAAGCTG
AAAGAGATTGTAACAAATTTCTTGGCTGGATTTGAAGCTTAA

Clone variation with respect to NM_004046.4

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004046 unedited

TTGTATACGACTCCTATAGGCGGCCCGCGAATTCGCACGAGGCCCAGTCAGTCCGGAGGC
TGCGGCTGCAGAAGTACCGCCTGCGGAGTAACTGCAAAGATGCTGTCCGTGCGCGTTGCT
GCGGCCGTGGTCCGCGCCCTTCCTCGGCGGGCCGGACTGGTCTCCAGAAATGCTTTGGGT
TCATCTTTCATTGCTGCAAGGAACTTCCATGCCTCTAACACTCATCTTCAAAAGACTGGG
ACTGCTGAGATGTCCTCTATTCTTGAAGAGCGTATTCTTGGAGCTGATACCTCTGTTGAT
CTTGAAGAAACTGGGCGTGTCTTAAGTATTGGTGATGGTATTGCCCGCGTACATGGGCTG
AGGAATGTTCAAGCAGAAGAAATGGTAGAGTTTTCTTCAGGCTTAAAGGGTATGTCCTTG
AACTTGGAACCTGACAATGTTGGTGTTGTCGTGTTTGGAAATGATAAACTAATTAAGGAA
GGAGATATAGTGAAGAGGACAGGAGCCATTGTGGACGTTCCAGTTGGTGAGGAGCTGTTG
GGTCGTGTAGTTGATGCCCTTGGTAATGCTATTGATGGAAAGGGTCCAATTGGTTCCAAG
ACGCGTAGGCGAGTTGGTCTGAAAGCCCCCGGTATCATTCCTCGAATTTCAGTGCGGGAA
CCAATGCAGACTGGCATTAAGGCTGTGGATAGCTTGGTGCCAATTGGTCGTGGTCAGCGT
GAACTGATTATTGGTGACCGACAGACTGNGAAAACCTCAATTGCTATTGACACAATCATT
AACCAGAAACGTTTCAATGATGGATCTGATGAAAAGAANAAGCTGTACTGTATTTTATGT
GCTATTGGTCAAAAGAGACCACTGTTGCCCCAGTGGTGAGAGACTTACGATGCAGATGCC
ATGAGACACATTNGTGTG

3' Read Nucleotide Sequence:

```
>OriGene 3' read for NM_004046 unedited
CGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
TTTTTTTTTTTTTTTTTTTACCCATTATGGAACCTTTATTTTTCATGGGATTTCTGGACA
TAAGGAGTATGAAAGTAACCCTTTTACAAAGGGAACTAATTTACTAAAACAATGACAAAA
CTGAACTGGTTTTTGATGGGAATCCACAGGAGTTTAAGCTTCAAATCCACCCAAAAAATT
TGGTACAATCTTTTTAAACTTTGCATTTGATTGTTCTGAAATCTTTCCATCAGCCCTGAT
AGGGCCCAACAAGGCTTGGGGCTGGCTGACCACATGAAACAAAAAAGCCTTCTCAAACTT
TGGAATTTTGCGGGGCTCCAGTTTATAAAAATATCCCCTTACACCCGCATAAATAACAGC
CACTTGTTCTTCAATAGCCATGGGAAAATACTGTCCTTGCTTCAGCAACTCAGTTAAACC
CCCGCCCCGACTCAAAAGTTGTTGAGGGGCAGCATCGAGGGCAAAACCGAACTGGGCAAA
AGCCACAACCCCACGATACTGAGCCAATTCCAGCTTTATGGGACCTGCTACCTGCTTTAA
TACCCCTGGTTTGGCCCAGCGGATCCCACACAATATACAGACAGACCCAACGTTATTTGG
AGGGCGGATACCTTTTGTAAAACAACTCTTTTTCCAAAAAAAACTGCCCGCCAGGGAGGG
AAACAACATTGCTTGGAAGAAAGAAAAACCTTCCCCCCCTGGGTTTTTTTATTGGCAACG
ATCTAGGCCCCACACCCAAACCTTGTTATTTGGCTGCTCCTCCCCCACCGGAGAGGTGGT
GAACACCCCCACAATGCCCCTCACCAGGGGGGCGGGGGAAACAAAAACATTTGAGGGAAA
AACACCCGGTTGGAAATCCCAATAAAAAACAGAATGGGCCCTTGTCTAAAAACCTCCCGG
AAACCG
```

Restriction Sites: NotI-NotI

ACCN: NM_004046

Insert Size: 1840 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:
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_004046.4, NP_004037.1

RefSeq Size:	1895 bp
RefSeq ORF:	1662 bp
Locus ID:	498
UniProt ID:	P25705
Cytogenetics:	18q21.1
Domains:	ATP-synt_ab, ATP-synt_ab_C, ATP-synt_ab_N
Protein Families:	Druggable Genome
Protein Pathways:	Alzheimer's disease, Huntington's disease, Metabolic pathways, Oxidative phosphorylation, Parkinson's disease
Gene Summary:	This gene encodes a subunit of mitochondrial ATP synthase. Mitochondrial ATP synthase catalyzes ATP synthesis, using an electrochemical gradient of protons across the inner membrane during oxidative phosphorylation. ATP synthase is composed of two linked multi-subunit complexes: the soluble catalytic core, F1, and the membrane-spanning component, Fo, comprising the proton channel. The catalytic portion of mitochondrial ATP synthase consists of 5 different subunits (alpha, beta, gamma, delta, and epsilon) assembled with a stoichiometry of 3 alpha, 3 beta, and a single representative of the other 3. The proton channel consists of three main subunits (a, b, c). This gene encodes the alpha subunit of the catalytic core. Alternatively spliced transcript variants encoding the different isoforms have been identified. Pseudogenes of this gene are located on chromosomes 9, 2, and 16. [provided by RefSeq, Mar 2012] Transcript Variant: This variant (2) differs in the 5' UTR, compared to variant 1. Variants 1 and 2 both encode the same isoform (a).