

Product datasheet for **RC201315**

ATP5A (ATP5A1) (NM_001001937) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP5A (ATP5A1) (NM_001001937) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ATP5A
Synonyms:	ATP5A; ATP5A1; ATP5AL2; ATPM; COXPD22; hATP1; HEL-S-123m; MC5DN4; MOM2; OMR; ORM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC201315 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGCTGTCCGTGCGCGTTGCTGCGGCCGTGGTCCGCGCCCTTCTCGCGGGCCGGACTGGTCTCCAGAA
 ATGCTTTGGGTTTCATCTTTCATTGCTGCAAGAACTTCCATGCCTCTAACACTCATCTTCAAAGACTGG
 GACTGCTGAGATGTCCTCTATTCTTGAAGAGCGTATTCTTGGAGCTGATACCTCTGTTGATCTTGAAGAA
 ACTGGGCGTGTCTTAAGTATTGGTATGGTATTGCCCGCGTACATGGGCTGAGGAATGTTCAAGCAGAAG
 AAATGGTAGAGTTTTCTCAGGCTTAAAGGGTATGTCCTGAACTTGAACCTGACAATGTTGGTGTGT
 CGTGTGTTGAAATGATAAACTAATTAAGGAAGGAGATATAGTGAAGAGGACAGGAGCCATTGTGGACGTT
 CCAGTTGGTGAGGAGCTGTTGGGTCGTAGTTGATGCCCTTGGTAAATGCTATTGATGAAAGGGTCCAA
 TTGGTTCCAAGACGCGTAGGCGAGTTGGTCTGAAAGCCCCGGTATCATTCTCGAATTCAGTCCGGGA
 ACCAATGCAGACTGGCATTAAAGGCTGTGGATAGCTTGGTGCCAATTGGTCTGGTTCAGCGTGAACGATT
 ATTGGTGACCGACAGACTGGGAAAACCTCAATTGCTATTGACACAATCATTAAACCAGAAAAGCTTTCAATG
 ATGGATCTGATGAAAAGAAGAAGCTGTACTGTATTTATGTTGCTATTGGTCAAAAAGAGATCCACTGTTGC
 CCAGTTGGTGAAGAGACTTACAGATGCAGATGCCATGAAGTACACCATTGTTGGTGTCCGGTACCGGCTCG
 GATGCTGCCCCACTTCAGTACCTGGCTCCTTACTCTGGCTGTTCCATGGGAGAGTATTTTAGAGACAATG
 GCAAACATGCTTTGATCATCTATGACGACTTATCCAAACAGGCTGTTGCTTACCCTCAGATGTCTCTGTT
 GCTCCGCCGACCCCTGGTCTGAGGCCATCCTGGTATGTGTTCTACCTACACTCCCGGTTGCTGGAG
 AGAGCAGCCAAAATGAACGATGCTTTGGTGGTGGCTCCTTACTGCTTTGCCAGTCATAGAAAACACAGG
 CTGGTATGTGTCTGCTTACATTCCAAACAAATGTCATTTCCATCACTGACGGACAGATCTCTTGGAAAC
 AGAATTGTTCTACAAAGGTATCCGCCCTGCAATTAACGTTGGTCTGTATCTCGTGTCCGGATCCGCT
 GCCCAAACCAGGCTATGAAGCAGGTAGCAGGTACCATGAAGCTGGAATTGGCTCAGTATCGTGAGGTTG
 CTGCTTTTCCCAGTTCGGTTCTGACCTCGATGCTGCCACTCAACAACCTTTGAGTCGTGGCGTGCCTCT
 AACTGAGTTGCTGAAGCAAGGACAGTATTCTCCCATGGCTATTGAAGAACAAGTGGCTGTTATCTATGCG
 GGTGTAAGGGGATATCTTGATAAACTGGAGCCAGCAAGATTACAAAGTTTGAGAATGCTTTCTGTCTC
 ATGTCGTCAGCCAGCACCAAGCCTTGTGGGCACTATCAGGGCTGATGAAAAGATCTCAGAACAAATCAGA
 TGCAAAGCTGAAAGAGATTGTAACAAATTTCTGGCTGGATTTGAAGCT

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201315 protein sequence
 Red=Cloning site Green=Tags(s)

MLSVRVAADVVRALPRRAGLVSRNALGSSFIAARNFHASNTHLQKTGTAEMSSILEERILGADTSVDLEE
 TGRVLSIGDGIARVHGLRNVQAEEMVEFSSGLKMSLNLEPDNVGVVVFNDKLIKEDIVKRTGAIVDV
 PVGSELLGRVVDALGNAIDGKPIGSKTRRRVGLKAPGIIPRISVREPMQTGIKAVDSLVPVIGRQRELI
 IGDRQTGKTSIAIDTIIINQKRFNDGSDEKKLYCIYVAIGQKRSTVAQLVKRLTDADAMKYTIVVSATAS
 DAAPLQYLAPYSGCSMGEYFRDNGKHALIIYDDLKQAVAYRQMSLLRRPPGREAYPGDVVFLHSRLLE
 RAAKMNDAFGGSLTALPVIETQAGDVSAYIPTNVISITDQIFLETIFYKIRPAINVGLSVSRVGS
 AQTRAMKQVAGTMKLELAQYREVAFAQFGSDLDAATQQLSRGVRLTELLKQGQYSPMAIEEQVAVIYA
 GVRGYLDKLEPSKITKFENAFLSHVVSQHQALLGTIRADGKISEQSDAKLKEIVTNFLAGFEA

SGPTRRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6618_f08.zip

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:


ACCN: NM_001001937

ORF Size: 1659 bp

OTI Disclaimer: 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:**
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_001001937.1](#), [NP_001001937.1](#)

RefSeq Size: 1950 bp

RefSeq ORF: 1662 bp

Locus ID: 498

UniProt ID: [P25705](#)

Cytogenetics: 18q21.1

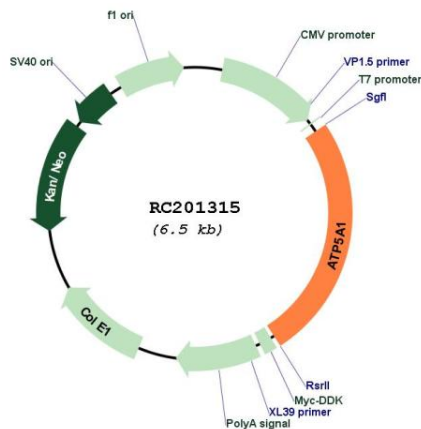
Protein Families: Druggable Genome

Protein Pathways: Alzheimer's disease, Huntington's disease, Metabolic pathways, Oxidative phosphorylation, Parkinson's disease

MW: 59.8 kDa

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, F_o, 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]

Product images:



Circular map for RC201315