

Product datasheet for **RG214840**

ATP5A (ATP5A1) (NM_004046) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | ATP5A (ATP5A1) (NM_004046) Human Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | ATP5A |
| Synonyms: | ATP5A; ATP5A1; ATP5AL2; ATPM; COXPD22; hATP1; HEL-S-123m; MC5DN4; MOM2; OMR; ORM |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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ORF Nucleotide Sequence:

>RG214840 representing NM_004046
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGTCCGTGCGCGTTGCTGCGGCCGTGGTCCGCGCCCTTCTCGCGGGCCGGACTGGTCTCCAGAA
 ATGCTTTGGGTTTCATCTTTCATTGCTGCAAGGAATTCATGCCTCTAACACTCATCTTCAAAGACTGG
 GACTGCTGAGATGTCCTCTATTCTTGAAGAGCGTATTCTTGGAGCTGATACCTCTGTTGATCTTGAAGAA
 ACTGGGCGTGTCTTAAGTATTGGTATGGTATTGCCCGCTACATGGGCTGAGGAATGTTCAAGCAGAAG
 AAATGGTAGAGTTTTCTCAGGCTTAAAGGGTATGTCCTGAACTTGAACCTGACAATGTTGGTGTGT
 CGTGTGGAAATGATAAACTAATTAAGGAAGGAGATATAGTGAAGAGGACAGGAGCCATTGTGGACGTT
 CCAGTTGGTGAGGAGCTTTGGGTCGTGATGTTGATGCCCTTGGTAAATGCTATTGATGAAAGGGTCCAA
 TTGGTTCCAAGACGCGTAGGCGAGTTGGTCTGAAAGCCCCGGTATCATTCTCGAATTCAGTCCGGGA
 ACCAATGCAGACTGGCATTAAAGGCTGTGGATAGCTTGGTCCCAATGGTCTGGTCAGCGTGAACGATT
 ATTGGTGACCGACAGACTGGGAAAACCTCAATTGCTATTGACACAATCATTAAACCAGAAAAGTTC AATG
 ATGGATCTGATGAAAAGAAGAAGCTGTACTGTATTTATGTTGCTATTGGTCAAAAAGAGATCCACTGTTGC
 CCAGTTGGTGAAGAGACTTACAGATGCAGATGCCATGAAGTACACCATTGGTGTCCGGCTACGGCTCG
 GATGCTGCCCCACTTCAGTACCTGGCTCCTTACTCTGGCTGTTCCATGGGAGAGTATTTTAGAGACAATG
 GCAAACATGCTTTGATCATCTATGACGACTTATCCAAACAGGCTGTTGCTTACCCTCAGATGTCTCTGTT
 GCTCCGCCGACCCCTGGTCTGAGGCCATCCTGGTGTGTTCTACCTACACTCCCGGTTGCTGGAG
 AGAGCAGCCAAAATGAACGATGCTTTGGTGGTGGCTCCTTACTGCTTTGCCAGTCATAGAAAACACAGG
 CTGGTGATGTCTGCTTACATTCCAACAAATGTCATTTCCATCACTGACGGACAGATCTTCTTGGAAAC
 AGAATTGTTCTACAAAGGTATCCGCCCTCAATTAACGTTGGTCTGTCTGTATCTCGTGTCCGATCCGCT
 GCCCAAACCAGGCTATGAAGCAGGTAGCAGGTACCATGAAGCTGGAATTGGCTCAGTATCGTGAGGTTG
 CTGCTTTTCCCAGTTCGGTTCTGACCTCGATGCTGCCACTCAACAACCTTTTGGTCTGCGGCTGCGTCT
 AACTGAGTTGCTGAAGCAAGGACAGTATCTCCCATGGCTATTGAAGAACAAGTGGCTGTTATCTATGCC
 GGTGTAAGGGGATATCTTGATAAACTGGAGCCCAGCAAGATTACAAAGTTTGAAGATGCTTTCTGTCTC
 ATGTCGTCAGCCAGCACCAAGCCTTGTGGGCACTATCAGGGCTGATGAAAAGATCTCAGAACAAATCAGA
 TGCAAAGCTGAAAGAGATTGTAACAAATTTCTGGCTGGATTTGAAGCT

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

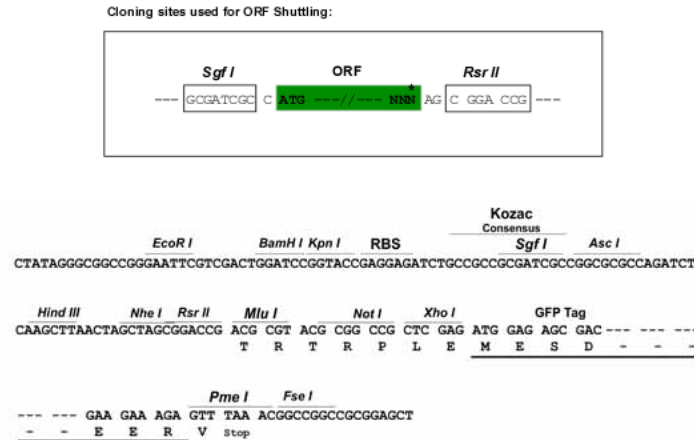
>RG214840 representing NM_004046
 Red=Cloning site Green=Tags(s)

MLSVRVAAAVRALPRRAGLVSRNALGSSFIAARNFHASNTHLQKTGTAEMSSILEERILGADTSVDLEE
 TGRVLSIGDGIARVHGLRNVQAEEMVEFSSGLKMSLNLEPDNVGVVVFNDKLIKEGDIVKRTGAIVDV
 PVGSELLGRVVDALGNAIDGKGPISKTRRRVGLKAPGIIIPRISVREPMQTGIKAVDSLVIIGRQRELI
 IGDRQTGKTSIAIDTIIINQKRFNDGSDEKKLYCIYVAIGQKRSTVAQLVKRLTDADAMKYTIVVSATAS
 DAAPLQYLAPYSGCSMGEYFRDNGKHALIIYDDLKQAVAYRQMSLLLRPPGREAYPGDVLYLHSLRLE
 RAAKMNDAFGGSLTALPVIETQAGDVSAYIPTNVISITDQIFLETIFYKIRPAINVGLSVSRVGS
 AQTRAMKQVAGTMKLELAQYREVAFAQFGSDLDAATQQLSRGVRLTELLKQGQYSPMAIEEQVAVIYA
 GVRGYLDKLEPSKITKFENAFLSHVVSQHQAALLGIRADGKISEQSDAKLKEIVTNFLAGFEA

SGP**TRRRLE** – GFP Tag – V

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:


ACCN: NM_004046

ORF Size: 1659 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](#)

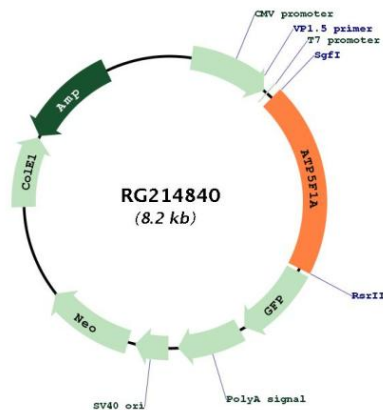
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:**
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_004046.6 |
| 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: | <p>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]</p> |

Product images:



Circular map for RG214840