

Product datasheet for **RG201315**

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:	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:

>RG201315 representing NM_001001937
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGTCCGTGCGCGTTGCTGCGGCCGTGGTCCGCGCCCTTCTCGCGGGCCGGACTGGTCTCCAGAA
 ATGCTTTGGGTTTCATCTTTCATTGCTGCAAGGAATTCATGCCTCTAACACTCATCTTCAAAGACTGG
 GACTGCTGAGATGTCCTCTATTCTTGAAGAGCGTATTCTTGGAGCTGATACCTCTGTTGATCTTGAAGAA
 ACTGGGCGTGTCTTAAGTATTGGTATGGTATTGCCCGCTACATGGGCTGAGGAATGTTCAAGCAGAAG
 AAATGGTAGAGTTTTCTCAGGCTTAAAGGGTATGTCCTGAACTTGAACCTGACAATGTTGGTGTGT
 CGTGTGTTGAAATGATAAACTAATTAAGGAAGGAGATATAGTGAAGAGGACAGGAGCCATTGTGGACGTT
 CCAGTTGGTGAGGAGCTGTTGGTCTGTAGTTGATGCCCTTGGTAAATGCTATTGATGAAAGGGTCCAA
 TTGGTTCCAAGACGCGTAGGCGAGTTGGTCTGAAAGCCCCGGTATCATTCTCGAATTCAGTCCGGGA
 ACCAATGCAGACTGGCATTAAAGGCTGTGGATAGCTTGGTCCCAATTGGTCTGGTTCAGCGTGAACGATT
 ATTGGTGACCGACAGACTGGGAAAACCTCAATTGCTATTGACACAATCATTAAACCAGAAAAGTTTCAATG
 ATGGATCTGATGAAAAGAAGAAGCTGTACTGTATTTATGTTGCTATTGGTCAAAAAGAGATCCACTGTTGC
 CCAGTTGGTGAAGAGACTTACAGATGCAGATGCCATGAAGTACACCATTGGTGTCCGGTACCGGCTCG
 GATGCTGCCCCACTTCAGTACCTGGCTCCTTACTCTGGCTGTTCCATGGGAGAGTATTTTAGAGACAATG
 GCAAACATGCTTTGATCATCTATGACGACTTATCCAAACAGGCTGTTGCTTACCCTCAGATGTCTCTGTT
 GCTCCGCCGACCCCTGGTCTGAGGCCATCCTGGTGTGTGTTCTACCTACACTCCCGGTTGCTGGAG
 AGAGCAGCCAAAATGAACGATGCTTTTGGTGGTGGCTCCTTACTGCTTTGCCAGTCATAGAAAACACAGG
 CTGGTGTGTCTGCTTACATTCCAACAAATGTCATTTCCATCACTGACGGACAGATCTCTTGGAAAC
 AGAATTGTTCTACAAAGGTATCCGCCCTCAATTAACGTTGGTCTGTATCTCGTGTCCGGATCCGCT
 GCCCAAACCAGGCTATGAAGCAGGTAGCAGGTACCATGAAGCTGGAATTGGCTCAGTATCGTGAGGTTG
 CTGCTTTTGGCCAGTTCGGTTCTGACCTCGATGCTGCCACTCAACAACCTTTGAGTCGTGGCGTGCCTCT
 AACTGAGTTGCTGAAGCAAGGACAGTATCTCCCATGGCTATTGAAGAACAAGTGGCTGTTATCTATGCC
 GGTGTAAGGGGATATCTTGATAAACTGGAGCCAGCAAGATTACAAAGTTTGAAGATGCTTTCTGTCTC
 ATGTCGTCAGCCAGCACCAAGCCTTGTGGGCACTATCAGGGCTGATGAAAAGATCTCAGAACAAATCAGA
 TGCAAAGCTGAAAGAGATTGTAACAAATTTCTGGCTGGATTTGAAGCT

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

Protein Sequence:

>RG201315 representing NM_001001937
 Red=Cloning site Green=Tags(s)

MLSVRVAADVVRALPRRAGLVSRNALGSSFIAARNFHASNTHLQKGTAEEMSSILEERILGADTSVDLEE
 TGRVLSIGDGIARVHGLRNVQAEEMVEFSSGLKMSLNLEPDNVGVVVFNDKLIKEGDIVKRTGAIVDV
 PVGSELLGRVVDALGNAIDGKPIGSKTRRRVGLKAPGIIIPRISVREPMQTGIKAVDSLVIPIGRGQRELI
 IGDRQTGKTSIAIDTIIINQKRFNDGSDEKKLYCIYVAIGQKRSTVAQLVKRLTDADAMKYTIVVSATAS
 DAAPLQYLAPYSGCSMGEYFRDNGKHALIIYDDLKQAVAYRQMSLLLRPPGREAYPGDVLYLHSRLLLE
 RAAKMNDAFGGSLTALPVIETQAGDVSAYIPTNVISITDQIFLETIFYKIRPAINVGLSVSRVGS
 AQTRAMKQVAGTMKLELAQYREVAFAQFGSDLDAATQQLSRGVRLTELLKQGGYSPMAIEEQVAVIYA
 GVRGYLDKLEPSKITKFENAFLSHVVSQHQALLGTRADGKISEQSDAKLKEIVTNFLAGFEA

SGP**TRRRLE** – GFP Tag – V

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:


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](#)

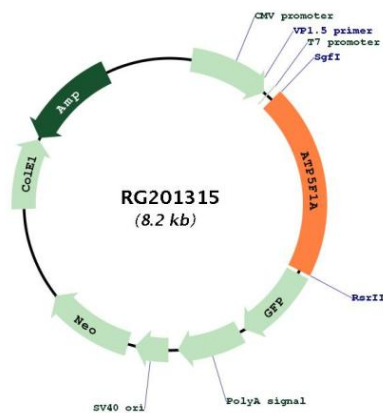
Cytogenetics: 18q21.1

Protein Families: Druggable Genome

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

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]

Product images:



Circular map for RG201315