

Product datasheet for **RG234365**

ATP5A (ATP5A1) (NM_001257334) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP5A (ATP5A1) (NM_001257334) 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:

>RG234365 representing NM_001257334
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGTCCGTGCGCGTTGCTGCGGCCGTGGTCCGCGCCCTTCTCGCGGGCCGGACTGGTCTCCAGAA
 ATGCTTTGGGTTTCATCTTTCATTGCTGCAAGAACTTCCATGCCTCTAACACTCATCTTCAAAGACTGG
 GACTGCTGAGATGTCCTCTATTCTTGAAGAGCGTATTCTTGGAGCTGATACCTCTGTTGATCTTGAAGAA
 ACTGGGCGTGTCTTAAGTATTGGTATGGTATTGCCCGCTACATGGGCTGAGGAATGTTCAAGCAGAAG
 AAATGGTAGAGTTTTCTCAGGCTTAAAGGGTATGTCCTGAACTTGAACCTGACAATGTTGGTGTGT
 CGTGTGTTGAAATGATAAACTAATTAAGGAAGGAGATATAGTGAAGAGGACAGGACCATTGTGGACGGT
 CCAATTGGTTCCAAGACGCGTAGGCGAGTTGGTCTGAAAGCCCCGGTATCATTCTCGAATTTTCAGTGC
 GGAACCAATGCAGACTGGCATTAAAGGCTGTGGATAGCTTGGTGCCAATTGGTCGTGGTCAGCGTGAAC
 TATTATTGGTGACCGACAGACTGGGAAAACCTCAATTGCTATTGACACAATCATTAAACCAGAAACGTTTC
 AATGATGGATCTGATGAAAAGAAGAAGCTGTACTGTATTTATGTTGCTATTGGTCAAAAGAGATCCACTG
 TTGCCAGTTGGTGAAGAGACTTACAGATGCAGATGCCATGAAGTACACCATTGGTGTGCGGCTACGGC
 CTCGGATGCTGCCCACTTCACTACCTGGCTCCTTACTCTGGCTGTTCCATGGGAGAGTATTTTAGAGAC
 AATGGCAAACATGCTTTGATCATCTATGACGACTTATCCAACAGGCTGTTGCTTACCGTCAGATGTCTC
 TGTGCTCCGCGACCCCTGGTCTGAGGCGCTATCCTGGTGTGTGTTCTACCTACACTCCCGTTGCT
 GGAGAGAGCAGCAAAATGAACGATGCTTTTGGTGGTGGCTCCTGACTGCTTTGCCAGTCATAGAAACA
 CAGGCTGGTGTGTGCTGCTTACATCCAACAATGTCATTTCCATCACTGACGGACAGATCTTCTTGG
 AAACAGAATTGTTCTACAAAGGTATCCGCCCTGCAATTAACGTTGGTCTGTCTGTATCTCGTGTGCGGATC
 CGCTGCCCAAACAGGGCTATGAAGCAGGTAGCAGGTACCATGAAGCTGGAATTGGCTCAGTATCGTGAG
 GTTGTGCTTTTCCAGTTCGTTCTGACCTCGATGCTGCCACTCAACAACCTTTGAGTCGTGGCGTGC
 GTCTAACTGAGTTGCTGAAGCAAGGACAGTATTCTCCATGGCTATTGAAGAACAAGTGGCTGTTATCTA
 TGCGGGTGTAAAGGGATATCTTGATAAACTGGAGCCAGCAAGATTACAAAGTTGAGAATGCTTTCTTG
 TCTCATGTCGTCAGCCAGCACCAAGCCTTGTGGGCACTATCAGGGCTGATGAAAGATCTCAGAACAAT
 CAGATGCAAAGCTGAAAGAGATTGTAACAAATTTCTTGGCTGGATTTGAAGCT

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

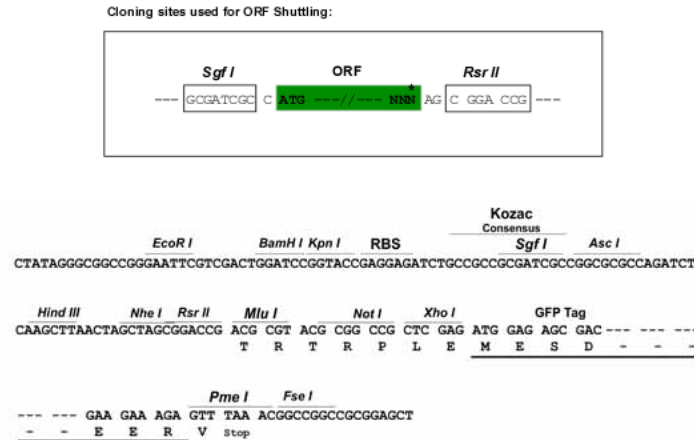
>RG234365 representing NM_001257334
 Red=Cloning site Green=Tags(s)

MLSVRVA AVVRLPRRAGLVSRNALGSSFIAARNFHASNTHLQKTGTAEMSSILEERILGADTSVDLEE
 TGRVLSIGDGIARVHGLRNVQAEEMVEFSSGLKGMSLNLEPDNVGVVVFNDKLIKEGDIVKRTGAIVDG
 PIGSKTRRRVGLKAPGIIPRISVREPMQTGIKAVDSLVPIGRGQRELIIGDRQTGKTSIAIDTIIINQKRF
 NDGSDEKKLYCIYVAIGQKRSTVAQLVKRLTDADAMKYTIVVSATASDAAPLQYLAPYSGCSMGEYFRD
 NGKHALIIYDDLKQAVAYRQMSLLRRPPGREAYPGDVFYLHSRLLERAAMNDAFGGSLTALPVIET
 QAGDVSAIYPTNVISITDQIFLETELFYKGRPAINVGLSVSRVGSAAQTRAMKQVAGTMKLELAQYRE
 VAAFAQFGSDLDAATQQLSRGVRLTELLKQGQYSPMAIEEQVAVIYAGVRYLDKLEPSKITKFENAF
 SHVVSQHQALLGTIRADGKISEQSDAKLKEIVTNFLAGFEA

SGPTRRRLE - GFP Tag - V

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:


ACCN: NM_001257334

ORF Size: 1593 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_001257334.2](#)

RefSeq Size: 1861 bp

RefSeq ORF: 1596 bp

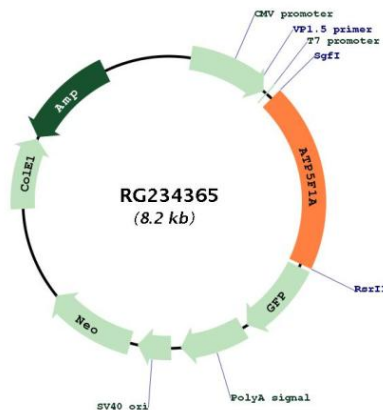
Locus ID: 498

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:	<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 RG234365