

## Product datasheet for **RG201638**

### **ATP5F1B (NM\_001686) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ATP5F1B (NM_001686) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ATP5F1B
Synonyms:	ATP5B; ATPMB; ATPSB; HEL-S-271
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG201638 representing NM\_001686  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGTTGGGTTTGTGGTTCGGTGGCCGCTGCTCCGGCCTCCGGGCCTTGCGGAGACTCACCCCTTCAG  
 CGTCGCTGCCCCAGCTCAGCTTACTGCGGGCCGCTCCGACGCGCGTCCATCCTGTACGGGACTATGC  
 GGCGCAAACATCTCCTTCGCAAAAAGCAGGCGCCGCCACCGGGCGCATCGTGGCGGTCATTGGCGCAGTG  
 GTGGACGTCCAGTTTGTAGGGGACTACCACCAATTCTAAATGCCCTGGAAGTGAAGGCAGGGAGACCA  
 GACTGGTTTTGGAGGTGGCCAGCATTGGGTGAGAGCACAGTAAGGACTATTGCTATGGATGGTACAGA  
 AGGCTTGGTTAGAGGCCAGAAAGTACTGGATTCTGGTGCACCAATCAAAATTCCTGTTGGTCTGAGACT  
 TTGGGCAGAATCATGAATGTCATTGGAGAACCTATTGATGAAAGAGGTCCCATCAAACCAACAATTTG  
 CTCCCATTCATGCTGAGGCTCCAGAGTTCATGAAATGAGTGTGAGCAGGAAATTCGGTACTGGTAT  
 CAAGTTGTGCTGCTAGCTCCCTATGCCAAGGGTGGCAAAATGGGCTTTTTGGTGGTCTGGAGTT  
 GGCAAGACTGTACTGATCATGGAGTTAATCAACAATGTCGCCAAAGCCATGGTGGTTACTCTGTGTTTG  
 CTGGTGTGGTGAGAGGACCCGTGAAGGCAATGATTTATACCATGAAATGATTGAATCTGGTGTATCAA  
 CTTAAAAGATGCCACCTTAAGGTAGCGCTGGTATATGGTCAAATGAATGAACCCTGGTCTCGTGCC  
 CGGGTAGCTCTGACTGGGCTGACTGTGGCTGAATACTTCAGAGACCAAGAAGGTCAAGATGTACTGCTAT  
 TTATTGATAACATCTTTCGCTTCACCCAGGCTGGTTCAGAGGTGTCTGCATTATTGGGCCGAATCCCTTC  
 TGCTGTGGGCTATCAGCCTACCTGGCCACTGACATGGTACTATGCAGGAAAGAATTACCACTACCAAG  
 AAGGATCTATCACCTCTGTACAGGCTATCTATGTGCCTGCTGATGACTGACTGACCCTGCCCTGCTA  
 CTACGTTTGGCCATTTGGATGCTACCACCTGTACTGTCGCGTGCCATTGCTGAGCTGGGCATCTATCCAGC  
 GTGGATCCTCTAGACTCCACCTCTCGTATCATGGATCCCAACATTGTTGGCAGTGAGCATTACGATGTT  
 GCCCGTGGGTGCAAAAGATCCTGCAGGACTACAATCCCTCCAGGATATCATTGCCATCTGGGTATGG  
 ATGAACCTTCTGAGGAAGACAAGTTGACCGTGTCCCGTGCACGAAAATACAGCGTTTCTTGTCTCAGCC  
 ATTCCAGTTGCTGAGGTCTTCACAGGTCAATGGGGAAGCTGGTACCCCTGAAGGAGACCATCAAAGGA  
 TTCCAGCAGATTTGGCAGGTGAATATGACCATCTCCAGAACAGGCCTTCTATATGGTGGGACCCATTG  
 AAGAAGCTGTGGCAAAAGCTGATAAGCTGGCTGAAGAGCATTATCG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG201638 representing NM\_001686  
 Red=Cloning site Green=Tags(s)

MLGFVGRVAAAPASGALRRLTPSASLPPAQLLLRAAPTAVHPVRDYAAQTSPSPKAGAATGRIVAVIGAV  
 VDVFDEGLPPILNALEVQGRETRLVLEVAQHLGESTVRTIAMDGTEGLVRGQKVLDSGAPIKIPVGPET  
 LGRIMNVIGEPIDERGPIKTKQFAPIHAEAPEFMEMSVEQEILVTGKVVDLLAPYAKGGKIGLFGGAGV  
 GKTVLIMELINNVAKAHGGYSVFAVGERTREGNDLYHEMIESGVINLKDATSKVALVYQMNPPGARA  
 RVALTGLTVAEYFRDQEGQDVLFFIDNIFRFTQAGSEVSALLGRIPSAVGYQPTLATDMGTMQERITTTK  
 KGSITSVQAIYVPADDLTDPAATTF AHL DATTVL SRAIAELGIYPAVDPLDSTSRIMDPNIVGSEHYDV  
 ARGVQKILQDYKSLQDIIAAILGMDLSEEDKLT VSRARKIQRFLSQPFQVAEVFTGHMGLVPLKETIKG  
 FQILAGEYDHLPEQAFYVMVPIEEAVAKADKLAEEHSS

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_001686

**ORF Size:** 1587 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](mailto: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).

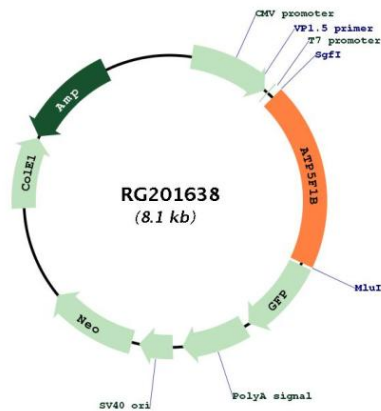
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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\\_001686.4](#)

**RefSeq Size:** 1857 bp  
**RefSeq ORF:** 1590 bp  
**Locus ID:** 506  
**UniProt ID:** [P06576](#)  
**Cytogenetics:** 12q13.3  
**Domains:** ATP-synt\_ab, ATP-synt\_ab\_C, AAA, 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, utilizing 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, F<sub>1</sub>, and the membrane-spanning component, F<sub>o</sub>, 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 beta subunit of the catalytic core. [provided by RefSeq, Jul 2008]

### Product images:



Circular map for RG201638