

Product datasheet for **RC201638**

ATP5F1B (NM_001686) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP5F1B (NM_001686) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ATP5F1B
Synonyms:	ATP5B; ATPMB; ATPSB; HEL-S-271
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC201638 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTTGGGTTTGTGGTGGGTGGCCGCTGCTCCGGCCTCCGGGCTTGGCGAGACTCACCCCTCAG
 CGTCGCTGCCCCAGCTCAGCTTACTGCGGGCCGCTCCGACGGCGGTCCATCCTGTACGGACTATGC
 GGCGCAAACATCTCCTTCGCAAAAAGCAGGCGCCGCCACCGGGCGCATCGTGGCGGTATTGGCGCAGTG
 GTGGACGTCCAGTTTGTAGGGACTACCACCAATTCTAAATGCCCTGGAAGTGAAGGCAGGGAGACCA
 GACTGGTTTTGGAGGTGGCCAGCATTGGGTGAGAGCACAGTAAGGACTATTGCTATGGATGGTACAGA
 AGGCTTGGTTAGAGGCCAGAAAGTACTGGATTCTGGTGCACCAATCAAAATTCCTGTTGGTCTGAGACT
 TTGGGCAGAATCATGAATGTCATTGGAGAACCTATTGATGAAAGAGGTCCCATCAAAACCAACAATTTG
 CTCCCATTCATGCTGAGGCTCCAGAGTTCATGAAATGAGTGTGAGCAGGAAATTCGGTACTGGTAT
 CAAGTTGTGCTGCTAGCTCCCTATGCCAAGGGTGGCAAAATGGGCTTTTTGGTGGTCTGGAGTT
 GGCAAGACTGTACTGATCATGGAGTTAATCAACAATGTCGCCAAAGCCATGGTGGTTACTCTGTGTTG
 CTGGTGTGGTGAGAGGACCCGTGAAGGCAATGATTTATACCATGAAATGATTGAATCTGGTGTATCAA
 CTTAAAAGATGCCACCTTAAGGTAGCGCTGGTATATGGTCAAATGAATGAACCCTGGTCTCGTGCC
 CGGGTAGCTCTGACTGGGCTGACTGTGGCTGAATACTTCAGAGACCAAGAAGGTCAAGATGTACTGCTAT
 TTATTGATAACATCTTTCGCTTCACCCAGGCTGGTTCAGAGGTGTCTGCATTATTGGGCCGAATCCCTTC
 TGCTGTGGGCTATCAGCCTACCTGGCCACTGACATGGTACTATGCAGGAAAGAATTACCACTACCAAG
 AAGGGATCTATCACCTCTGTACAGGCTATCTATGTGCCTGCTGACTGACTGACCCTGCCCTGCTA
 CTACGTTTTGCCATTTGGATGCTACCAGTGTACTGTGCGGTGCCATTGCTGAGCTGGGCATCTATCCAGC
 TGTGGATCCTCTAGACTCCACCTCTCGTATCATGGATCCCAACATTGTTGGCAGTGAGCATTACGATGTT
 GCCCGTGGGTGCAAAAGATCCTGCAGGACTACAATCCCTCCAGGATATCATTGCCATCTGGGTATGG
 ATGAACTTTCTGAGGAAGACAAGTTGACCGTGTCCCGTGCACGAAAATACAGCGTTTCTTGTCTCAGCC
 ATTCCAGTTGCTGAGGTCTTACAGGTCATATGGGGAAGCTGGTACCCCTGAAGGAGACCATCAAAGGA
 TTCCAGCAGATTTGGCAGGTGAATATGACCATCTCCAGAACAGGCCTTCTATATGGTGGGACCCATTG
 AAGAAGCTGTGGCAAAAGCTGATAAGCTGGCTGAAGAGCATTATCG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201638 protein sequence
 Red=Cloning site Green=Tags(s)

MLGFVGRVAAAPASGALRRLTPSASLPPAQLLLRAAPTAVHPVRDYAAQTSPSPKAGAATGRIVAVIGAV
 VDVFDEGLPPILNALEVQGRETRLVLEVAQHLGESTVRTIAMDGTEGLVRGQKVLDSGAPIKIPVGPET
 LGRIMNVIGEPIDERGPICKTKQFAPIHAEAPEFMEMSVEQEILVTGIKVVDLLAPYAKGGKIGLFGGAGV
 GKTVLIMELINNVAKAHGGYSVFAVGERTREGNDLYHEMIESGVINLKDATSKVALVYQGMNEPPGARA
 RVALTGLTVAEYFRDQEQDVLFFIDNIFRFTQAGSEVSALLGRIPSAVGYQPTLATDMGMTQERITTTK
 KGSITSVQAIYVPADDLTDPAATTF AHL DATTVL SRAIAELGIYPAVDPLDSTSRIMDPNIVGSEHYDV
 ARGVQKILQDYKSLQDI IAILGMDLSEEDKLTVSRARKIQRFLSQPFQVAEVFTGHMGKLVPLKETIKG
 FQILAGEYDHLPEQAFYVMGPIEEAVAKADKLAEEHSS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6139_c11.zip

Restriction Sites:

Sgfl-MluI

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 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](#)

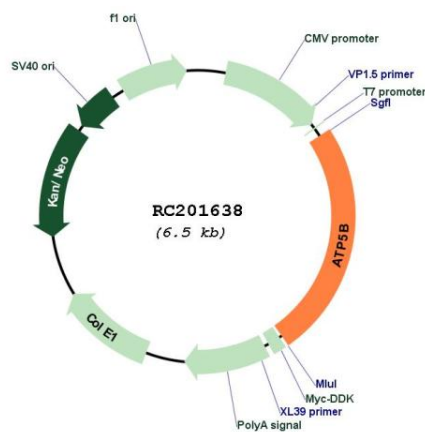
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

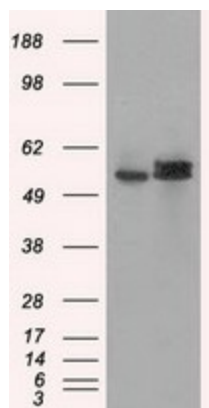
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the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

Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
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
MW:	56.6 kDa
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, 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 beta subunit of the catalytic core. [provided by RefSeq, Jul 2008]

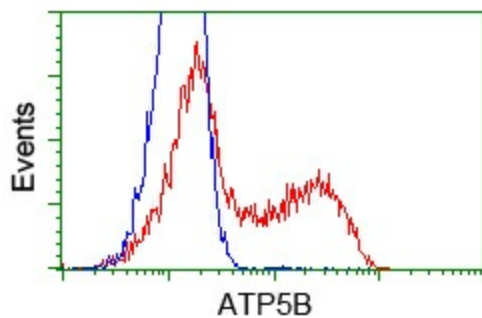
Product images:



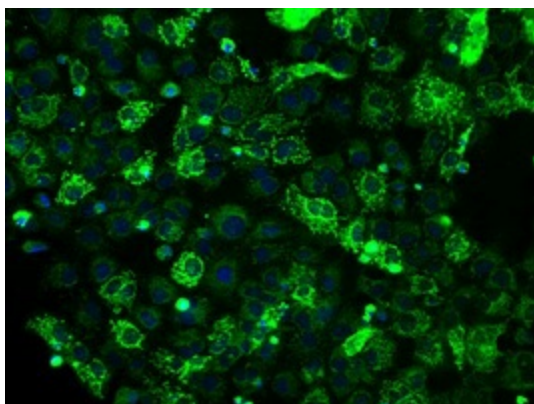
Circular map for RC201638



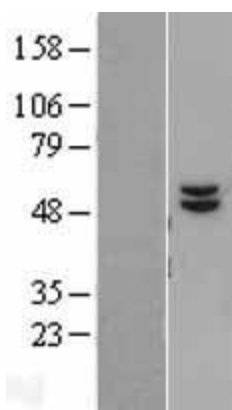
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ATP5B (Cat# RC201638, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ATP5B (Cat# [TA500834]). Positive lysates [LY400637] (100ug) and [LC400637] (20ug) can be purchased separately from OriGene.



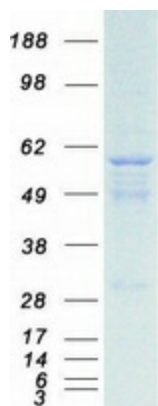
HEK293T cells transfected with either pCMV6-ENTRY ATP5B (RC201638) (Red) or empty vector control plasmid (Blue) were immunostained with anti-ATP5B mouse monoclonal ([TA500834]), and then analyzed by flow cytometry.



Anti-ATP5B mouse monoclonal antibody ([TA500834]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY ATP5B (RC201638).



Western blot validation of overexpression lysate (Cat# [LY400637]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201638 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ATP5F1B protein (Cat# [TP301638]). The protein was produced from HEK293T cells transfected with ATP5F1B cDNA clone (Cat# RC201638) using MegaTran 2.0 (Cat# [TT210002]).