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Product datasheet for RC214840

ATP5A (ATP5A1) (NM_004046) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	ATP5A
Synonyms:	ATP5A; ATP5A1; ATP5AL2; ATPM; COXPD22; hATP1; HEL-S-123m; MC5DN4; MOM2; OMR; ORM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC214840 representing NM_004046
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCTGTCCGTGCGCGTTGCTGCGGCCGTGGTCCGCGCCCTTCCTCGGCGGGCCGGACTGGTCTCCAGAA
ATGCTTTGGGTTCATCTTTCATTGCTGCAAGGAACTTCCATGCCTCTAACACTCATCTTCAAAAGACTGG
GACTGCTGAGATGTCCTCTATTCTTGAAGAGCGTATTCTTGGAGCTGATACCTCTGTTGATCTTGAAGAA
ACTGGGCGTGTCTTAAGTATTGGTGATGGTATTGCCCGCGTACATGGGCTGAGGAATGTTCAAGCAGAAG
AAATGGTAGAGTTTTCTTCAGGCTTAAAGGGTATGTCCTTGAACTTGGAACCTGACAATGTTGGTGTTGT
CGTGTTTGGAAATGATAAACTAATTAAGGAAGGAGATATAGTGAAGAGGACAGGAGCCATTGTGGACGTT
CCAGTTGGTGAGGAGCTGTTGGGTCGTGTAGTTGATGCCCTTGGTAATGCTATTGATGGAAAGGGTCCAA
TTGGTTCCAAGACGCGTAGGCGAGTTGGTCTGAAAGCCCCCGGTATCATTCCTCGAATTTCAGTGCGGGA
ACCAATGCAGACTGGCATTAAGGCTGTGGATAGCTTGGTGCCAATTGGTCGTGGTCAGCGTGAACTGATT
ATTGGTGACCGACAGACTGGGAAAACCTCAATTGCTATTGACACAATCATTAACCAGAAACGTTTCAATG
ATGGATCTGATGAAAAGAAGAAGCTGTACTGTATTTATGTTGCTATTGGTCAAAAGAGATCCACTGTTGC
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GATGCTGCCCCACTTCAGTACCTGGCTCCTTACTCTGGCTGTTCCATGGGAGAGTATTTTAGAGACAATG
GCAAACATGCTTTGATCATCTATGACGACTTATCCAAACAGGCTGTTGCTTACCGTCAGATGTCTCTGTT
GCTCCGCCGACCCCCTGGTCGTGAGGCCTATCCTGGTGATGTGTTCTACCTACACTCCCGGTTGCTGGAG
AGAGCAGCCAAAATGAACGATGCTTTTGGTGGTGGCTCCTTGACTGCTTTGCCAGTCATAGAAACACAGG
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AGAATTGTTCTACAAAGGTATCCGCCCTGCAATTAACGTTGGTCTGTCTGTATCTCGTGTCGGATCCGCT
GCCCAAACCAGGGCTATGAAGCAGGTAGCAGGTACCATGAAGCTGGAATTGGCTCAGTATCGTGAGGTTG
CTGCTTTTGCCCAGTTCGGTTCTGACCTCGATGCTGCCACTCAACAACTTTTGAGTCGTGGCGTGCGTCT
AACTGAGTTGCTGAAGCAAGGACAGTATTCTCCCATGGCTATTGAAGAACAAGTGGCTGTTATCTATGCG
GGTGTAAGGGGATATCTTGATAAACTGGAGCCCAGCAAGATTACAAAGTTTGAGAATGCTTTCTTGTCTC
ATGTCGTCAGCCAGCACCAAGCCTTGTTGGGCACTATCAGGGCTGATGGAAAGATCTCAGAACAATCAGA
TGCAAAGCTGAAAGAGATTGTAACAAATTTCTTGGCTGGATTTGAAGCT

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC214840 representing NM_004046
Red=Cloning site Green=Tags(s)

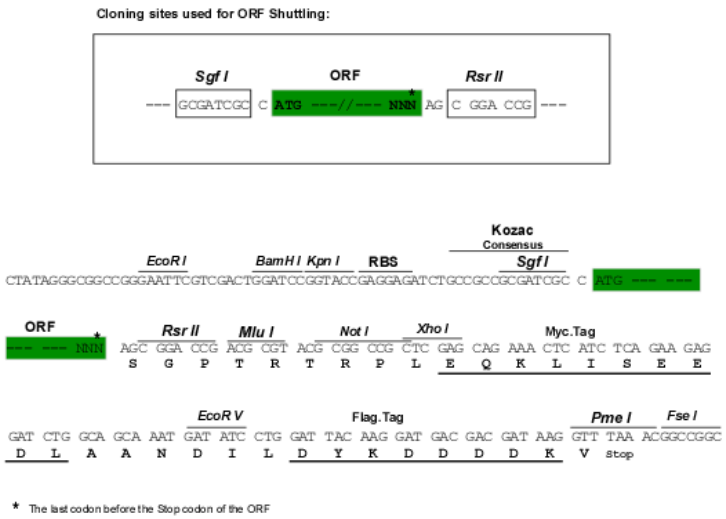
MLSVRVAAAVVRALPRRAGLVSRNALGSSFIAARNFHASNTHLQKTGTAEMSSILEERILGADTSVDLEE
TGRVLSIGDGIARVHGLRNVQAEEMVEFSSGLKGMSLNLEPDNVGVVVFGNDKLIKEGDIVKRTGAIVDV
PVGEELLGRVVDALGNAIDGKGPIGSKTRRRVGLKAPGIIPRISVREPMQTGIKAVDSLVPIGRGQRELI
IGDRQTGKTSIAIDTIINQKRFNDGSDEKKKLYCIYVAIGQKRSTVAQLVKRLTDADAMKYTIVVSATAS
DAAPLQYLAPYSGCSMGEYFRDNGKHALIIYDDLSKQAVAYRQMSLLLRRPPGREAYPGDVFYLHSRLLE
RAAKMNDAFGGGSLTALPVIETQAGDVSAYIPTNVISITDGQIFLETELFYKGIRPAINVGLSVSRVGSA
AQTRAMKQVAGTMKLELAQYREVAAFAQFGSDLDAATQQLLSRGVRLTELLKQGQYSPMAIEEQVAVIYA
GVRGYLDKLEPSKITKFENAFLSHVVSQHQALLGTIRADGKISEQSDAKLKEIVTNFLAGFEA

SGPTRTRRLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6222_d10.zip

Restriction Sites: SgfI-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

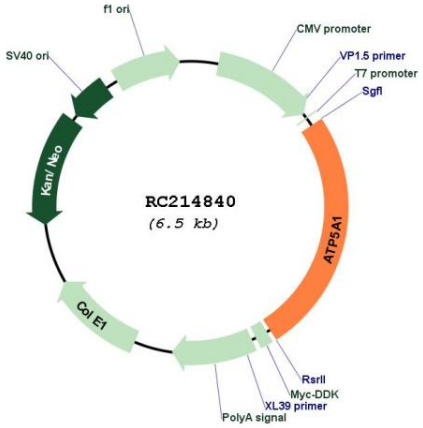
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

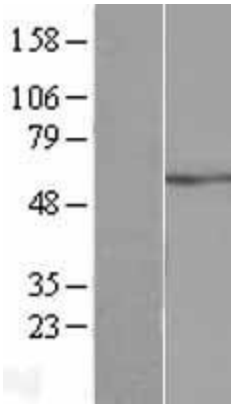
Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid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

Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
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
MW:	59.75 kDa
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]

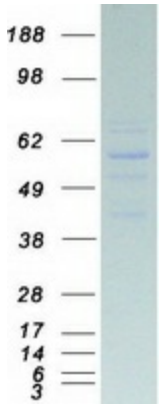
Product images:



Circular map for RC214840



Western blot validation of overexpression lysate (Cat# [LY418257]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214840 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ATP5F1A protein (Cat# [TP314840]). The protein was produced from HEK293T cells transfected with ATP5F1A cDNA clone (Cat# RC214840) using MegaTran 2.0 (Cat# [TT210002]).