

## Product datasheet for RC216197

### ATP5MC1 (NM\_001002027) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** ATP5MC1 (NM\_001002027) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** ATP5MC1  
**Synonyms:** ATP5A; ATP5G; ATP5G1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC216197 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCAGACCGCCGGGCATTATTCATTTCTCCAGCTCTGATCCGCTGTTGTACCAGGGTCTAATCAGGC  
CTGTGTCTGCCTCCTTCTGAATAGCCAGTGAATTCATCTAACAGCCTTCTACAGCACTTCCCACT  
CCAGGTGGCCAGACGGGAGTCCAGACCAGTGTGTCTCCGGGACATTGACACAGCAGCAAGTTATT  
GGTGTGGGCAGCCACAGTTGGTGTGGCTGGTTCAGGGGCTGGCATTGGAACCGTGTGGCAGCTTGA  
TCATTGGCTATGCCAGGAACCTTCTCTCAAGCAGCAGCTTCTCCTATGCCATTCTTGGCTTTGCCCT  
GTCTGAGCCATGGGGCTTTTCTGTTTGTGGTTCGCTTCTCATCCTCTCGCCATG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC216197 protein sequence  
 Red=Cloning site Green=Tags(s)

MQTAGALFISPALIRCCTRGLIRPVSASFNLNSPVNSSKQPSYSNFPLQVARREFQTSVVSRDIDTAAKFI  
GAGAATVGVAGSGAGIGTVFGSLIIGYARNPSLKQQLFSYAILGFALSEAMGLFCLMVAFLILFAM

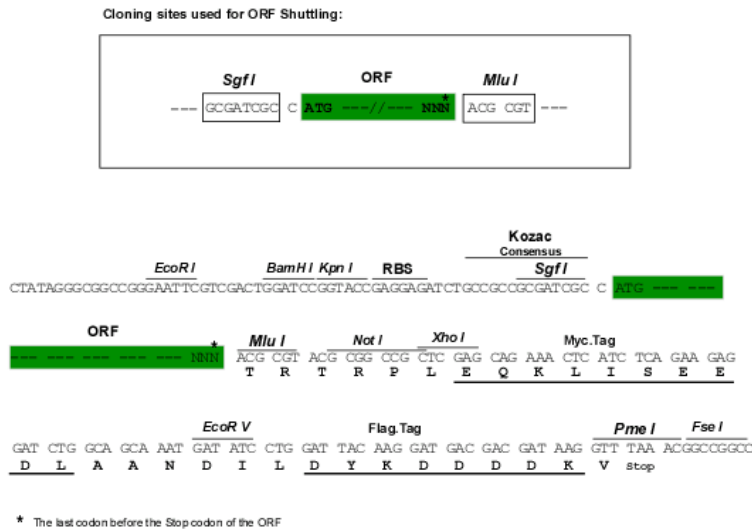
**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6407\\_a07.zip](https://cdn.origene.com/chromatograms/mk6407_a07.zip)

**Restriction Sites:** Sgfl-Mlul



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**Cloning Scheme:**


**ACCN:** NM\_001002027

**ORF Size:** 408 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\\_001002027.1](#), [NP\\_001002027.1](#)

**RefSeq Size:** 593 bp

**RefSeq ORF:** 411 bp

**Locus ID:** 516

**UniProt ID:** [P05496](#)

**Cytogenetics:** 17q21.32

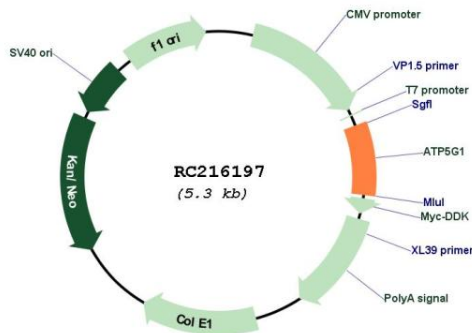
**Protein Families:** Transmembrane

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

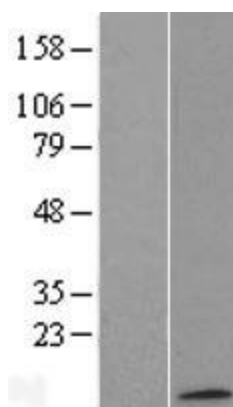
**MW:** 14.3 kDa

**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, 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 seems to have nine subunits (a, b, c, d, e, f, g, F6 and 8). This gene is one of three genes that encode subunit c of the proton channel. Each of the three genes have distinct mitochondrial import sequences but encode the identical mature protein. Alternatively spliced transcript variants encoding the same protein have been identified. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC216197



Western blot validation of overexpression lysate (Cat# [LY400364]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216197 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).