

Product datasheet for **RG212805**

ATP5MC2 (NM_005176) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: ATP5MC2 (NM_005176) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: ATP5MC2
Synonyms: ATP5A; ATP5G2
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG212805 representing NM_005176
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCTGAGCTGATCCTGTATGTTGCAATCACTCTATCCGTGGCTGAGCGACTCGTTGGCCCGGTCACG
CATGCGCTGAGCCTTCTTTGCTCTTCCCGCTGCTCCGCCCTCTGTCTTCTCTGCAGTGGGAGCAG
CTCTCCTGCCACAGCTCCTCACCCCTGAAAATGTTCCGCTGCTCCAAGTTTGTCTCCACTCCCTCCTTG
GTCAAGAGCACCTCACAGCTGCTGAGCCGTCGGCTATCTGCAGTGGTGTCAAACGACCGGAGATACTGA
CAGATGAGAGCCTCAGCAGCTTGGCAGTCTCATGTCCCCTTACCTCACTGTCTCTAGCCGAGCTTCCA
AACCAGCGCCATTTCAAGGGACATCGACACAGCAGCAAGTTCATTGGAGCTGGGGCTGCCACAGTTGGG
GTGGCTGGTTCTGGGGCTGGGATTGGAAGTGTGTTTGGGAGCCTCATCATTGGTTATGCCAGGAACCCCT
CTCTGAAGCAACAGCTCTTCTCCTACGCCATTCTGGGCTTTGCCCTCTCGGAGGCCATGGGGCTCTTTTG
TCTGATGGTAGCCTTTCTCATCCTTTTGCCATG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG212805 representing NM_005176
Red=Cloning site Green=Tags(s)

MPSELILYVAITLSVAERLVGPGHACAEPFRSSRCSAPLCLLCGSSSPATAPHPLKMFACSKFVSTPSL
VKSTSQLLSRPLSAVVLKRPEILTDESLSLAVSCPLTSLVSSRSFQTSASRDIDTAAKFIGAGAAATVG
VAGSGAGIGTVFGSLIIGYARNPSLKQQLFSYAILGFALSEAMGLFCLMVAFLILFAM

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

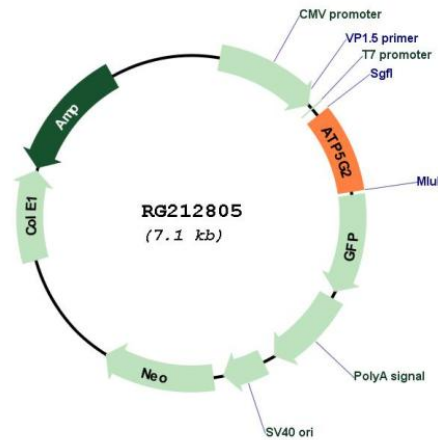


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Cloning Scheme:



Plasmid Map:



ACCN: NM_005176

ORF Size: 594 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_005176.5](#), [NP_005167.2](#)

RefSeq Size: 898 bp

RefSeq ORF: 426 bp

Locus ID: 517

UniProt ID: [Q06055](#)

Cytogenetics: 12q13.13

Domains: ATP-synt_C

Protein Families: Transmembrane

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, 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 single representatives of the gamma, delta, and epsilon subunits. The proton channel likely has nine subunits (a, b, c, d, e, f, g, F6 and 8). There are three separate genes which encode subunit c of the proton channel and they specify precursors with different import sequences but identical mature proteins. The protein encoded by this gene is one of three precursors of subunit c. This gene has multiple pseudogenes. [provided by RefSeq, Jan 2018]