

## Product datasheet for **RG210485**

### COX6A1 (NM\_004373) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** COX6A1 (NM\_004373) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** COX6A1  
**Synonyms:** CMTRID; COX6A; COX6AL  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG210485 representing NM\_004373  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGC**C

ATGGCGGTAGTTGGTGTGTCTCGGTTTCTCGGCTGCTGGGTGGTCCCGCCACAGCTGGGGCGGCCTA  
 TGTCGAGTGGCGCCCATGGCGAAGAGGGCTCAGCTCGCATGTGGAAGACTCTCACCTTCTTCGTCGCGCT  
 CCCCAGGGTGGCAGTCAGCATGCTGAATGTGTACCTGAAGTCGCACCACGGAGAGCACGAGAGACCCGAG  
 TTCATCGCCTACCCCATCTCCGCATCAGGACCAAGCCGTTTCCCTGGGAGATGGTAACCATACTCTAT  
 TCCATAACCCTCATGTGAATCCACTTCCAACCTGGCTACGAAGATGAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG210485 representing NM\_004373  
 Red=Cloning site Green=Tags(s)  
 MAVVGVSYSRLLGRSRPQLGRPMSSGAHGEESARMWKTLTFFVALPGVAVSMLNVYLKSHHGEHERPE  
 FIAYPHLRIRTKPFPWGDGNHTLFHNPHVNPLPTGYEDE

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI



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**Cloning Scheme:**


**ACCN:** NM\_004373

**ORF Size:** 327 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.

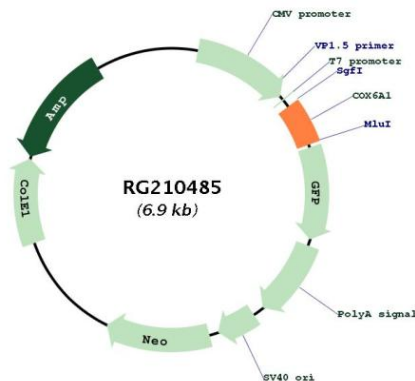
**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_004373.4](#)

RefSeq Size:	548 bp
RefSeq ORF:	330 bp
Locus ID:	1337
UniProt ID:	<a href="#">P12074</a>
Cytogenetics:	12q24.2
Protein Families:	Transmembrane
Protein Pathways:	Alzheimer's disease, Cardiac muscle contraction, Huntington's disease, Metabolic pathways, Oxidative phosphorylation, Parkinson's disease

**Gene Summary:** Cytochrome c oxidase (COX), the terminal enzyme of the mitochondrial respiratory chain, catalyzes the electron transfer from reduced cytochrome c to oxygen. It is a heteromeric complex consisting of 3 catalytic subunits encoded by mitochondrial genes and multiple structural subunits encoded by nuclear genes. The mitochondrially-encoded subunits function in the electron transfer and the nuclear-encoded subunits may function in the regulation and assembly of the complex. This nuclear gene encodes polypeptide 1 (liver isoform) of subunit VIa, and polypeptide 1 is found in all non-muscle tissues. Polypeptide 2 (heart/muscle isoform) of subunit VIa is encoded by a different gene, and is present only in striated muscles. These two polypeptides share 66% amino acid sequence identity. It has been reported that there may be several pseudogenes on chromosomes 1, 6, 7q21, 7q31-32 and 12. However, only one pseudogene (COX6A1P) on chromosome 1p31.1 has been documented. [provided by RefSeq, Jul 2008]

## Product images:



Circular map for RG210485