

Product datasheet for **RC210485**

COX6A1 (NM_004373) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: COX6A1 (NM_004373) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: COX6A1
Synonyms: CMTRID; COX6A; COX6AL
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC210485 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGGTAGTTGGTGTGTCTCGGTTTCTCGGCTGCTGGGTGGTCCCGCCACAGCTGGGGCGGCCTA
TGTCGAGTGGCGCCCATGGCGAAGAGGGCTCAGCTCGCATGTGGAAGACTCTCACTTCTTCGTCGCGCT
CCCCGGGTGGCAGTCAGCATGTGAATGTGTACCTGAAGTCGCACCACGGAGAGCACGAGAGACCCGAG
TTCATCGCTACCCCATCTCCGCATCAGGACCAAGCCGTTCCCTGGGAGATGGAACCATACTCTAT
TCCATAACCTCATGTGAATCCACTTCCAAGTACGAAGATGAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC210485 protein sequence
Red=Cloning site Green=Tags(s)
MAVVGVSYSRLLGRSRPQLGRPMSSGAHGEEGSARMWKTLTFFVALPGVAVSMLNVYLKSHHGEHERPE
FIAYPHLRIRTKFPWPWGDGNHTLFHNPHVNPLPTGYEDE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6071_g02.zip

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.

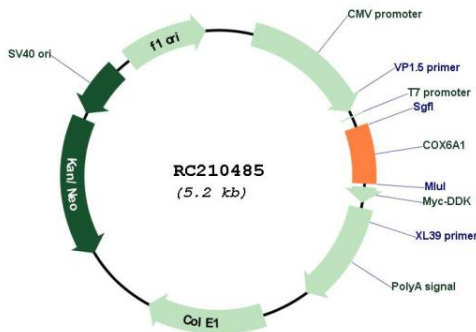
RefSeq: [NM_004373.4](#)

RefSeq Size: 593 bp

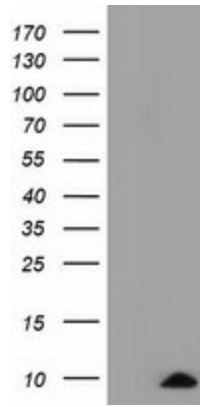
RefSeq ORF: 330 bp

Locus ID: 1337
UniProt ID: [P12074](#)
Cytogenetics: 12q24.2
Protein Families: Transmembrane
Protein Pathways: Alzheimer's disease, Cardiac muscle contraction, Huntington's disease, Metabolic pathways, Oxidative phosphorylation, Parkinson's disease
MW: 12.2 kDa
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]

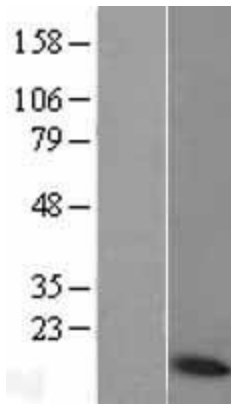
Product images:



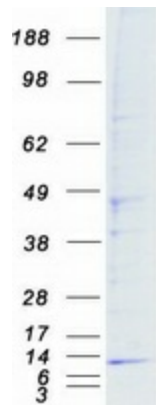
Circular map for RC210485



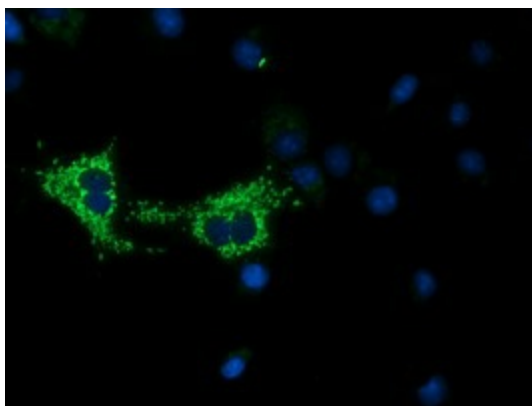
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY COX6A1 (Cat# RC210485, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-COX6A1 (Cat# [TA501431]). Positive lysates [LY401392] (100ug) and [LC401392] (20ug) can be purchased separately from OriGene.



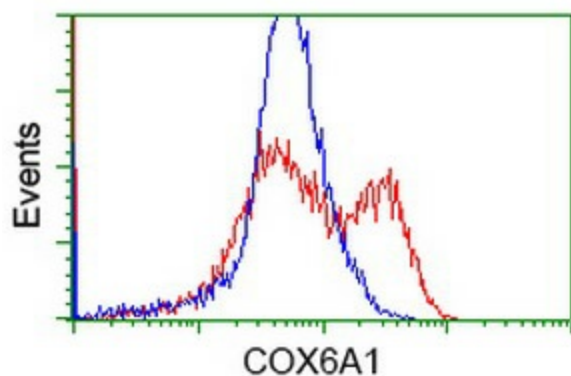
Western blot validation of overexpression lysate (Cat# [LY401392]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210485 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified COX6A1 protein (Cat# [TP310485]). The protein was produced from HEK293T cells transfected with COX6A1 cDNA clone (Cat# RC210485) using MegaTran 2.0 (Cat# [TT210002]).



Anti-COX6A1 mouse monoclonal antibody (TA501431) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY COX6A1 (RC210485).



HEK293T cells transfected with either RC210485 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-COX6A1 antibody (TA501431), and then analyzed by flow cytometry.