

## Product datasheet for **RC209204**

### COX4 (COX4I2) (NM\_032609) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** COX4 (COX4I2) (NM\_032609) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** COX4  
**Synonyms:** COX4; COX4-2; COX4B; COX4L2; COXIV-2; dj857M17.2  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC209204 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTCCCCAGAGCTGCCTGGAGCTTGGTGTGAGGAAAGGTGGAGGTGGAAGACGAGGGATGCACAGCT  
CAGAAGGCACCACCCGTGGTGGGGGAAGATGTCCCCCTACACCAACTGCTATGCCCAGCGCTACTACCC  
CATGCCAGAAGAGCCCTTCTGCACAGAAGCTCAACGCTGAGGAGCAGGCCCTGAAGGAGAAGGAGAAGGGA  
AGCTGGACCCAGCTGACCCACGCCGAAAAGGTGGCCTTGTACCGCTCCAGTTCAATGAGACCTTTGCGG  
AGATGAACCGTCGCTCCAATGAGTGGAAGACAGTGATGGGTTGTGTCTTCTTTCATTGGATTGCGCAGC  
TCTGGTGATTTGGTGGCAGCGGGTCTACGTATTTCTCCAAGCCGATCACCTTGACGGACGAGCGGAAA  
GCCCAGCAGCTGCAGCGCATGCTGGACATGAAGGTGAATCCTGTGCAGGGCCTGGCTCCCGCTGGGACT  
ATGAGAAGAAGCAGTGAAGAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC209204 protein sequence  
Red=Cloning site Green=Tags(s)

MLPRAAWSLVLRKGGGRRGMHSSEGTTRGGGKMSPTYNCYAQRYYPMPEEPFCTELNAEEQALKEKEKG  
SWTQLTHAEKVALYRLQFNETFAEMNRRSNEWKTVMGCVFFFIFGAALVIWWQRVYVFPKPIITLDERK  
AQLQRMLDMKVNVPVQGLASRWDEYKQWKK

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6346\\_e06.zip](https://cdn.origene.com/chromatograms/mk6346_e06.zip)



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Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_032609

ORF Size: 513 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\\_032609.3](#)

RefSeq Size: 684 bp

RefSeq ORF: 516 bp

Locus ID: 84701

UniProt ID: [Q96KJ9](#)

**Cytogenetics:** 20q11.21

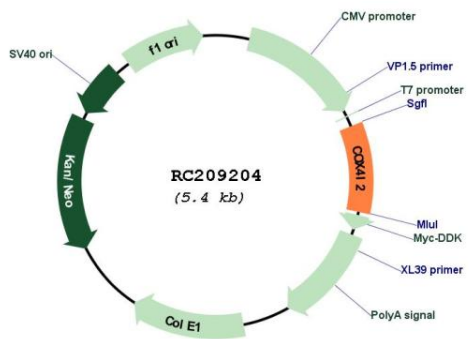
**Protein Families:** Transmembrane

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

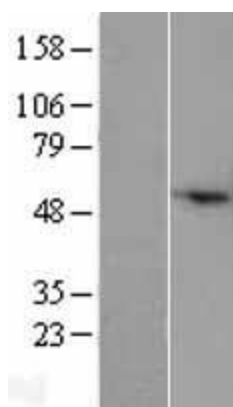
**MW:** 20 kDa

**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 electron transfer, and the nuclear-encoded subunits may be involved in the regulation and assembly of the complex. This nuclear gene encodes isoform 2 of subunit IV. Isoform 1 of subunit IV is encoded by a different gene, however, the two genes show a similar structural organization. Subunit IV is the largest nuclear encoded subunit which plays a pivotal role in COX regulation. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC209204



Western blot validation of overexpression lysate (Cat# [LY410005]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209204 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).