

Product datasheet for **SC118987**

COX4 (COX4I1) (NM_001861) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	COX4 (COX4I1) (NM_001861) Human Untagged Clone
Tag:	Tag Free
Symbol:	COX4
Synonyms:	COX4; COX4-1; COXIV; COX IV-1; COXIV-1; MC4DN16
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC118987 sequence for NM_001861 edited (data generated by NextGen Sequencing)

```
ATGTTGGCTACCAGGGTATTTAGCCTAGTTGGCAAGCGAGCAATTTCCACCTCTGTGTGT  
GTACGAGCTCATGAAAGTGTGTGAAGAGCGAAGACTTTTCGCTCCCAGCTTATATGGAT  
CGGCGTGACCACCCCTTGCCGGAGGTGGCCCATGTCAAGCACCTGTCTGCCAGCCAGAAG  
GCACTGAAGGAGAAGGAGAAGGCCTCCTGGAGCAGCCTCTCCATGGATGAGAAAAGTCGAG  
TTGTATCGCATTAAAGTTCAAGGAGAGCTTTGCTGAGATGAACAGGGGCTCGAACGAGTGG  
AAGACGGTTGTGGGCGGTGCCATGTTCTTCATCGGTTTCACCGCGCTCGTTATCATGTGG  
CAGAAGCACTATGTGTACGGCCCCCTCCCGCAAAGCTTTGACAAAGAGTGGGTGGCCAAG  
CAGACCAAGAGGATGCTGGACATGAAGGTGAACCCCATCCAGGGCTTAGCCTCCAAGTGG  
GACTACGAAAAGAACGAGTGAAGAAGTGA
```

Clone variation with respect to NM_001861.3
184 t=>c



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5' Read Nucleotide Sequence:

```
>OriGene 5' read for NM_001861 unedited
GTATACGACTCACTATTAGGGCGGCCGCGATTCCGGCACGAGGGGGACACCGGGTGTAGAG
GGCGGTGCGCGCGGGCAGTGGCGGCAGAATGTTGGCTACCAGGGTATTTAGCCTAGTTGG
CAAGCGAGCAATTTCCACCTCTGTGTGTACGAGCTCATGAAAGTGTGTGAAGAGCGA
AGACTTTTCGCTCCCAGCTTATATGGATCGGCGTGACCACCCCTTGCCGGAGGTGGCCCA
TGTC AAGCACCTGTCTGCCAGCCAGAAGGCACTGAAGGAGAAGGAGAAGGCCTCTGGAG
CAGCCTCTCCATGGATGAGAAAGTCGAGTTGTATCGCATTAAAGTTCAAGGAGAGCTTTGC
TGAGATGAACAGGGGCTCGAACGAGTGAAGACGGTTGTGGGCGGTGCCATGTTCTTCAT
CGGTTTACC GCGCTCGTTATCATGTGGCAGAAGCACTATGTGTACGGCCCCCTCCCGCA
AAGCTTTGACAAAGAGTGGGTGGCCAAGCAGACCAAGAGGATGCTGGACATGAAGGTGAA
CCCCATCCAGGGCTTAGCCTCCAAGTGGGACTACGAAAAGAACGAGTGAAGAAGTGAGA
GATGCTGGCCTGCGCCTGCACCTGCGCCTGGCTCTGTACCGCCATGCAACTCCATGCTT
ATTTACTGGAAACCTGTTATGCCAAACAGTTGTACCACTGCTAATAAATGACCANGTTTA
CCTGAAAAAAAAAANAANAACCTGACTCTAGATTGCGGCCGCGGTATAGCTTGTCTG
AACAGATCCCGGGTGGCATCCCTGTGACCCTCCAGTGCCTCTCCTGCCCTGGAGGTG
CACTNCAGTGCCACCAGCCTTGTCTATAAAATAAGTGCTATTTGCTGACTAGTGTCTCA
TAATATGGGANGGGGGGGGGGGNNNNANAAAGAGGGCCNNGGAAAACCCCGGGG
```

3' Read Nucleotide Sequence:

```
>OriGene 3' read for NM_001861 unedited
AGAGTCGAGTTTTTTTTTTTTTTTTTTTTCAGGTAAGTGGTCAATTTATTAGCAGTGGTACA
ACTGTTTGGCATAACAGGTTTCCAGTAAATAGGCATGGAGTTGCATGGCGGTGACAGAGC
CAGGCGCAGGTGCAGGCGCAGGCCAGCATCTCTCACTTCTTCCACTCGTTCTTTTCGTAG
TCCCACTTGGAGGCTAAGCCCTGGATGGGGTTCACCTTTCATGTCCAGCATCCTCTTGGTC
TGCTTGGCCACCCACTCTTTGTCAAAGCTTTCGGGGAGGGGGCCGTACACATAGTCTTC
TGCCACATGATAAACGAGCGCGGTGAAACCGATGAAGAACATGGCACCGCCACAAACCGT
CTTCCACTCGTTCGAGCCCTGTTTATCTCAGCAAAGCTCTCCTTGAACCTAATGCGATA
CAACTCGACTTTCTATCCATGGAGAGGCTGCTCCAGGAGGCCTTCTCCTTCTCCTTCAG
TGCCTTCTGGCTGGCAGACAGGTGCTTGACATGCGCCACCTCCCGTAAGGGGTGGTCACG
CCGATCCATATAAGCTGGGGAGCGAAAAGTCTTCGCTCTCTACAACACTTTCATGAGCTC
TGACCAACACAGAGGTGGGAATTGCTCGCTTCCAACTAGGCTAAAATACCCTGGTAGCC
AACATTTGCCCCCACTGGCCGCGCGACCCGCTTTACACCCCGTGTCCCCCNGTGC
CCGAATTCGCGGGCGGCCTTATGGGAGGCGTATACAAAATTCGACCGGTCACTAAACG
AGCCTTTGGTTATATAGACCTCCACGGACACCGCTACCCGCCATTTGGGTAACGGGGCG
GGGTTTACCAACTTTTGGAAAGCCGTGGATTTTGGGCCAACCAACCTCATTGAGCGC
AAGGGGCGGGAACCTGGAAACCCGGGAGTCAACCGCTTCCCCGCTATGGGTGGTCAA
ACCGCTACCTCGGGAATAGGAGACAAAACCAATGTCCGCCCATAGGAAACCCCTCAGGC
TGTCTGGCTATAGGCCGGGCCCTTCTCGCTTGGGTAAG
```

Restriction Sites:

NotI-NotI

ACCN:

NM_001861

Insert Size:

850 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

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_001861.2](#), [NP_001852.1](#)

RefSeq Size: 802 bp

RefSeq ORF: 510 bp

Locus ID: 1327

UniProt ID: [P13073](#)

Cytogenetics: 16q24.1

Domains: COX4

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) is the terminal enzyme of the mitochondrial respiratory chain. It is a multi-subunit enzyme complex that couples the transfer of electrons from cytochrome c to molecular oxygen and contributes to a proton electrochemical gradient across the inner mitochondrial membrane. The complex consists of 13 mitochondrial- and nuclear-encoded subunits. The mitochondrially-encoded subunits perform the electron transfer and proton pumping activities. The functions of the nuclear-encoded subunits are unknown but they may play a role in the regulation and assembly of the complex. This gene encodes the nuclear-encoded subunit IV isoform 1 of the human mitochondrial respiratory chain enzyme. It is located at the 3' of the NOC4 (neighbor of COX4) gene in a head-to-head orientation, and shares a promoter with it. Pseudogenes related to this gene are located on chromosomes 13 and 14. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jan 2016]

Transcript Variant: This variant (1) encodes the longest isoform (1). Variants 1 and 2 encode the same isoform (1).