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Product datasheet for RC200624

COX10 (NM_001303) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	COX10
Synonyms:	MC4DN3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC200624 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCGCATCTCCGCACACTCTCTCCTCACGCCTCCTGACAGGTTGCGTAGGAGGCTCTGTCTGGTATC
TTGAAAGAAGAACTATACAGGACTCCCCTCACAAGTTCTTACATCTTCTCAGGAATGTCAATAAGCAGTG
GATTACATTTCAGCACTTTAGCTTCCTCAAACGCATGTATGTCACACAGCTGAACAGAAGCCACAACCAG
CAAGTAAGACCCAAGCCAGAACCAGTAGCATCTCCTTTCCTTGAAAAAACATCTTCAGGTCAAGCCAAAG
CAGAAATATATGAGATGAGACCTCTCTCACCGCCCAGCCTATCTTTGTCCAGAAAGCCAAATGAAAAGGA
ATTGATAGAACTAGAGCCAGACTCAGTAATTGAAGACTCAATAGATGTAGGGAAAGAGACAAAAGAGGAA
AAGCGGTGGAAAGAGATGAAGCTGCAAGTGTATGATTTGCCAGGAATTTTGGCTCAACTATCCAAAATCA
AACTCACAGCTCTAGTTGTAAGTACCACTGCAGCTGGATTTGCATTGGCTCCGGGCCCTTTTGACTGGCC
CTGTTTCCTGCTTACTTCTGTTGGGACAGGCCTTGCATCCTGTGCTGCCAACTCCATCAATCAGTTTTTT
GAGGTGCCATTTGACTCAAACATGAATAGGACAAAGAACAGACCGCTGGTTCGTGGACAGATCAGCCCGT
TGCTAGCTGTGTCCTTTGCCACTTGTTGTGCTGTTCCGGGAGTTGCCATTCTGACCTTGGGGGTGAATCC
ACTCACAGGAGCCCTGGGGCTCTTCAACATTTTCCTGTATACCTGCTGCTACACACCACTGAAAAGGATC
AGCATTGCCAACACATGGGTCGGAGCTGTGGTTGGGGCCATCCCGCCTGTCATGGGCTGGACAGCGGCCA
CGGGCAGCCTCGATGCTGGCGCATTTCTCCTGGGAGGAATCCTCTACTCCTGGCAGTTTCCTCATTTCAA
CGCCCTGAGCTGGGGCCTCCGTGAAGACTACTCCCGGGGCGGCTACTGCATGATGTCGGTCACCCACCCG
GGCCTGTGCCGGCGCGTGGCGCTGCGCCACTGCCTGGCCCTGCTCGTGCTGTCCGCAGCAGCCCCTGTGC
TGGACATCACCACATGGACCTTCCCCATCATGGCCCTTCCCATCAATGCGTACATCTCCTACCTCGGCTT
CCGCTTCTACGTGGACGCAGACCGCAGGAGCTCGCGGAGACTGTTCTTCTGCAGCCTGTGGCACCTGCCG
CTGCTGCTGCTGCTCATGCTCACCTGCAAGCGGCCGAGCGGAGGCGGGGACGCAGGGCCCCCTCCCAGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC200624 protein sequence
Red=Cloning site Green=Tags(s)

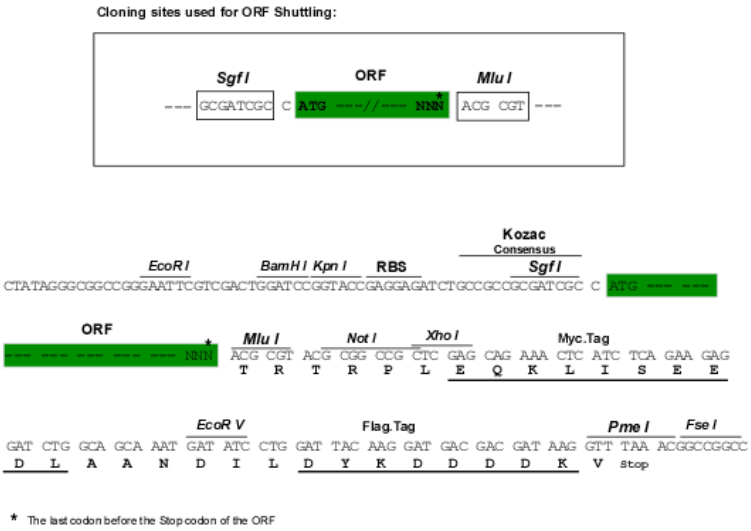
MAASPHTLSSRLLTGCVGGSVWYLERRTIQDSPHKFLHLLRNVNKQWITFQHFSFLKRMYVTQLNRSHNQ
QVRPKPEPVASPFLEKTSSGQAKAEIYEMRPLSPPSLSLSRKPNEKELIELEPDSVIEDSIDVGKETKEE
KRWKEMKLQVYDLPGILAQLSKIKLTALVVSTTAAGFALAPGPFDWPCFLLTSVGTGLASCAANSINQFF
EVPFDSNMNRTKNRPLVRGQISPLLAVSFATCCAVPGVAILTLGVNPLTGALGLFNIFLYTCCYTPLKRI
SIANTWVGAVVGAIPPVMGWTAATGSLDAGAFLLGGILYSWQFPHFNALSWGLREDYSRGGYCMMSVTHP
GLCRRVALRHCLALLVLSAAAPVLDITTWTFPIMALPINAYISYLGFRFYVDADRRSSRRLFFCSLWHLP
LLLLLMLTCKRPSGGGDAGPPPS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6396_d02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001303

ORF Size: 1329 bp

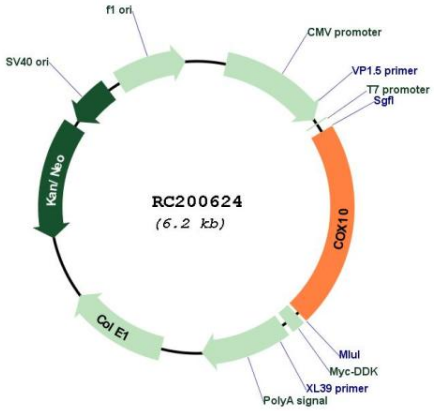
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

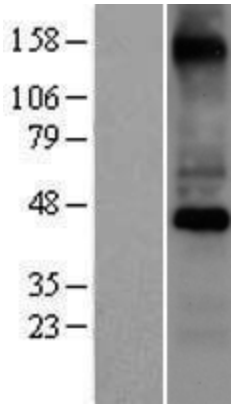
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_001303.4
RefSeq Size:	3016 bp
RefSeq ORF:	1332 bp
Locus ID:	1352
UniProt ID:	Q12887
Cytogenetics:	17p12
Domains:	UbiA
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Metabolic pathways, Oxidative phosphorylation, Porphyrin and chlorophyll metabolism
MW:	48.9 kDa
Gene Summary:	Cytochrome c oxidase (COX), the terminal component of the mitochondrial respiratory chain, catalyzes the electron transfer from reduced cytochrome c to oxygen. This component 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 function in the regulation and assembly of the complex. This nuclear gene encodes heme A:farnesyltransferase, which is not a structural subunit but required for the expression of functional COX and functions in the maturation of the heme A prosthetic group of COX. This protein is predicted to contain 7-9 transmembrane domains localized in the mitochondrial inner membrane. A gene mutation, which results in the substitution of a lysine for an asparagine (N204K), is identified to be responsible for cytochrome c oxidase deficiency. In addition, this gene is disrupted in patients with CMT1A (Charcot-Marie-Tooth type 1A) duplication and with HNPP (hereditary neuropathy with liability to pressure palsies) deletion. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC200624



Western blot validation of overexpression lysate (Cat# [LY420021]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200624 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).