

Product datasheet for **RG206046**

COX5A (NM_004255) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: COX5A (NM_004255) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: COX5A
Synonyms: COX; COX-VA; MC4DN20; VA
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG206046 representing NM_004255
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTGGGCGCGCTCTCCGCCGCTGCGCTGTGGCCGCAACCACCCGGGCCGACCCTCGAGGCCTCCTGC
ACTCCGCCCGACCCCGGCCCGCCGTGGCTATCCAGTCAGTTCGCTGCTATCCCATGGGTCACAGGA
GACAGATGAGGAGTTTGATGCTCGCTGGGTAACATACTTCAACAAGCCAGATATAGATGCCTGGGAATTG
CGTAAAGGGATAAACACACTTGTACCTATGATATGGTCCAGAGCCAAAATCATTGATGCTGCTTTGC
GGGCATGCAGACGGTTAAATGATTTTGCTAGTACAGTTCGTATCCTAGAGGTTGTTAAGGACAAAGCAGG
ACCTCATAAGGAAATCTACCCCTATGTCATCCAGGAACCTAGACCAACTTAAATGAACTGGGAATCTCC
ACTCCGGAGGAAGTGGGCCTTGACAAAGTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG206046 representing NM_004255
Red=Cloning site Green=Tags(s)

MLGAALRRCAVAATTRADPRGLLHSARTPGPAVAIQSVRCYSHGSQETDEEFDARWVTFYFNKPDIDAWEL
RKGINTLVTYDMVPEPKIIDAALRACRRLNDFASTVRILEVVKDKAGPHKEIYPYVIQELRPTLNELGIS
TPEELGLDKV

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI



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Cloning Scheme:


ACCN: NM_004255

ORF Size: 450 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_004255.4](#)

RefSeq Size: 645 bp

RefSeq ORF: 453 bp

Locus ID: 9377

UniProt ID: [P20674](#)

Cytogenetics: 15q24.2

Domains: COX5A

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 of 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 Va of the human mitochondrial respiratory chain enzyme. A pseudogene COX5AP1 has been found in chromosome 14q22. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG206046