

## Product datasheet for **RG202697**

### COX7A2L (NM\_004718) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** COX7A2L (NM\_004718) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** COX7A2L  
**Synonyms:** COX7AR; COX7RP; EB1; SCAF1; SCAFI; SIG81  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG202697 representing NM\_004718  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTACTACAAGTTT**AGTGGCTT**CACGCAGAAGTTGGCAGGAGCATGGGCTTCGGAGGCCTATAGCCCGC  
AGGGATTAAGCCTGTGGTTTCCACAGAAGCACCACCTATCATATTTGCCACCACTAAACTGACCTC  
CGATTCCACAGTGTATGATTATGCTGGGAAAAACAAAGTTCCAGAGCTACAAAAGTTTTCCAGAAAGCT  
GATGGTGTCCCGTCTACCTGAAACGAGGCCTGCCTGACCAAATGCTTTACCGGACCACCATGGCGCTGA  
CTGTGGGAGGGACCATCTACTGCCTGATCGCCCTACATGGCTTCGCAGCCCAAAAACAAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG202697 representing NM\_004718  
Red=Cloning site Green=Tags(s)  
MYYKFSGFTQKLAGAWASEAYSPQGLKPVVSTEAPPIIFATPTKLTSDSTVYDYAGKNKVPQLKFFQKA  
DGVVPVYLKRGLPDQMLYRTTMMALTVGGTIYCLIALYMASQPKNK

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** Sgfl-MluI



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**Cloning Scheme:**


**ACCN:** NM\_004718

**ORF Size:** 342 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.

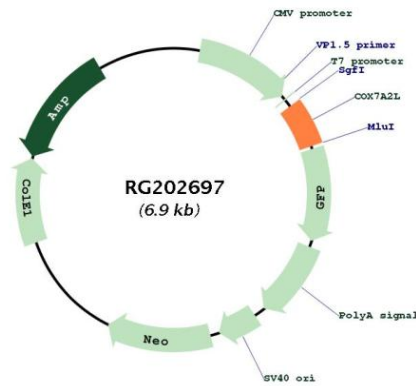
**RefSeq:** [NM\\_004718.4](#)

**RefSeq Size:** 1145 bp

**RefSeq ORF:** 345 bp

**Locus ID:** 9167  
**UniProt ID:** [O14548](#)  
**Cytogenetics:** 2p21  
**Domains:** COX7a  
**Protein Families:** Druggable Genome, Transmembrane  
**Protein Pathways:** Alzheimer's disease, Cardiac muscle contraction, Huntington's disease, Oxidative phosphorylation, Parkinson's disease  
**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 a protein similar to polypeptides 1 and 2 of subunit VIIa in the C-terminal region, and also highly similar to the mouse Sig81 protein sequence. This gene is expressed in all tissues, and upregulated in a breast cancer cell line after estrogen treatment. It is possible that this gene represents a regulatory subunit of COX and mediates the higher level of energy production in target cells by estrogen. Several transcript variants, some protein-coding and others non-protein coding, have been found for this gene. [provided by RefSeq, Jan 2016]

**Product images:**



Circular map for RG202697