

## Product datasheet for **SC119000**

### **CPT1A (NM\_001876) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CPT1A (NM_001876) Human Untagged Clone
Tag:	Tag Free
Symbol:	CPT1A
Synonyms:	CPT1; CPT1-L; L-CPT1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL6</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**Fully Sequenced ORF:** >OriGene ORF within SC119000 sequence for NM\_001876 edited (data generated by NextGen Sequencing)

```

ATGGCAGAAGCTACCAAGCTGTGGCCTTTCAGTTCACGGTCACTCCGGACGGGATTGAC
CTGCGGCTGAGCCATGAAGCTCTTAGACAAATCTATCTCTCTGGACTTCATTCTGGAAA
AAGAAGTTCATCAGATTCAGAACGGCATCATCACTGGCGTGTACCCGGCAAGCCCCTCC
AGTTGGCTTATCGTGGTGGTGGCGTGATGACAACGATGTACGCCAAGATCGACCCTCG
TTAGGAATAATTGCAAAAATCAATCGGACTCTGGAAACGGCCAACCTGCATGTCCAGCCAG
ACGAAGAACGTGGTCAGCGGCGTGCTGTTTGGCACCGGCCTGTGGGTGGCCCTCATCGTC
ACCATGCGCTACTCCCTGAAAGTGCTGCTCCTACCACGGGTGGATGTTCACTGAGCAC
GGCAAGATGAGTCGTGCCACCAAGATCTGGATGGGTATGGTCAAGATCTTTTCAGGCCGA
AAACCCATGTTGTACAGCTTCCAGACATCGCTGCCTCGCCTGCCGGTCCCAGGCTGTCAA
GACTGTGAACAGGTATCTACAGTCGGTGAGGCTCTTATGAAGGAAGAAGACTTCAA
CGGATGACAGCACTTGTCAAGATTTTGTGTGCGTCTTGGACCAAGATTACAGTGGTAT
TTGAAGTAAAAATCCTGGTGGGTACAAATTACGTGAGCGACTGGTGGGAGGAGTACATC
TACCTCCGAGGACGAGGGCCGCTCATGGTGAACAGCAACTATTATGCCATGGATCTGCTG
TATATCCTTCCAACCTCACATTCAGGCAGCAAGAGCCGGCAACGCCATCCATGCCATCCTG
CTTTACAGGCGCAAACTGGACCGGGAGGAAATCAAACCAATTCGTCTTTTGGGATCCACG
ATTCCACTCTGCTCCGCTCAGTGGGAGCGGATGTTAATACTTCCCGGATCCCAGGAGAG
GAGACAGACACCATCCAGCACATGAGAGACAGCAAGCACATCGTCGTGTACCATCGAGGA
CGCTACTTCAAGGTCTGGCTCTACCATGATGGGCGGCTGTGAAGCCCCGGGAGATGGAG
CAGCAGATGCAGAGGATCCTGGACAATACCTCGGAGCCTCAGCCCCGGGGAGGCCAGGCTG
GCAGCCCTCACCCAGGAGACAGAGTCCCTGGGCCAGGTGTCGTGAGCCTATTTTGA
CGTGGGAAAAATAAGCAGTCTCTTGTGCTGTGGAGAAAGCAGCGTTCTTCGTGACGTTA
GATGAAACTGAAGAAGGATACAGAAGTGAAGACCCGGATACGTCAATGGACAGCTACGCC
AAATCTCTACTACACGGCCGATGTTACGACAGGTGGTTTGAAGTCAAGTTCAGTTTGT
GTCTTCAAAAACGGGAAGATGGGCCTCAACGCTGAACACTCCTGGGCAGATGCGCCGATC
GTGGCCACCTTTGGGAGTACGTGATGTCATTGACAGCCTCCAGCTGGGCTATGCGGAG
GATGGGCACTGCAAAGGCGACATCAATCCGAACATTCCGTACCCACCAGGCTGCAGTGG
GACATCCCGGGGAATGTCAAGAGGTTATAGAGACCTCCCTGAACACCGCAAATCTTCTG
GCAAACGACGTGGATTTCCATTCCTTCCATTGTCAGCCTTTGGTAAAGGAATCATCAAG
AAATGTGCGACGAGCCCAGAGCCTTTGTGACGCTGGCCCTCCAGCTGGCGCACTACAAG
GACATGGGCAAGTTTTGCCTCACATACGAGGCCTCCATGACCCGGCTCTTCCGAGAGGGG
AGGACGGAGACCGTGCCTCCTGCACCACTGAGTCATGCGACTTCGTGCGGGCCATGGTG
GACCCGGCCAGACGGTGAACAGAGGCTGAAGTTGTTCAAGTTGGCGTCTGAGAAGCAT
CAGCATATGATCGCCTCGCCATGACCGGCTCTGGGATCGATCGTCACCTCTTCTGCCTT
TACGTGGTGTCTAAATATCTCGCTGTGGAGTCCCTTTCTTAAGGAAGTTTATCTGAG
CCTTGGAGATTATCAACAAGCCAGACCCCTCAGCAGCAAGTGGAGCTGTTTGACTTGGAG
AATAACCCAGAGTACGTGTCCAGCGGAGGGGCTTTGGACCGGTTGCTGATGACGGCTAT
GGTGTGCTGATACATCCTTGTGGGAGAGAACCTCATCAATTTCCACATTTCTTCCAAGTTC
TCTTGCCCTGAGACGGATTCTCATCGCTTTGGAAGGCACCTGAAAGAAGCAATGACTGAC
ATCATCACTTTGTTTGGTCTCAGTTCTAATTCCAAAAAGTAA
    
```

Clone variation with respect to NM\_001876.3

**5' Read Nucleotide Sequence:** >OriGene 5' read for NM\_001876 unedited  
 ACCCCGCCCGTTGACGCAAAGGGCGGTAGGCGGTACGGTGGGAGGTCTATATAAGCAG  
 AGCTCATTTAGGTGACACTATAGAATACAAGCTACTTGTCTTTTTGCAGCGGCCGCGAA  
 TTCGGCACGAGGCCGGCGTGGGTGCGCTCGGCCCTCGCCCGCGGCCCTCCTTCCCCGGCT  
 CCCGCTCGCCGCTCGTTCCTCCACCGCCGCGCCGCGCCGCGCTGCCGCTGCCGCTG  
 CCGCACCTCCGTAGCTGACTCGGTACTCTCTGAAGATGGCAGAAGCTACCAAGCTGTGG  
 CCTTTACGATTCACGGTCACTCCGGACGGGATTGACCTGCGGCTGAGCCATGAAGCTCTTA  
 GACAAATCTATCTCTGGACTTCATTCTGGAAAAAGAAGTTCATCAGATTCAAGAACG  
 GCATCATCACTGGCGTGTACCCGCAAGCCCTCCAGTTGGCTTATCGTGGTGGTGGCG  
 TGATGACAACGATGTACGCCAAGATCGACCCCTCGTTAGGAATAATTGCAAAAATCAATC  
 GGACTCTGAAAACGGCCAACTGCATGTCCAGCCAGACGAAGAAGTGGTCAAGCGCGTGC  
 TGTTTGGCACC GGCTGTGGTGGCCCTCATCGTACCATGCGCTACTCCCTGAAAGTGC  
 TGCTCTCTACCACGGTGGATGTTCACTGAGCACGGNCAGATGAGTCGTGCCACCAAGA  
 TCTGGATGGGTATGGTCAAGATCTTTTCANGCCGAANACCCATGTTGTACAGCTTCCAGA  
 CATCGCTGCCTCGCTGCCGGTCCGGGTGTCAAGACACTGTGAACAGGTATCTACAGTC  
 GGTGAAGCCCTCTATGAAGGAAGAAAGACTCANACGGATGACAGCACTTGCTCAGAAATN  
 TGCTGTGCTCTTGACCAGATACAGTGTATTTGAGTTAAATCCTGTGGCTACAATACTGA  
 GCACTGTGGGAGG

**3' Read Nucleotide Sequence:** >OriGene 3' read for NM\_001876 unedited  
 CGCCTACTAGTGTACGTTCCGCNCTCNANGATCNATTTTTTTTTTTTTTTTTTTTGTCTTTT  
 GTTTTCATTTTTTCTTGCTTTCAGGGAGAAAAAATCTTTGGCCATAAAGGTGGGATT  
 TTTACATCATGAAGTATACATACATAAAACATGCATGTGGGCCGCGCATGGTGGCTCATG  
 CCTGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGTGGATCACCTGAGGTCAGGAGTTCCG  
 AGACCAGCCTGACCAATATGATGAAACCCGCTCTACTAAAAATACAAAATCAGCAGG  
 GCATGGTGTGGGCGTGAATCCCAGCCACTCGGGAGGCTGAGACAGGAGAAATCGCTTGA  
 ACCTGCAAGGCAGATGCTGCAGTGAAGCCGAGATCGCACCCTGCACTCCAGCCTGGGCAA  
 CAAGAGCGAACTCCATCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAGGCACGTGTTCTCCGGCA  
 AGCACCTCCATCGACTCCAACAGTTCAGCCATCGCTGTTGTACTATCGGGTGCAGCAC  
 TCTGAAGGAGTCAGGCCCACTAGAACCAAGTGGTCAAAAAAAAAATAACACAATTTAAA  
 ACAATGGACAGCTAAGCTTGTGATGACAGACAGTGGGAATTTTCATTCATGATGCTTCAT  
 TTTTGCATTAATACTGAAGATGACTCAGTGCATAATTGCTTTGTGGNTCATGAGACGCC  
 TTCGTGAAGGCACTCCTATCTGAAGGACAGGCTGGGTGAACACCTAGCACCGTCACTTGA  
 GACATCTTGCTGGTACCAAGTGAAGCCGGCTACTGTCTCCATCACCCCTCTGGTGAAGT  
 CTTCCCTCACCCGGTGGGAAGAGAAAGCCATCCC

**Restriction Sites:** NotI-NotI  
**ACCN:** NM\_001876  
**Insert Size:** 4700 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](mailto: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\\_001876.2](#), [NP\\_001867.2](#)

**RefSeq Size:** 2941 bp

**RefSeq ORF:** 2322 bp

**Locus ID:** 1374

**UniProt ID:** [P50416](#)

**Cytogenetics:** 11q13.3

**Domains:** Carn\_acyltransf

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Adipocytokine signaling pathway, Fatty acid metabolism, PPAR signaling pathway

**Gene Summary:**

The mitochondrial oxidation of long-chain fatty acids is initiated by the sequential action of carnitine palmitoyltransferase I (which is located in the outer membrane and is detergent-labile) and carnitine palmitoyltransferase II (which is located in the inner membrane and is detergent-stable), together with a carnitine-acylcarnitine translocase. CPT I is the key enzyme in the carnitine-dependent transport across the mitochondrial inner membrane and its deficiency results in a decreased rate of fatty acid beta-oxidation. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (1) encodes the longer isoform (1).