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Product datasheet for RC200485

CPT1A (NM_001031847) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CPT1A (NM_001031847) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CPT1A
Synonyms:	CPT1; CPT1-L; L-CPT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC200485 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCAGAAGCTCACCAAGCTGTGGCCTTTCAGTTCACGGTCACTCCGGACGGGATTGACCTGCGGCTGA
GCCATGAAGCTCTTAGACAAATCTATCTCTCTGGACTTCATTCCTGGAAAAAGAAGTTCATCAGATTCAA
GAACGGCATCATCACTGGCGTGTACCCGGCAAGCCCCTCCAGTTGGCTTATCGTGGTGGTGGGCGTGATG
ACAACGATGTACGCCAAGATCGACCCCTCGTTAGGAATAATTGCAAAAATCAATCGGACTCTGGAAACGG
CCAACTGCATGTCCAGCCAGACGAAGAACGTGGTCAGCGGCGTGCTGTTTGGCACCGGCCTGTGGGTGGC
CCTCATCGTCACCATGCGCTACTCCCTGAAAGTGCTGCTCTCCTACCACGGGTGGATGTTCACTGAGCAC
GGCAAGATGAGTCGTGCCACCAAGATCTGGATGGGTATGGTCAAGATCTTTTCAGGCCGAAAACCCATGT
TGTACAGCTTCCAGACATCGCTGCCTCGCCTGCCGGTCCCGGCTGTCAAAGACACTGTGAACAGGTATCT
ACAGTCGGTGAGGCCTCTTATGAAGGAAGAAGACTTCAAACGGATGACAGCACTTGCTCAAGATTTTGCT
GTCGGTCTTGGACCAAGATTACAGTGGTATTTGAAGTTAAAATCCTGGTGGGCTACAAATTACGTGAGCG
ACTGGTGGGAGGAGTACATCTACCTCCGAGGACGAGGGCCGCTCATGGTGAACAGCAACTATTATGCCAT
GGATCTGCTGTATATCCTTCCAACTCACATTCAGGCAGCAAGAGCCGGCAACGCCATCCATGCCATCCTG
CTTTACAGGCGCAAACTGGACCGGGAGGAAATCAAACCAATTCGTCTTTTGGGATCCACGATTCCACTCT
GCTCCGCTCAGTGGGAGCGGATGTTTAATACTTCCCGGATCCCAGGAGAGGAGACAGACACCATCCAGCA
CATGAGAGACAGCAAGCACATCGTCGTGTACCATCGAGGACGCTACTTCAAGGTCTGGCTCTACCATGAT
GGGCGGCTGCTGAAGCCCCGGGAGATGGAGCAGCAGATGCAGAGGATCCTGGACAATACCTCGGAGCCTC
AGCCCGGGGAGGCCAGGCTGGCAGCCCTCACCGCAGGAGACAGAGTTCCCTGGGCCAGGTGTCGTCAGGC
CTATTTTGGACGTGGGAAAAATAAGCAGTCTCTTGATGCTGTGGAGAAAGCAGCGTTCTTCGTGACGTTA
GATGAAACTGAAGAAGGATACAGAAGTGAAGACCCGGATACGTCAATGGACAGCTACGCCAAATCTCTAC
TACACGGCCGATGTTACGACAGGTGGTTTGACAAGTCGTTCACGTTTGTTGTCTTCAAAAACGGGAAGAT
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AAATCTTCTGGCAAACGACGTGGATTTCCATTCCTTCCCATTCGTAGCCTTTGGTAAAGGAATCATCAAG
AAATGTCGCACGAGCCCAGACGCCTTTGTGCAGCTGGCCCTCCAGCTGGCGCACTACAAGGACATGGGCA
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ATCGTCACCTCTTCTGCCTTTACGTGGTGTCTAAATATCTCGCTGTGGAGTCCCCTTTCCTTAAGGAAGT
TTTATCTGAGCCTTGGAGATTATCAACAAGCCAGACCCCTCAGCAGCAAGTGGAGCTGTTTGACTTGGAG
AATAACCCAGAGTACGTGTCCAGCGGAGGGGGCTTTGGACCGGTTGCTGATGACGGCTATGGTGTGTCGT
ACATCCTTGTGGGAGAGAACCTCATCAATTTCCACATTTCTTCCAAGTTCTCTTGCCCTGAGACGGGGAT
TATAAGTCAAGGACCAAGTTCAGATACT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC200485 protein sequence
Red=Cloning site Green=Tags(s)

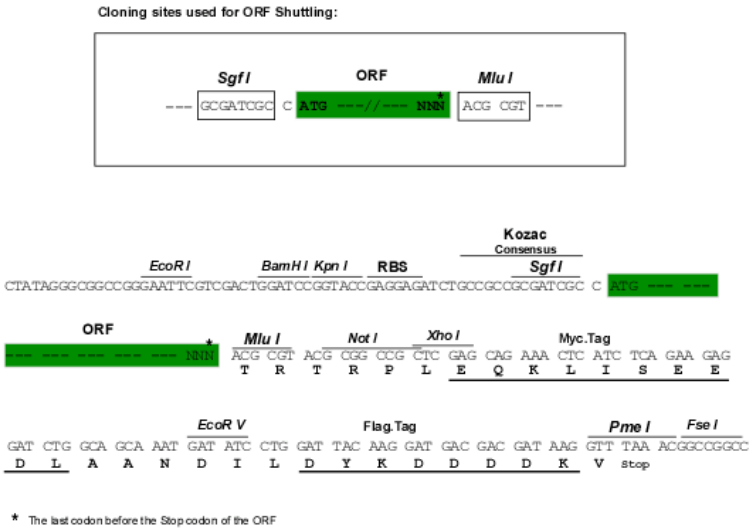
MAEAHQAVAFQFTVTPDGIDLRLSHEALRQIYLSGLHSWKKKFIRFKNGIITGVYPASPSSWLIVVVGVM
TTMYAKIDPSLGIIAKINRTLETANCMSSQTKNVVSGVLFGTGLWVALIVTMRYSLKVLLSYHGWMFTEH
GKMSRATKIWMGMVKIFSGRKPMLYSFQTSLPRLPVPAVKDTVNRYLQSVRPLMKEEDFKRMTALAQDFA
VGLGPRLQWYLKLKSWWATNYVSDWWEEYIYLRGRGPLMVNSNYYAMDLLYILPTHIQAARAGNAIHAIL
LYRRKLDREEIKPIRLLGSTIPLCSAQWERMFNTSRIPGEETDTIQHMRDSKHIVVYHRGRYFKVWLYHD
GRLLKPREMEQQMQRILDNTSEPQPGEARLAALTAGDRVPWARCRQAYFGRGKNKQSLDAVEKAAFFVTL
DETEEGYRSEDPDTSMDSYAKSLLHGRCYDRWFDKSFTFVVFKNGKMGLNAEHSWADAPIVAHLWEYVMS
IDSLQLGYAEDGHCKGDINPNIPYPTRLQWDIPGECQEVIETSLNTANLLANDVDFHSFPFVAFGKGIIK
KCRTSPDAFVQLALQLAHYKDMGKFCLTYEASMTRLFREGRTETVRSCTTESCDFVRAMVDPAQTVEQRL
KLFKLASEKHQHMYRLAMTGSGIDRHLFCLYVVSKYLAVESPFLKEVLSEPWRLSTSQTPQQQVELFDLE
NNPEYVSSGGGFGPVADDGYGVSYILVGENLINFHISSKFSCPETGIISQGPSSDT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6209_h05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



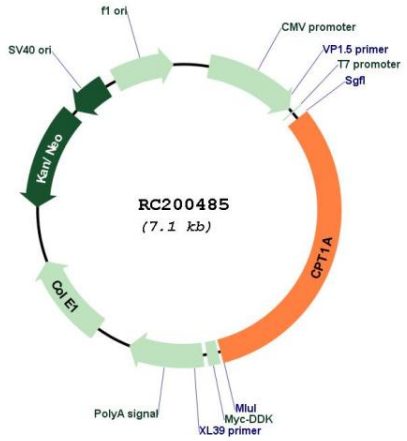
ACCN: NM_001031847

ORF Size: 2268 bp

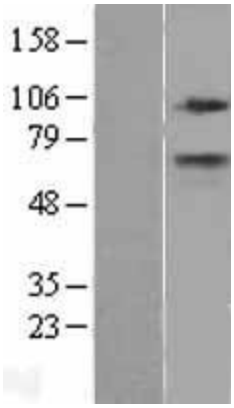
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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
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_001031847.2
RefSeq Size:	2671 bp
RefSeq ORF:	2271 bp
Locus ID:	1374
UniProt ID:	P50416
Cytogenetics:	11q13.3
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Adipocytokine signaling pathway, Fatty acid metabolism, PPAR signaling pathway
MW:	86.2 kDa

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]

Product images:



Circular map for RC200485



Western blot validation of overexpression lysate (Cat# [LY422204]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200485 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).