

## Product datasheet for **RC202420**

### Serine Palmitoyltransferase (SPTLC2) (NM\_004863) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Serine Palmitoyltransferase (SPTLC2) (NM_004863) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Serine Palmitoyltransferase
Synonyms:	hLCB2a; HSN1C; LCB2; LCB2A; NSAN1C; SPT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC202420 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGCGCCCGGAGCCCGGAGGCTGCTGCTGCCGCCGACGGTGC GGCGCAATGGCTGCGTGGCGAACGGG  
 AAGTACGGAACGGGTACGTGAGGAGCAGCGCTGCAGCCGAGCCGAGCCGCCCGGCCAGATCCATCA  
 TGTACACAAAATGGAGGACTATATAAAAGACCGTTAATGAAGCTTTTGAAGAAACACCAATGCTGGTT  
 GCTGTGCTCACGTATGTGGGTATGGCGTACTCACCTCTTTGGATATCTTCGAGATTTCTTGAGGTATT  
 GGAGAATTGAAAAGTGTCACCATGCAACAGAAAGAGAAGAACAAAAGGACTTTGTGTCATTGTATCAAGA  
 TTTTAAAACCTTTTATACAAGGAATCTGTACATGAGGATAAGAGACAACCTGGAATCGGCCAATCTGTAGT  
 GTGCCTGGAGCCAGGTTGACATCATGGAGAGACAGTCTCATGATTATAACTGGTCTTCAAGTATACAG  
 GGAATATAATAAAGGGTGTATAAACAATGGGTTCTCAACTATCTTGGATTTGCACGGAATACTGGATC  
 ATGTCAAGAAGCAGCCGCAAAGTCTTGAGGAGTATGGAGCTGGAGTGTGCAGTACTCGCAGGAAATT  
 GGAAACCTGGACAAGCATGAAGAACTAGAGGAGCTTGTAGCAAGTTCTTAGGAGTAGAAGCTGCTATGG  
 CGTATGGCATGGGATTTGCAACGAATTCATGAACATTCCTGCTCTTGTGGCAAAGTTGCCTGATTCT  
 GAGTGTGAACCTGAACCATGCATCACTGGTTCTGGGAGCCAGACTGTCAGGAGCAACCATTAGAATCTTC  
 AAACACAACAATATGCAAAGCCTAGAGAAGCTATTGAAAGATGCCATTGTTTATGGTCAGCCTCGGACAC  
 GAAGGCCCTGGAAGAAAATTCATCCTTGTGGAAGGAATATATAGCATGGAGGGATCTATTGTTCTGCT  
 TCCTGAAGTGATTGCCCTCAAGAAGAAATACAAGGCATACTTGTATCTGGATGAGGCTCACAGCATTGGC  
 GCCCTGGGCCCCACAGGCCGGGTGTGGTGGAGTACTTTGGCCTGGATCCCGAGGATGTGGATGTTATGA  
 TGGGAACGTTACAAAAGAGTTTTGGTCTCTGGAGGATATATTGGAGGCAAGAAGGAGCTGATAGACTA  
 CCTGCGAACACATTCTCATAGTGCAGTGTATGCCACGTCAATTGTACCTCCTGTAGTGGAGCAGATCATC  
 ACCTCCATGAAGTGCATCATGGGCAGGATGGCACCAGCCTTGGTAAAGAGTGTGTACAACAGTTAGCTG  
 AAAACACCAGGATTTTCAGGAGACGCCTGAAAGAGATGGGCTTCATCATCTATGGAATGAAGACTCTCC  
 AGTAGTGCCTTTGATGCTCTACATGCCTGCCAAAATTGGCGCTTTGGACGGGAGATGCTGAAGCGGAAC  
 ATCGGTGTCGTTGGTTGGATTTCTGCCACCCCAATTATTGAGTCCAGAGCCAGGTTTGGCTGTCAG  
 CAGCTCATACAAAGAAATACTTGATACTGCTTTAAAGGAGATAGATGAAGTTGGGGACCTATTGCAGCT  
 GAAGTATCCCGTCATCGTTGGTACCTCTACTGGACAGGCCCTTACGAGACGACGTATGAAGAAACA  
 GAAGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC202420 protein sequence  
 Red=Cloning site Green=Tags(s)

MRPEPGGCCRRTVRANGCVANGEVRNGYVRSSAAAAAAGQIHHVTQNGGLYKRPFNEAFEETPMLV  
 AVLTYVGYVLTFLGYLRDFLRWRIEKCHATEREEQKDFVSLYQDFENFYTRNLYMRIRDNWNRPICS  
 VPGARVDIMERQSHDYNWSFKYTGNIKGVINMGSYNYLGFARNTGSCQEAANKVLEEYAGVCSTRQEI  
 GNLDKHEELEELVARFLGVEAAMAYGMGFATNSMNIPALVGKGLILSDELNHASLVLGARLSGATIRIF  
 KHNNMQSLEKLLKDAIVYGPTRRRPWKILILVEGIYSMEGSIVRLPEVIALKKYKAYLYLDEAHSIG  
 ALGPTGRGVVEYFGLDPEDVDVMMGTFKSFSGASGGYIGGKELIDYLRTHSHSAVYATSLSPVVEQII  
 TSMKCCIMQDGTSLGKECVQQLAENTRYFRRLKEMGFIYGNEDSPVPLMLYMPAKIGAFGREMLKRN  
 IGVVVVGFPAPIIESRARFCLSAHTKEILDALKEIDEVGDLLQLKYSRHLVPLLDPRPFDETTYEET  
 ED

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6150\\_f11.zip](https://cdn.origene.com/chromatograms/mk6150_f11.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_004863

**ORF Size:** 1686 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\\_004863.1](#)

**RefSeq Size:** 8164 bp

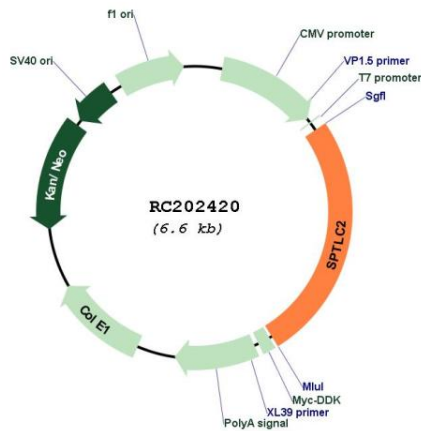
**RefSeq ORF:** 1689 bp

**Locus ID:** 9517

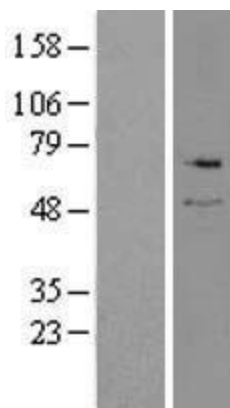
**UniProt ID:** [O15270](#)  
**Cytogenetics:** 14q24.3  
**Domains:** aminotran\_1\_2  
**Protein Pathways:** Metabolic pathways, Sphingolipid metabolism  
**MW:** 62.9 kDa

**Gene Summary:** This gene encodes a long chain base subunit of serine palmitoyltransferase. Serine palmitoyltransferase, which consists of two different subunits, is the key enzyme in sphingolipid biosynthesis. It catalyzes the pyridoxal-5-prime-phosphate-dependent condensation of L-serine and palmitoyl-CoA to 3-oxosphinganine. Mutations in this gene were identified in patients with hereditary sensory neuropathy type I. [provided by RefSeq, Mar 2011]

### Product images:



Circular map for RC202420



Western blot validation of overexpression lysate (Cat# [LY401528]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202420 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).