

## Product datasheet for **MG207578**

### Sptlc1 (NM\_009269) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sptlc1 (NM_009269) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Sptlc1
Synonyms:	AW552086; C77762; E030036H05; Lcb1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG207578 representing NM\_009269  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCGACAGTGGCGGAGCAGTGGGTGCTGGTGGAGATGGTGCAGGCGCTGTACGAGGCTCCAGCATAACC  
 ATCTTATTTTGAAGGAATCCTAATACTTTGGATAATCAGACTCGTTTTCTCTAAAACCTTACAAGTTGCA  
 GGAGCGTTCTGATCTTACAGCCAAGGAAAAGGAAGAACTGATTGAAGAGTGGCAGCCAGAGCCCCTCGTC  
 CCTCCAGTCTCCAAGAACCACCCTGCTCTCAACTACAACATCGTGTCCGGCCCTCAACCCACAACATCG  
 TGGTGAATGGAAAAGAGTGTGTCAACTTTGCCTCCTTTAACTTCCTTGGGCTGCTGGCAACCCTCGAGT  
 TAAGGCCACAGCTTTTTCATCTTTAAAGAAGTACGGAGTGGTACCTGTGGTCTCGAGGGTTCTATGGC  
 ACATTTGATGTCCATCTGGATTTAGAAGAGCGCTGGCAAAGTTTATGAAGACCGAAGAAGCCATCATT  
 ACTCGTATGGCTTCTCCACCATAGCCAGTGCCATTCTCGCTACTCTAAGAGAGGGGACATCATCTTTGT  
 GGACAGTGGCCCTGCTTTGCTATCCAGAAAGGATTACAGGCATCAAGAAGTGACATTAAGTTATTTAAG  
 CATAATGATGTGGCTGACCTGGAGCGACTGCTAAAAGAACAAGAGATTGAAGATCAAAGAATCCTCGCA  
 AGGCCCGTGTGACTCGGCGGTTTCATCGTGGTGGAGGGCTGTACATGAACACTGGAACTCTGTCCCT  
 TCCAGAACTGGTTAAATTAATAATAAATAAAGCAAGAATATTCCTGGAGGAGAGCCTGTCTTTGGA  
 GTCCTTGGGGAGCACGGGCGAGGAGTACCAGCACTATGGGATCAGTATTGATGATATTGACCTTATCA  
 GTGCTAACATGGAGAATGCCTCGCTTCTGTGGGGGCTTCTGTGTGGCCGCTCCTTCGTGGTTGACCA  
 TCAGCGGCTCTCCGGTCAAGGATACTGCTTTTCTGCTTCGTTACCTCCCTGCTAGCTGTGTGCCATT  
 GAGGCCCTCAACATCATGGAAGAGAATCCAGATATTTTGCAGTTTTAAAGAAAAATGCCAGAACATCC  
 ATAAGTCTCTACAAGGTGTTTCGGGTTTAAAAGTGGTGGGAGAGTCCCTTCTCCGGCGCTTCACTCCA  
 GCTGGAAGAGAGCACGGGCTCTCGGGAGAAAGATGTGAAGCTGCTTCAAGCAATCGTAGATCAGTGCATG  
 GATAAGGGCATCGCATTGACTCAGGCACGGTACTTGGACAGGAAGAGAAGTGCCTTCTCCTCCAAGCA  
 TCAGGGTTGTGGTCACTGTGGAGCAGACGGAGGAAGAGCTACAGAGGGCTGCATCCACCATCAGGGAGGC  
 GGCCAGGCTGTGCTGTTG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG207578 representing NM\_009269  
 Red=Cloning site Green=Tags(s)

MATVAEQWLVEMVQALYEAPAYHLILEGILILWIIRLVFSKYKQLQERSDLTAKEKEELIEEWQPEPLV  
 PPVSKNHPALNYNIVSGPPTHNIIVVNGKECVNFASFNGLLANPRVKATAFSSLKKYGVGTCGPRGFYF  
 TFDVHLDLEERLAKFMKTEEAIIYSYGFSTIASAIPAYSKRGDIIFVDSAACFAIQKGLQASRSDIKLKF  
 HNDVADLERLLKEQEI EDQKNPRKARVTRRFIVVEGLYMNTGTICPLPELVKLYKARIFLEESLSFG  
 VLGEHGRGVTEHYGISIDDIDLISANMENALASVGGFCCGRSFVVDHQRLSGQGYCF SASLPPLAAAAI  
 EALNIMEENPDIFAVLKKKQNIHKSLQGVSGLVVGESLSPALHLQLEESTGSREKDVKLLQAIVDQCM  
 DKGIALTQARYLDKEEKCLPPPSIRVVVTVEQTEEELQRAASTIREAAQAVLL

**TRTRPLE** - GFP Tag - V

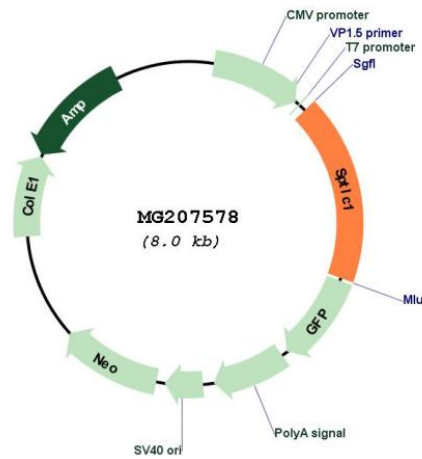
**Restriction Sites:**

Sgfl-Mlul

Cloning Scheme:



Plasmid Map:



ACCN: NM\_009269

ORF Size: 1419 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\\_009269.2](#), [NP\\_033295.2](#)

**RefSeq Size:** 2601 bp

**RefSeq ORF:** 1422 bp

**Locus ID:** 268656

**UniProt ID:** [O35704](#)

**Cytogenetics:** 13 B1

**Gene Summary:** Serine palmitoyltransferase (SPT) (PubMed:28100772). The heterodimer formed with SPTLC2 or SPTLC3 constitutes the catalytic core. The composition of the serine palmitoyltransferase (SPT) complex determines the substrate preference. The SPTLC1-SPTLC2-SPTSSA complex shows a strong preference for C16-CoA substrate, while the SPTLC1-SPTLC3-SPTSSA isozyme uses both C14-CoA and C16-CoA as substrates. The SPTLC1-SPTLC2-SPTSSB complex displays a strong preference for C18-CoA substrate, while the SPTLC1-SPTLC3-SPTSSB isozyme has the ability to use a broader range of acyl-CoAs (By similarity). Required for adipocyte cell viability and metabolic homeostasis (PubMed:28100772).[UniProtKB/Swiss-Prot Function]