

# SPTLC1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP2534b

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">O15269</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Calculated MW</b>	52744
<b>Antigen Region</b>	405-437

## Additional Information

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<b>Gene ID</b>	10558
<b>Other Names</b>	Serine palmitoyltransferase 1, Long chain base biosynthesis protein 1, LCB 1, Serine-palmitoyl-CoA transferase 1, SPT 1, SPT1, SPTLC1, LCB1
<b>Target/Specificity</b>	This SPTLC1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 405-437 amino acids from the C-terminal region of human SPTLC1.
<b>Dilution</b>	WB~~1:1000 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	SPTLC1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	SPTLC1
<b>Synonyms</b>	LCB1
<b>Function</b>	Component of the serine palmitoyltransferase multisubunit enzyme (SPT) that catalyzes the initial and rate-limiting step in sphingolipid biosynthesis by condensing L-serine and activated acyl-CoA (most commonly palmitoyl-CoA)

to form long-chain bases. The SPT complex is also composed of SPTLC2 or SPTLC3 and SPTSSA or SPTSSB. Within this complex, the heterodimer with SPTLC2 or SPTLC3 forms the catalytic core (PubMed:[19416851](#), PubMed:[33558762](#), PubMed:[36170811](#)). The composition of the serine palmitoyltransferase (SPT) complex determines the substrate preference (PubMed:[19416851](#), PubMed:[33558762](#)). 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, with a slight preference for C14-CoA (PubMed:[19416851](#), PubMed:[19648650](#)). The SPTLC1-SPTLC2-SPTSSB complex shows a strong preference for C18-CoA substrate, while the SPTLC1-SPTLC3-SPTSSB isozyme displays an ability to use a broader range of acyl-CoAs, without apparent preference (PubMed:[19416851](#), PubMed:[19648650](#), PubMed:[33558761](#), PubMed:[33558762](#)). Required for adipocyte cell viability and metabolic homeostasis (By similarity).

**Cellular Location** Endoplasmic reticulum membrane; Single-pass membrane protein {ECO:0000250|UniProtKB:O35704}

**Tissue Location** Widely expressed. Not detected in small intestine.

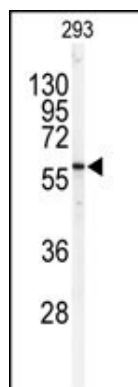
## Background

Serine palmitoyltransferase (SPT) 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.

## References

Stachowitz, S., et al., J. Invest. Dermatol. 119(5):1048-1052 (2002).  
 Nicholson, G.A., et al., Am. J. Hum. Genet. 69(3):655-659 (2001).  
 Dawkins, J.L., et al., Nat. Genet. 27(3):309-312 (2001).  
 Bejaoui, K., et al., Nat. Genet. 27(3):261-262 (2001).  
 Perry, D.K., et al., J. Biol. Chem. 275(12):9078-9084 (2000).

## Images



Western blot analysis of anti-SPTLC1 Antibody (C-term)(Cat.#AP2534b) in 293 cell line lysates (35ug/lane).SPTLC1(arrow) was detected using the purified Pab.

## Citations

- [Serine palmitoyltransferase subunit 1 is present in the endoplasmic reticulum, nucleus and focal adhesions, and functions in cell morphology.](#)
- [Apoptotic sphingolipid signaling by ceramides in lung endothelial cells.](#)

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