

**Anti-SPTLC1 Picoband Antibody**  
Catalog # ABO12580

**Specification**

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**Anti-SPTLC1 Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">O15269</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Serine palmitoyltransferase 1(SPTLC1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-SPTLC1 Picoband Antibody - Additional Information**

**Gene ID** 10558

**Other Names**

Serine palmitoyltransferase 1, 2.3.1.50, Long chain base biosynthesis protein 1, LCB 1, Serine-palmitoyl-CoA transferase 1, SPT 1, SPT1, SPTLC1, LCB1

**Calculated MW**

52744 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat<br><br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br><br>

**Subcellular Localization**

Endoplasmic reticulum membrane ; Single-pass membrane protein .

**Tissue Specificity**

Widely expressed. Not detected in small intestine. .

**Protein Name**

Serine palmitoyltransferase 1

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>N.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human SPTLC1 (444-473aa IRVVVTVEQTEELERAASTIKEVAQAVLL), different from the related mouse sequence by three amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins.

**Storage**

**At -20°C for one year. After r° Constitution, at 4°C for one month. It° Can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-SPTLC1 Picoband Antibody - Protein Information**

**Name** SPTLC1

**Synonyms** LCB1

**Function**

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: <a href="http://www.uniprot.org/citations/19416851" target="\_blank">19416851</a>, PubMed: <a href="http://www.uniprot.org/citations/33558762" target="\_blank">33558762</a>, PubMed: <a href="http://www.uniprot.org/citations/36170811" target="\_blank">36170811</a>). The composition of the serine palmitoyltransferase (SPT) complex determines the substrate preference (PubMed: <a href="http://www.uniprot.org/citations/19416851" target="\_blank">19416851</a>, PubMed: <a href="http://www.uniprot.org/citations/33558762" target="\_blank">33558762</a>). 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: <a href="http://www.uniprot.org/citations/19416851" target="\_blank">19416851</a>, PubMed: <a href="http://www.uniprot.org/citations/19648650" target="\_blank">19648650</a>). 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: <a href="http://www.uniprot.org/citations/19416851" target="\_blank">19416851</a>, PubMed: <a href="http://www.uniprot.org/citations/19648650" target="\_blank">19648650</a>, PubMed: <a href="http://www.uniprot.org/citations/33558761" target="\_blank">33558761</a>, PubMed: <a href="http://www.uniprot.org/citations/33558762" target="\_blank">33558762</a>). 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**

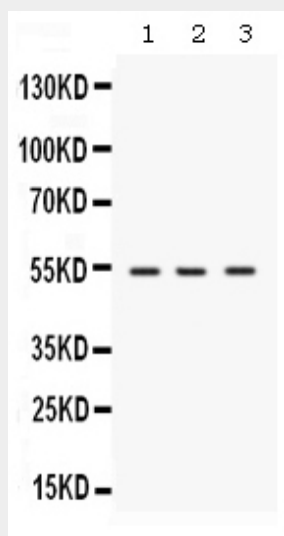
Widely expressed. Not detected in small intestine.

**Anti-SPTLC1 Picoband Antibody - Protocols**

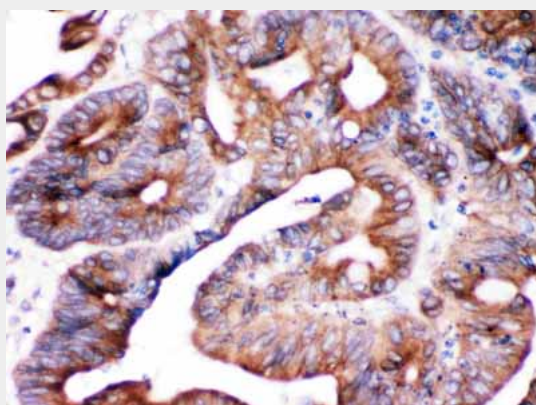
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Anti-SPTLC1 Picoband Antibody - Images



Western blot analysis of SPTLC1 expression in rat brain extract (lane 1), mouse brain extract (lane 2) and MCF-7 whole cell lysates (lane 3). SPTLC1 at 53KD was detected using rabbit anti-SPTLC1 Antigen Affinity purified polyclonal antibody (Catalog # ABO12580) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .



SPTLC1 was detected in paraffin-embedded sections of human intestinal cancer tissues using rabbit anti- SPTLC1 Antigen Affinity purified polyclonal antibody (Catalog # ABO12580) at 1 µg/mL. The immunohistochemical section was developed using SABC method .

#### Anti-SPTLC1 Picoband Antibody - Background

SPTLC1 (Serine palmitoyltransferase, long chain base subunit 1), also known as SPT1, LCB1, is a protein which in humans is encoded by the SPTLC1 gene. Dawkins et al. (2001) noted that the SPTLC1 gene maps to chromosome 9q22.1-q22.3. Serine palmitoyltransferase, which consists of two different subunits, is the initial enzyme in sphingolipid biosynthesis. It converts L-serine and

palmitoyl CoA to 3-oxosphinganine with pyridoxal 5'-phosphate as a cofactor. The product of this gene is the long chain base subunit 1 of serine palmitoyltransferase. Mutations in this gene were identified in patients with hereditary sensory neuropathy type 1. Alternatively spliced variants encoding different isoforms have been identified.