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Anti-SPTLC1 Picoband Antibody
Catalog # ABO12580

Specification

Anti-SPTLC1 Picoband Antibody - Product Information

Application	**WB, IHC**
Primary Accession	O15269
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

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

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 Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human SPTLC1 (444-473aa IRVVVTVEQTEEELERAASTIKEVAQAVLL), 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: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}

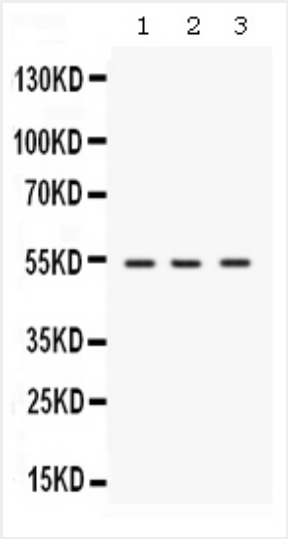
Tissue Location
Widely expressed. Not detected in small intestine.

Anti-SPTLC1 Picoband Antibody - Protocols

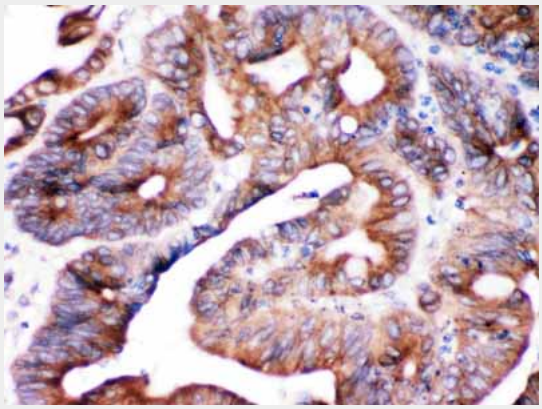
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- 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) at0.5 ??g/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 Î¼g/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.