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SPTLC1 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP2534b

Specification

SPTLC1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession O15269

SPTLC1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 10558

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

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2534b was selected from the C-term region of human SPTLC1 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SPTLC1 Antibody (C-term) Blocking Peptide - 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:<a

href="http://www.uniprot.org/citations/19416851" target="_blank">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.

SPTLC1 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

SPTLC1 Antibody (C-term) Blocking Peptide - Images

SPTLC1 Antibody (C-term) Blocking Peptide - 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.

SPTLC1 Antibody (C-term) Blocking Peptide - 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).