

SPTLC1 Polyclonal Antibody

Catalog # AP73415

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	O15269
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52744

Additional Information

Gene ID	10558
Other Names	SPTLC1; LCB1; Serine palmitoyltransferase 1; Long chain base biosynthesis protein 1; LCB 1; Serine-palmitoyl-CoA transferase 1; SPT 1; SPT1
Dilution	WB~~Western Blot: 1/500 - 1/2000. IHC-p: 1:100-300 ELISA: 1/20000. Not yet tested in other applications. IHC-P~~Western Blot: 1/500 - 1/2000. IHC-p: 1:100-300 ELISA: 1/20000. Not yet tested in other applications. IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

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}

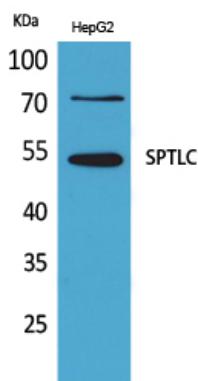
Tissue Location

Widely expressed. Not detected in small intestine.

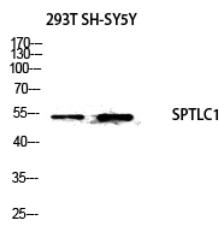
Background

Serine palmitoyltransferase (SPT) (PubMed: [19416851](#)). The heterodimer formed with SPTLC2 or SPTLC3 constitutes the catalytic core (PubMed: [19416851](#)). The composition of the serine palmitoyltransferase (SPT) complex determines the substrate preference (PubMed: [19416851](#)). 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](#)). 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](#)). Required for adipocyte cell viability and metabolic homeostasis (By similarity).

Images

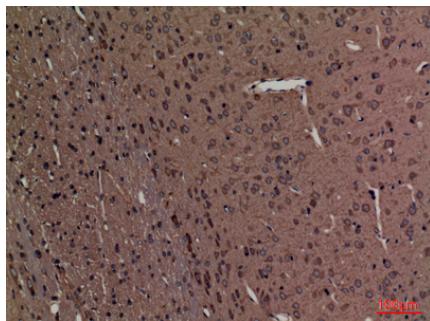


Western Blot analysis of HepG2 cells using SPTLC1 Polyclonal Antibody. Antibody was diluted at 1:500. Secondary antibody was diluted at 1:20000

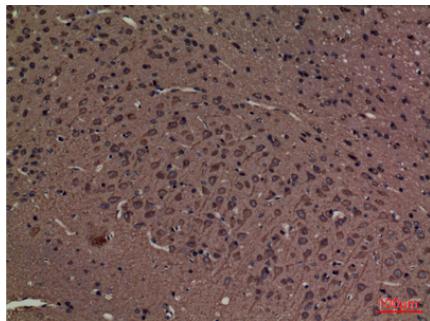


Western blot analysis of 293T SH-SY5Y lysis using SPTLC1 antibody. Antibody was diluted at 1:500. Secondary antibody was diluted at 1:20000

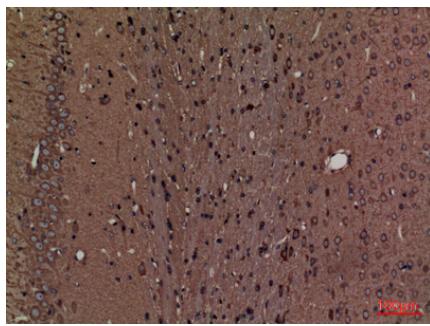
Immunohistochemical analysis of paraffin-embedded rat-brain, antibody was diluted at 1:100



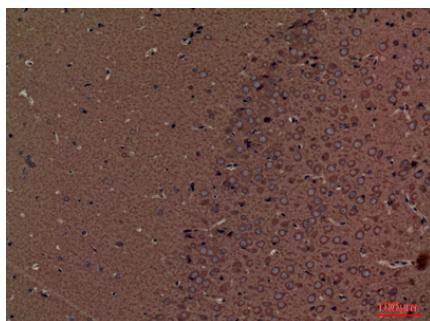
Immunohistochemical analysis of paraffin-embedded rat-brain, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded rat-brain, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded mouse-brain, antibody was diluted at 1:100



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