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SPTLC2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP59110

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O15270
Reactivity	Human, Mouse, Rat, Pig, Dog, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	62924
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SPTLC2
Epitope Specificity	301-400/562
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Endoplasmic reticulum membrane; Single-pass membrane protein.
SIMILARITY	Belongs to the class-II pyridoxal-phosphate-dependent aminotransferase family.
SUBUNIT	eterodimer with SPTLC1. Component of the serine palmitoyltransferase (SPT) complex, composed of LCB1/SPTLC1, LCB2 (SPTLC2 or SPTLC3) and ssPT (C14orf147/SSSPTA and C3orf57/SSSPTB).
DISEASE	Defects in SPTLC2 are the cause of hereditary sensory and autonomic neuropathy type 1C (HSAN1C) [MIM:613640]. It is a form of hereditary sensory and autonomic neuropathy, a genetically and clinically heterogeneous group of disorders characterized by degeneration of dorsal root and autonomic ganglion cells, and by prominent sensory abnormalities with a variable degree of motor and autonomic dysfunction. The neurological phenotype is often complicated by severe infections, osteomyelitis, and amputations. HSAN1C symptoms include loss of touch and vibration in the feet, dysesthesia and severe panmodal sensory loss in the upper and lower limbs, distal lower limb sensory loss with ulceration and osteomyelitis, and distal muscle weakness.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a long chain base subunit of serine palmitoyltransferase. Serine palmitoyltransferase, which consists of two different subunits, 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. Mutations in this gene were identified in patients with hereditary sensory neuropathy type I. [provided by RefSeq, Mar 2011].

Additional Information

Gene ID	9517
Other Names	Serine palmitoyltransferase 2, 2.3.1.50, Long chain base biosynthesis protein 2, LCB 2, Long chain base biosynthesis protein 2a, LCB2a, Serine-palmitoyl-CoA transferase 2, SPT 2, SPTLC2 (HGNC:11278), KIAA0526, LCB2
Target/Specificity	Widely expressed.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:50-200,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SPTLC2 (HGNC:11278)
Synonyms	KIAA0526, LCB2
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 (PubMed:19416851, PubMed:19648650, PubMed:20504773, PubMed:20920666). The SPT complex is composed of SPTLC1, SPTLC2 or SPTLC3 and SPTSSA or SPTSSB. Within this complex, the heterodimer consisting of SPTLC1 and SPTLC2/SPTLC3 forms 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, 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). Crucial for adipogenesis (By similarity).
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P97363}; Single-pass membrane protein {ECO:0000250|UniProtKB:P97363}
Tissue Location	Widely expressed..