SANTA CRUZ BIOTECHNOLOGY, INC.

SPTLC1 (H-300): sc-32916

BACKGROUND

SPTLC1 (serine palmitoyltransferase 1), also known as LCB1, and SPTLC2 (serine palmitoyltransferase 2), also known as LCB2, together catalyze sphingolipid biosynthesis by converting L-serine and palmitoyl-CoA to 3-oxosphinganine, utilizing pyridoxal 5'-phosphate as a cofactor. Increases in transepidermal water loss triggers upregulation of serine palmitoyltransferase mRNA expression in humans. Deficiencies in wildtype SPTLC1 and SPTLC2 can lead to hereditary sensory neuropathy, atopic eczema and psoriasis.

REFERENCES

1. Weiss, B., et al. 1997. Human and murine Serine-palmitoyl-CoA transferase-cloning, expression and characterization of the key enzyme in sphingolipid synthesis. Eur. J. Biochem. 249: 239-247.
2. Uhlinger, D.J., et al. 2001. Increased expression of Serine palmitoyltransferase (SPT) in balloon-injured rat carotid artery. Thromb. Haemost. 86: 1320-1326.
3. Stachowitz, S., et al. 2002. Permeability barrier disruption increases the level of Serine palmitoyltransferase in human epidermis. J. Invest. Dermatol. 119: 1048-1052.
4. Batheja, A.D., et al. 2003. Characterization of Serine palmitoyltransferase in normal human tissues. J. Histochem. Cytochem. 51: 687-696.
5. Carton, J.M., et al. 2003. Enhanced Serine palmitoyltransferase expression in proliferating fibroblasts, transformed cell lines, and human tumors. J. Histochem. Cytochem. 51: 715-726.
6. Dedov, V.N., et al. 2004. Activity of partially inhibited Serine palmitoyltransferase is sufficient for normal sphingolipid metabolism and viability of HSN1 patient cells. Biochim. Biophys. Acta 1688: 168-175.
7. LocusLink Report (LocusID: 10558). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: SPTLC1 (human) mapping to 9q22.31; Sptlc1 (mouse) mapping to 13 B1.

SOURCE

SPTLC1 (H-300) is a rabbit polyclonal antibody raised against amino acids 174-473 mapping at the C-terminus of SPTLC1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

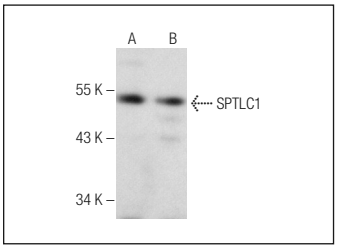
SPTLC1 (H-300) is recommended for detection of SPTLC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SPTLC1 (H-300) is also recommended for detection of SPTLC1 in additional species, including equine, canine, bovine and avian.

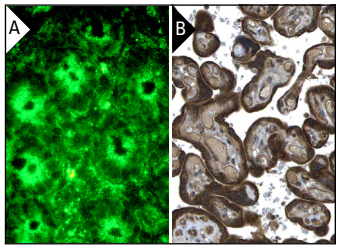
Suitable for use as control antibody for SPTLC1 siRNA (h): sc-106561, SPTLC1 siRNA (m): sc-153804, SPTLC1 shRNA Plasmid (h): sc-106561-SH, SPTLC1 shRNA Plasmid (m): sc-153804-SH, SPTLC1 shRNA (h) Lentiviral Particles: sc-106561-V and SPTLC1 shRNA (m) Lentiviral Particles: sc-153804-V.

Postive Controls: Jurkat whole cell lysate: sc-2204, mouse liver extract: sc-2256 or Hep G2 cell lysate: sc-2227.

DATA



SPTLC1 (H-300): sc-32916. Western blot analysis of SPTLC1 expression in Jurkat (**A**) and Hep G2 (**B**) whole cell lysates.



SPT1 (H-300): sc-32916. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

RESEARCH USE

For research use only, not for use in diagnostic procedures.