SANTA CRUZ BIOTECHNOLOGY, INC.

SPTLC1 (N-17): sc-27495

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 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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.

Blocking peptide available for competition studies, sc-27495 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SPTLC1 (N-17) 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), immunofluorescence (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 (N-17) is also recommended for detection of SPTLC1 in additional species, including equine, canine, bovine, porcine 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.

Molecular Weight of SPTLC1: 55 kDa.

Postive Controls: rat kidney extract: sc-2394 or mouse liver extract: sc-2256.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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