SANTA CRUZ BIOTECHNOLOGY, INC.

SPTLC2 (G-19): sc-27499

BACKGROUND

SPTLC1 (serine palmitoyltransferase 1, also known as LCB1) and SPTLC2 (serine palmitoyltransferase 2, 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 trigger 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: SPTLC2 (human) mapping to 14q24.3; Sptlc2 (mouse) mapping to 12 D2.

SOURCE

SPTLC2 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SPTLC2 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-27499 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

SPTLC2 (G-19) is recommended for detection of SPTLC2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

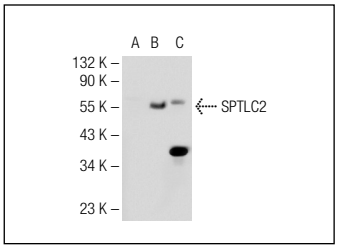
SPTLC2 (G-19) is also recommended for detection of SPTLC2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SPTLC2 siRNA (h): sc-106811, SPTLC2 siRNA (m): sc-77377, SPTLC2 shRNA Plasmid (h): sc-106811-SH, SPTLC2 shRNA Plasmid (m): sc-77377-SH, SPTLC2 shRNA (h) Lentiviral Particles: sc-106811-V and SPTLC2 shRNA (m) Lentiviral Particles: sc-77377-V.

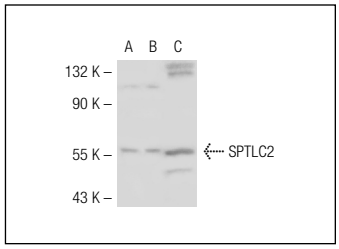
Molecular Weight of SPTLC2: 65 kDa.

Positive Controls: SPTLC2 (m): 293T lysate: sc-123764, SW480 cell lysate: sc-2219 or SPTLC2 (h): 293T Lysate: sc-172454.

DATA



SPTLC2 (G-19): sc-27499. Western blot analysis of SPTLC2 expression in non-transfected 293T: sc-117752 (**A**), human SPTLC2 transfected 293T: sc-172454 (**B**) and SW480 (**C**) whole cell lysates.



SPTLC2 (G-19): sc-27499. Western blot analysis of SPTLC2 expression in non-transfected: sc-117752 (**A**) and mouse SPTLC2 transfected: sc-123764 (**B**) 293T whole cell lysates and mouse brain tissue extract (**C**).

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.