SANTA CRUZ BIOTECHNOLOGY, INC.

SPTLC2 (G-4): sc-398704

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 wild type 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-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 306-342 within an internal region of SPTLC2 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398704 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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-4) is recommended for detection of SPTLC2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

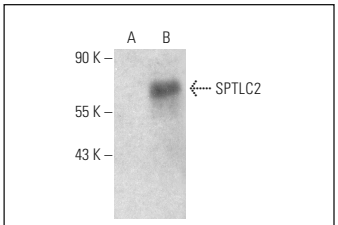
Molecular Weight of SPTLC2: 65 kDa.

Positive Controls: SPTLC2 (h): 293T Lysate: sc-172454.

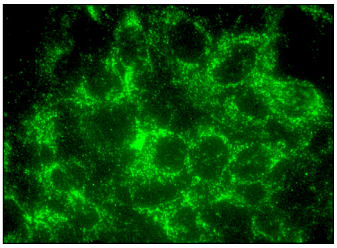
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SPTLC2 (G-4): sc-398704. Western blot analysis of SPTLC2 expression in non-transfected: sc-117752 (**A**) and human SPTLC2 transfected: sc-172454 (**B**) 293T whole cell lysates.



SPTLC2 (G-4): sc-398704. Immunofluorescence staining of formalin-fixed Hep G2 cells showing mitochondrial localization.

SELECT PRODUCT CITATIONS

1. Su, X., et al. 2019. The effect of SPTLC2 on promoting neuronal apoptosis is alleviated by MiR-124-3p through TLR4 signalling pathway. Neurochem. Res. 44: 2113-2122.

RESEARCH USE

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

PROTOCOLS

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