

## SPTLC2 (C-20): sc-27500

### 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

- 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.
- Uhlinger, D.J., et al. 2001. Increased expression of serine palmitoyltransferase (SPT) in balloon-injured rat carotid artery. *Thromb. Haemost.* 86: 1320-1326.
- Stachowitz, S., et al. 2002. Permeability barrier disruption increases the level of serine palmitoyltransferase in human epidermis. *J. Invest. Dermatol.* 119: 1048-1052.
- Batheja, A.D., et al. 2003. Characterization of serine palmitoyltransferase in normal human tissues. *J. Histochem. Cytochem.* 51: 687-696.
- 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.
- 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.

### CHROMOSOMAL LOCATION

Genetic locus: SPTLC2 (human) mapping to 14q24.3; Sptlc2 (mouse) mapping to 12 D2.

### SOURCE

SPTLC2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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-27500 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.

### RESEARCH USE

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

### APPLICATIONS

SPTLC2 (C-20) 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), 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).

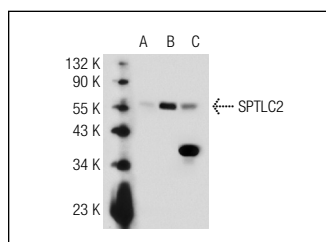
SPTLC2 (C-20) is also recommended for detection of SPTLC2 in additional species, including equine, canine, bovine, porcine and avian.

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.

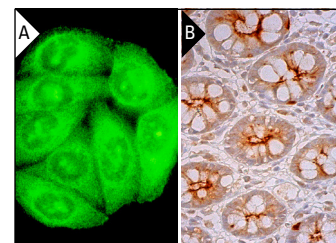
Molecular Weight of SPTLC2: 65 kDa.

Positive Controls: mouse brain extract: sc-2253, SPTLC2 (h): 293T Lysate: sc-172454 or SW480 cell lysate: sc-2219.

### DATA



SPTLC2 (C-20): sc-27500. 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 (C-20): sc-27500. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells (B).

### SELECT PRODUCT CITATIONS

- Konstantynowicz-Nowicka, K., et al. 2015. New evidence for the role of ceramide in the development of hepatic insulin resistance. *PLoS ONE* 10: e0116858.

### PROTOCOLS

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