

## ELOVL2 (S-16): sc-54874

### BACKGROUND

Elongation of very long chain fatty acid-like (ELOVL) proteins 1-6 are members of the ELO family of proteins, which play an important role in tissue-specific biosynthesis of very long chain fatty acids and sphingolipids. The ELOVL proteins act as elongases and catalyze fatty acid elongation reduction and localize to the endoplasmic reticulum (ER). Elongation of very long chain fatty acids protein 2 (ELOVL2), also referred to as Ssc2 (sequence similarity to Cig30 2), is the human homolog of the yeast ELO2 protein. It is abundantly expressed in the testis, kidney and liver. ELOVL2 participates in the elongation of polyunsaturated fatty acids of 20 and 22 carbons thereby regulating the activity of PPAR $\alpha$ . It has a narrow substrate preference which includes arachidonic acid and eicosapentaenoic acid. In addition, the overexpression of ELOVL2 enhances the synthesis of triacylglycerol (TAG).

### REFERENCES

1. Tvrdik, P., et al. 2000. Role of a new mammalian gene family in the biosynthesis of very long chain fatty acids and sphingolipids. *J. Cell Biol.* 149: 707-718.
2. Zhang, K., et al. 2001. A 5 bp deletion in ELOVL4 is associated with two related forms of autosomal dominant macular dystrophy. *Nat. Genet.* 27: 89-93.
3. Leonard, A.E., et al. 2002. Identification and expression of mammalian long-chain PUFA elongation enzymes. *Lipids* 37: 733-740.
4. Pereira, S.L., et al. 2004. Identification of two novel microalgal enzymes involved in the conversion of the  $\omega$ 3-fatty acid, eicosapentaenoic acid, into docosahexaenoic acid. *Biochem. J.* 384: 357-366.
5. Agaba, M., et al. 2005. Zebrafish cDNA encoding multifunctional fatty acid elongase involved in production of eicosapentaenoic (20:5n-3) and docosahexaenoic (22:6n-3) acids. *Mar. Biotechnol.* 6: 251-261.
6. Berger, A., et al. 2005. Dietary effects of arachidonate-rich fungal oil and fish oil on murine hepatic and hippocampal gene expression. *Lipids Health Dis.* 1: 2.
7. Wang, Y., et al. 2006. Regulation of hepatic fatty acid elongase and desaturase expression in diabetes and obesity. *J. Lipid Res.* 47: 2028-2041.

### CHROMOSOMAL LOCATION

Genetic locus: ELOVL2 (human) mapping to 6p24.2; Elovl2 (mouse) mapping to 13 A3.3.

### SOURCE

ELOVL2 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ELOVL2 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-54874 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

ELOVL2 (S-16) is recommended for detection of ELOVL2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

ELOVL2 (S-16) is also recommended for detection of ELOVL2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for ELOVL2 siRNA (h): sc-62265, ELOVL2 siRNA (m): sc-62266, ELOVL2 shRNA Plasmid (h): sc-62265-SH, ELOVL2 shRNA Plasmid (m): sc-62266-SH, ELOVL2 shRNA (h) Lentiviral Particles: sc-62265-V and ELOVL2 shRNA (m) Lentiviral Particles: sc-62266-V.

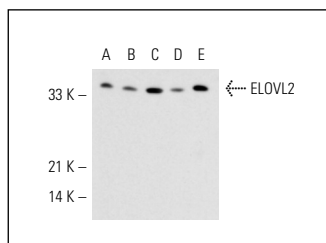
Molecular Weight of ELOVL2: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, mouse liver extract: sc-2256 or 3T3-L1 cell lysate: sc-2243.

### 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

### DATA



ELOVL2 (S-16): sc-54874. Western blot analysis of ELOVL2 expression in 3T3-L1 (A), Hep G2 (B), HeLa (C) and Y79 (D) whole cell lysates and mouse liver tissue extract (E).

### 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.