

# ELOVL7 (H-50): sc-134919

## BACKGROUND

Elongation of very long chain fatty acid-like (ELOVL) proteins 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. Fatty acids are important in many biological processes including fetal growth and development, brain development, inflammatory response, and retinal function. The ELOVL proteins function as elongases and catalyze fatty acid elongation reduction and localize to the endoplasmic reticulum (ER). Elongation of very long chain fatty acids protein 7 (ELOVL7) is involved in lipogenesis and its expression is regulated by PPAR $\alpha$ . ELOVL7 is a 281 amino acid protein and the gene encoding ELOVL7 maps to chromosome 5q12.1.

## 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. Kohlwein, S.D., et al. 2001. Tsc13p is required for fatty acid elongation and localizes to a novel structure at the nuclear-vacuolar interface in *Saccharomyces cerevisiae*. *Mol. Cell. Biol.* 21: 109-125.
4. Moon, Y.A., et al. 2001. Identification of a mammalian long chain fatty acyl elongase regulated by sterol regulatory element-binding proteins. *J. Biol. Chem.* 276: 45358-45366.
5. Leonard, A.E., et al. 2002. Identification and expression of mammalian long-chain PUFA elongation enzymes. *Lipids* 37: 733-740.
6. Zhang, X.M., et al. 2003. ELOVL4 mRNA distribution in the developing mouse retina and phylogenetic conservation of Elov4 genes. *Mol. Vis.* 9: 301-307.
7. Jakobsson, A., et al. 2005. Differential regulation of fatty acid elongation enzymes in brown adipocytes implies a unique role for ELOVL3 during increased fatty acid oxidation. *Am. J. Physiol. Endocrinol. Metab.* 289: E517-E526.
8. Jakobsson, A., et al. 2006. Fatty acid elongases in mammals: their regulation and roles in metabolism. *Prog. Lipid Res.* 45: 237-249.

## CHROMOSOMAL LOCATION

Genetic locus: ELOVL7 (human) mapping to 5q12.1; Elov17 (mouse) mapping to 13 D2.1.

## SOURCE

ELOVL7 (H-50) is a rabbit polyclonal antibody raised against amino acids 61-110 mapping within an internal region of ELOVL7 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.

## APPLICATIONS

ELOVL7 (H-50) is recommended for detection of ELOVL7 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).

ELOVL7 (H-50) is also recommended for detection of ELOVL7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ELOVL7 siRNA (h): sc-62273, ELOVL7 siRNA (m): sc-144634, ELOVL7 shRNA Plasmid (h): sc-62273-SH, ELOVL7 shRNA Plasmid (m): sc-144634-SH, ELOVL7 shRNA (h) Lentiviral Particles: sc-62273-V and ELOVL7 shRNA (m) Lentiviral Particles: sc-144634-V.

Molecular Weight (predicted) of ELOVL7: 33 kDa.

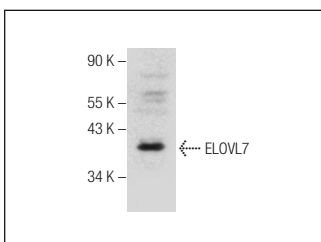
Molecular Weight (observed) of ELOVL7: 38 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or rat liver extract: sc-2395.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



ELOVL7 (H-50): sc-134919. Western blot analysis of ELOVL7 expression in rat liver tissue extract.

## 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.