

ELOVL5 (m): 293T Lysate: sc-120012

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 catalysts in fatty acid elongation reduction and localize to the endoplasmic reticulum (ER). Elongation of very long chain fatty acids protein 5 (ELOVL5), also known as HLO1 (human elongase 1), is predominantly expressed in adrenal gland and testis, but is also found in lung, brain and prostate tissue. ELOVL5 participates in the elongation of monounsaturated and polyunsaturated fatty acids of 18 to 20 carbons and thereby regulates the activity of PPAR α . In addition, ELOVL5 localizes to the sebaceous glands of the pheromone-producing region of skin and may be associated with pheromone production and regulation.

REFERENCES

- Leonard, A.E., et al. 2000. Cloning of a human cDNA encoding a novel enzyme involved in the elongation of long-chain polyunsaturated fatty acids. *Biochem. J.* 350: 765-770.
- Inagaki, K., et al. 2002. Identification and expression of a rat fatty acid elongase involved in the biosynthesis of C18 fatty acids. *Biosci. Biotechnol. Biochem.* 66: 613-621.
- Leonard, A.E., et al. 2002. Identification and expression of mammalian long-chain PUFA elongation enzymes. *Lipids* 37: 733-740.
- Mamalakos, G., et al. 2004. Depression and adipose polyunsaturated fatty acids in an adolescent group. *Prostaglandins Leukot. Essent. Fatty Acids* 71: 289-294.
- Barragan, I., et al. 2005. Mutation screening of three candidate genes, ELOVL5, SMAP1 and GLUL1 in autosomal recessive retinitis pigmentosa. *Int. J. Mol. Med.* 16: 1163-1167.
- Jakobsson, A., et al. 2006. Fatty acid elongases in mammals: their regulation and roles in metabolism. *Prog. Lipid Res.* 45: 237-249.
- Kitago, M., et al. 2007. Localization of the candidate genes ELOVL5 and SCD1 for "male-effect" pheromone synthesis in goats (*Capra hircus*). *J. Reprod. Dev.* 53:1329-1333.
- Kothapalli, K.S., et al. 2007. Differential cerebral cortex transcriptomes of baboon neonates consuming moderate and high docosahexaenoic acid formulas. *PLoS ONE* 2: e370.
- Rebouissou, S., et al. 2007. HNF1 α inactivation promotes lipogenesis in human hepatocellular adenoma independently of SREBP-1 and carbohydrate-response element-binding protein (ChREBP) activation. *J. Biol. Chem.* 282: 14437-14446.

CHROMOSOMAL LOCATION

Genetic locus: Elov5 (mouse) mapping to 9 E1.

PRODUCT

ELOVL5 (m): 293T Lysate represents a lysate of mouse ELOVL5 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ELOVL5 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ELOVL5 antibodies. Recommended use: 10-20 μ l per lane.

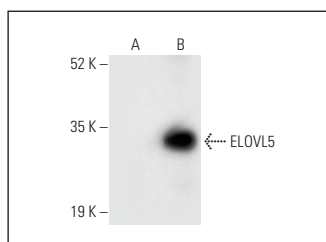
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ELOVL5 (E-10): sc-398653 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ELOVL5 expression in ELOVL5 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



ELOVL5 (E-10): sc-398653. Western blot analysis of ELOVL5 expression in non-transfected: sc-117752 (A) and mouse ELOVL5 transfected: sc-120012 (B) 293T whole cell lysates.

STORAGE

Store at -20 $^{\circ}$ C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.