

# ELOVL5 (G-18): sc-54882

## 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 HELO1 (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 $\alpha$ . 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

1. Inagaki, K., Aki, T., Fukuda, Y., Kawamoto, S., Shigeta, S., Ono, K. and Suzuki, O. 2002. Identification and expression of a rat fatty acid elongase involved in the biosynthesis of C18 fatty acids. *Biosci. Biotechnol. Biochem.* 66: 613-621.
2. Leonard, A.E., Kelder, B., Bobik, E.G., Chuang, L.T., Lewis, C.J., Kopchick, J.J., Mukerji, P. and Huang, Y.S. 2002. Identification and expression of mammalian long-chain PUFA elongation enzymes. *Lipids* 37: 733-740.
3. Mamalakis, G., Kiriakakis, M., Tsibinos, G. and Kafatos, A. 2004. Depression and adipose polyunsaturated fatty acids in an adolescent group. *Prosta-glandins Leukot. Essent. Fatty Acids* 71: 289-294.
4. Barragan, I., Marcos, I., Borrego, S. and Antiñolo, G. 2005. Mutation screening of three candidate genes, ELOVL5, SMAP1 and GLULD1 in autosomal recessive retinitis pigmentosa. *Int. J. Mol. Med.* 16: 1163-1167
5. Jakobsson, A., Westerberg, R. and Jacobsson, A. 2006. Fatty acid elongases in mammals: their regulation and roles in metabolism. *Prog. Lipid Res.* 45: 237-249.

## CHROMOSOMAL LOCATION

Genetic locus: *Elovl5* (mouse) mapping to 9 E1.

## SOURCE

ELOVL5 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ELOVL5 of rat 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-54882 P, (100  $\mu$ g 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.

## APPLICATIONS

ELOVL5 (G-18) is recommended for detection of ELOVL5 of mouse and rat 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).

Suitable for use as control antibody for ELOVL5 siRNA (m): sc-62270, ELOVL5 shRNA Plasmid (m): sc-62270-SH and ELOVL5 shRNA (m) Lentiviral Particles: sc-62270-V.

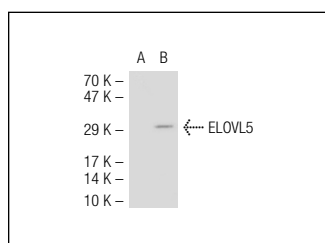
Molecular Weight of ELOVL5: 35 kDa.

Positive Controls: ELOVL5 (m): 293T Lysate: sc-120012.

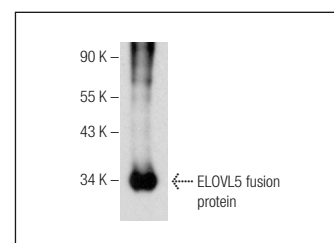
## RECOMMENDED SECONDARY REAGENTS

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



ELOVL5 (G-18): sc-54882. Western blot analysis of ELOVL5 expression in non-transfected: sc-117752 (A) and mouse ELOVL5 transfected: sc-120012 (B) 293T whole cell lysates.



ELOVL5 (G-18): sc-54882. Western blot analysis of human recombinant ELOVL5 fusion protein.

## RESEARCH USE

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

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Try **ELOVL5 (E-10): sc-398653**, our highly recommended monoclonal alternative to ELOVL5 (G-18).