

# ELOVL6 (Q-14): sc-54885

## 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). ELOVL6 (elongation of very long chain fatty acids protein 6), also known as fatty acid elongase 2, LCE (long-chain fatty-acyl elongase), FACE (fatty acyl-CoA elongase) or FAE, is a 265 amino acid multi-pass membrane protein that localizes to endoplasmic reticulum and mitochondria. A fatty acid elongase with specificity for C12-C16 saturated and monounsaturated fatty acids, ELOVL6 is implicated in Insulin sensitivity and energy metabolism, and is therefore considered a potential target for metabolic diseases including cardiovascular disease and diabetes.

## 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. 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.
3. Matsuzaka, T., et al. 2002. Cloning and characterization of a mammalian fatty acyl-CoA elongase as a lipogenic enzyme regulated by SREBPs. *J. Lipid Res.* 43: 911-920.
4. Jakobsson, A., et al. 2006. Fatty acid elongases in mammals: their regulation and roles in metabolism. *Prog. Lipid Res.* 45: 237-249.
5. Matsuzaka, T., et al. 2007. Crucial role of a long-chain fatty acid elongase, ELOVL6, in obesity-induced Insulin resistance. *Nat. Med.* 13: 1193-1202.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611546. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Lu, Y., et al. 2008. Multiple genetic variants along candidate pathways influence plasma high-density lipoprotein cholesterol concentrations. *J. Lipid Res.* 49: 2582-2589.
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## CHROMOSOMAL LOCATION

Genetic locus: ELOVL6 (human) mapping to 4q25; Elovl6 (mouse) mapping to 3 G3.

## SOURCE

ELOVL6 (Q-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ELOVL6 of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## 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-54885 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ELOVL6 (Q-14) is recommended for detection of ELOVL6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ELOVL6 (Q-14) is also recommended for detection of ELOVL6 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ELOVL6 siRNA (h): sc-62271, ELOVL6 siRNA (m): sc-62272, ELOVL6 shRNA Plasmid (h): sc-62271-SH, ELOVL6 shRNA Plasmid (m): sc-62272-SH, ELOVL6 shRNA (h) Lentiviral Particles: sc-62271-V and ELOVL6 shRNA (m) Lentiviral Particles: sc-62272-V.

Molecular Weight of ELOVL6: 31 kDa.

Positive Controls: Mouse brain extract: sc-2253.

## 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) 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.