SANTA CRUZ BIOTECHNOLOGY, INC.

# ELOVL5 (B-3): sc-374138

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: ELOVL5 (human) mapping to 6p12.1.

## SOURCE

ELOVL5 (B-3) is a mouse monoclonal antibody raised against amino acids 211-299 mapping at the C-terminus of ELOVL5 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ELOVL5 (B-3) is available conjugated to agarose (sc-374138 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374138 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374138 PE), fluorescein (sc-374138 FITC), Alexa Fluor® 488 (sc-374138 AF488), Alexa Fluor® 546 (sc-374138 AF546), Alexa Fluor® 594 (sc-374138 AF594) or Alexa Fluor® 647 (sc-374138 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374138 AF680) or Alexa Fluor® 790 (sc-374138 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

ELOVL5 (B-3) is recommended for detection of ELOVL5 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (h): sc-62269, ELOVL5 shRNA Plasmid (h): sc-62269-SH and ELOVL5 shRNA (h) Lentiviral Particles: sc-62269-V.

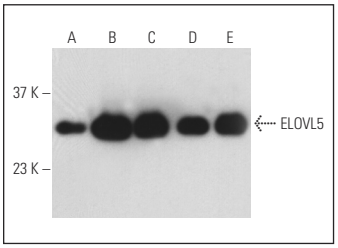
Molecular Weight of ELOVL5: 35 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

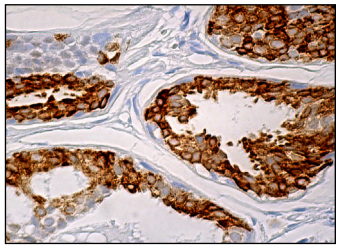
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG$\kappa$ BP-HRP: sc-516102 or m-IgG$\kappa$ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG$\kappa$ BP-FITC: sc-516140 or m-IgG$\kappa$ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG$\kappa$ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA




ELOVL5 (B-3): sc-374138. Western blot analysis of ELOVL5 expression in MCF7 (**A**), MOLT-4 (**B**), Jurkat (**C**), K-562 (**D**) and AN3 CA (**E**) whole cell lysates. Detection reagent used: m-$IgG_1$ BP-HRP: sc-525408.



ELOVL5 (B-3): sc-374138. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and membrane staining of glandular cells.

## SELECT PRODUCT CITATIONS


1. Bautista, C.J., et al. 2016. Changes in milk composition in obese rats consuming a high-fat diet. Br. J. Nutr. 115: 538-546.
2. Lee, J.Y., et al. 2020. Polyunsaturated fatty acid biosynthesis pathway determines ferroptosis sensitivity in gastric cancer. Proc. Natl. Acad. Sci. USA 117: 32433-32442.
3. Park, S.R., et al. 2021. Holistic characterization of single-hepatocyte transcriptome responses to high-fat diet. Am. J. Physiol. Endocrinol. Metab. 320: E244-E258.


## STORAGE

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

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.