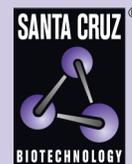


ACSVL1 (D-7): sc-393906



The Power to Question

BACKGROUND

Acyl-coenzyme A synthetases (ACs) are a large family of related enzymes known to catalyze the fundamental initial reaction in fatty acid metabolism. The ACS family is roughly characterized based on fatty acid chain length preference among different members. The nomenclature in the ACS family reflects this relationship and includes short-chain ACS (ACSS), medium-chain ACS (ACSM), long-chain ACS (ACSL) and very long-chain ACS (ACSVL). ACSVL family members are capable of activating both long-chain fatty acids (LCFAs) and very long-chain (VLCFAs) fatty acids. There are six members of the human ACSVL subfamily which have been described as solute carrier family 27A (SLC27A) gene products. They represent a group of evolutionarily conserved fatty acid transport proteins (FATPs) recognized for their role in facilitating translocation of long-chain fatty acids across the plasma membrane. The family nomenclature has recently been unified with their respective acyl-CoA synthetase family designations: ACSVL1 (FATP2), ACSVL2 (FATP6), ACSVL3 (FATP3), ACSVL4 (FATP4), ACSVL5 (FATP1) and ACSVL6 (FATP5). ACSVLs have unique expression patterns and are found in major organs of fatty acid metabolism, such as adipose tissue, liver, heart and kidney.

REFERENCES

- Schaffer, J.E., et al. 1994. Expression cloning and characterization of a novel adipocyte long chain fatty acid transport protein. *Cell* 79: 427-436.
- Hirsch, D., et al. 1998. A family of fatty acid transporters conserved from mycobacterium to man. *Proc. Natl. Acad. Sci. USA* 95: 8625-8629.

CHROMOSOMAL LOCATION

Genetic locus: SLC27A2 (human) mapping to 15q21.2; Slc27a2 (mouse) mapping to 2 F1.

SOURCE

ACSVL1 (D-7) is a mouse monoclonal antibody raised against amino acids 41-167 mapping near the N-terminus of ACSVL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACSVL1 (D-7) is available conjugated to agarose (sc-393906 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393906 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393906 PE), fluorescein (sc-393906 FITC), Alexa Fluor® 488 (sc-393906 AF488), Alexa Fluor® 546 (sc-393906 AF546), Alexa Fluor® 594 (sc-393906 AF594) or Alexa Fluor® 647 (sc-393906 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393906 AF680) or Alexa Fluor® 790 (sc-393906 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

ACSVL1 (D-7) is recommended for detection of ACSVL1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ACSVL1 siRNA (h): sc-90127, ACSVL1 siRNA (m): sc-140837, ACSVL1 shRNA Plasmid (h): sc-90127-SH, ACSVL1 shRNA Plasmid (m): sc-140837-SH, ACSVL1 shRNA (h) Lentiviral Particles: sc-90127-V and ACSVL1 shRNA (m) Lentiviral Particles: sc-140837-V.

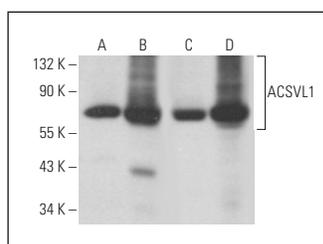
Molecular Weight of ACSVL1: 70 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HL-60 whole cell lysate: sc-2209 or human kidney extract: sc-363764.

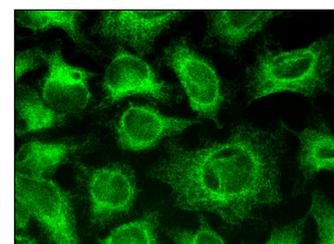
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ACSVL1 (D-7): sc-393906. Western blot analysis of ACSVL1 expression in Hep G2 (A), HL-60 (B) and KNRK (C) whole cell lysates and human kidney tissue extract (D).



ACSVL1 (D-7): sc-393906. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Chen, Y., et al. 2020. Involvement of FATP2-mediated tubular lipid metabolic reprogramming in renal fibrogenesis. *Cell Death Dis.* 11: 994.
- Seidu, T., et al. 2021. DHT causes liver steatosis via transcriptional regulation of SCAP in normal weight female mice. *J. Endocrinol.* 250: 49-65.

RESEARCH USE

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