

ACSVL4 (H-6): sc-393309

BACKGROUND

Acyl-coenzyme A synthetases (ACSSs) 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: SLC27A4 (human) mapping to 9q34.11; Slc27a4 (mouse) mapping to 2 B.

SOURCE

ACSVL4 (H-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 582-609 near the C-terminus of ACSVL4 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACSVL4 (H-6) is available conjugated to agarose (sc-393309 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393309 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393309 PE), fluorescein (sc-393309 FITC), Alexa Fluor® 488 (sc-393309 AF488), Alexa Fluor® 546 (sc-393309 AF546), Alexa Fluor® 594 (sc-393309 AF594) or Alexa Fluor® 647 (sc-393309 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393309 AF680) or Alexa Fluor® 790 (sc-393309 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393309 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

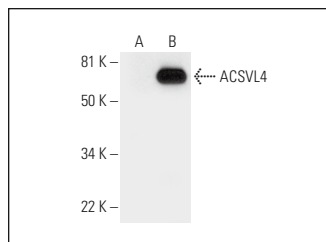
ACSVL4 (H-6) is recommended for detection of ACSVL4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 ACSVL4 siRNA (h): sc-37094, ACSVL4 siRNA (m): sc-37095, ACSVL4 shRNA Plasmid (h): sc-37094-SH, ACSVL4 shRNA Plasmid (m): sc-37095-SH, ACSVL4 shRNA (h) Lentiviral Particles: sc-37094-V and ACSVL4 shRNA (m) Lentiviral Particles: sc-37095-V.

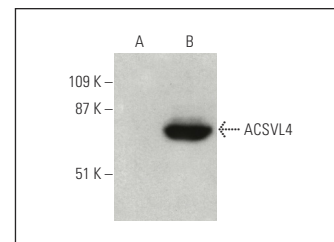
Molecular Weight of ACSVL4: 70 kDa.

Positive Controls: ACSVL4 (m): 293T Lysate: sc-126389.

DATA



ACSVL4 (H-6): sc-393309. Western blot analysis of ACSVL4 expression in non-transfected: sc-117752 (A) and mouse ACSVL4 transfected: sc-126389 (B) 293T whole cell lysates.



ACSVL4 (H-6) HRP: sc-393309 HRP. Direct western blot analysis of ACSVL4 expression in sc-117752 (A) and sc-126389 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Podratz, P.L., et al. 2020. Disruption of fertility, placenta, pregnancy outcome, and multigenerational inheritance of hepatic steatosis by organotin exposure from contaminated seafood in rats. *Sci. Total Environ.* 723: 138000.
- Li, H., et al. 2022. *Clostridium butyricum* inhibits fat deposition via increasing the frequency of adipose tissue-resident regulatory T cells. *Mol. Nutr. Food Res.* 66: e2100884.
- Riojas, A.M., et al. 2022. Blood pressure and the kidney cortex transcriptome response to high-sodium diet challenge in female nonhuman primates. *Physiol. Genomics* 54: 443-454.
- Bursac, B., et al. 2024. *Crocus sativus* tepals extract suppresses subcutaneous adipose tissue hypertrophy and improves systemic Insulin sensitivity in mice on high-fat diet. *Biofactors*. E-published.

STORAGE

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

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