

ACSVL5 (G-18): sc-31954

BACKGROUND

Acyl-coenzyme A synthetases (ACSs) 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

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- Watkins, P.A., Manguel, D., Jia, Z. and Pevsner, J. 2007. Evidence for 26 distinct acyl-coenzyme A synthetase genes in the human genome. *J. Lipid Res.* 48: 2736-2750.

CHROMOSOMAL LOCATION

Genetic locus: SLC27A1 (human) mapping to 19p13.11; Slc27a1 (mouse) mapping to 8 B3.3.

SOURCE

ACSVL5 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ACSVL5 of human origin.

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-31954 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ACSVL5 (G-18) is recommended for detection of ACSVL5 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).

Suitable for use as control antibody for ACSVL5 siRNA (h): sc-44585, ACSVL5 siRNA (m): sc-37093, ACSVL5 shRNA Plasmid (h): sc-44585-SH, ACSVL5 shRNA Plasmid (m): sc-37093-SH, ACSVL5 shRNA (h) Lentiviral Particles: sc-44585-V and ACSVL5 shRNA (m) Lentiviral Particles: sc-37093-V.

Molecular Weight of ACSVL5: 63 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

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.

SELECT PRODUCT CITATIONS

- Gurriarán-Rodríguez, U., Al-Massadi, O., Roca-Rivada, A., Crujeiras, A.B., Gallego, R., Pardo, M., Seoane, L.M., Pazos, Y., Casanueva, F.F. and Camiña, J.P. 2011. Obestatin as a regulator of adipocyte metabolism and adipogenesis. *J. Cell. Mol. Med.* 15: 1927-1940.

STORAGE

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

RESEARCH USE

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