**BACKGROUND**

Acyl-CoA synthetases, also known as long-chain fatty-acid CoA synthases (FACL) or palmitoyl-CoA ligases, include ACSL1-6, which are all single-pass membrane proteins localizing to the mitochondrion, microsome or peroxisome. FACL proteins are important for synthesis of cellular lipids and for β-oxidation degradation. Specifically, ACSL proteins catalyze the activation of long-chain fatty acids to acyl-CoAs, which can be metabolized to form CO₂, triacylglycerol (TAG), phospholipids (PL) and cholesteryl esters (CE). ACSL3 preferentially utilizes laurate, myristate, arachidonate and eicosapentaenoate among saturated and unsaturated long chain fatty acids. FACL3 is expressed as two isoforms in various tissues, including brain, heart, placenta, prostate, skeletal muscle, testis and thymus. FACL4 preferentially utilizes arachidonate and is abundant in steroidogenic tissues. FACL4 may modulate female fertility and uterine prostaglandin production.

**CHROMOSOMATIC LOCATION**

Genetic locus: ACSL4 (human) mapping to Xq23; Acsl4 (mouse) mapping to 8.7.1 (distal, Xq22).

**SOURCE**

ACSL4 (A-5) is a mouse monoclonal antibody raised against amino acids 623-675 mapping near the C-terminus of ACSL4 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG₂ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACSL4 (A-5) is available conjugated to agarose (sc-271800 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271800 HRP), 200 µg/ml, for WB, (HCP) and ELISA; to either phycoerythrin (sc-271800 PE), fluorescein (sc-271800 FITC), Alexa Fluor® 488 (sc-271800 AF488), Alexa Fluor® 546 (sc-271800 AF546), Alexa Fluor® 594 (sc-271800 AF594) or Alexa Fluor® 647 (sc-271800 AF647), 200 µg/ml, for WB, (RGB), IF, HCP and FCM; and to either Alexa Fluor® 680 (sc-271800 AF680) or Alexa Fluor® 790 (sc-271800 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

ACSL4 (A-5) is recommended for detection of short isoform and long isoform of ACSL4 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), 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).

ACSL4 (A-5) is also recommended for detection of short isoform and long isoform of ACSL4 in additional species, including equine.

Suitable for use as control antibody for ACSL4 siRNA (h): sc-60619, ACSL4 siRNA (m): sc-60620, ACSL4 shRNA Plasmid (h): sc-60619-SH, ACSL4 shRNA Plasmid (m): sc-60620-SH, ACSL4 shRNA (h) Lentiviral Particles: sc-60619-V and ACSL4 shRNA (m) Lentiviral Particles: sc-60620-V.

Molecular Weight of ACSL4: 75 kDa.

**STORAGE**

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

**DATA**

ACSL4 (A-5) sc-271800. Western blot analysis of ACSL4 expression in Hep G2 (A) and Hela (B) whole cell lysates.


**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

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