

ACSL3 (F-9): sc-271246

BACKGROUND

Acyl-CoA synthetases, also known as long-chain fatty-acid CoA synthases (ACSL) or Palmitoyl-CoA ligases, include ACSL1-6, which are all single-pass membrane proteins localizing to the mitochondrion, microsome or peroxisome. ACSL 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 CO_2 , triacylglycerol (TAG), phospholipids (PL) and cholesteryl esters (CE). ACSL3 preferentially utilizes laurate, myristate, arachidonate and eicosapentaenoate among saturated and unsaturated long chain fatty acids. ACSL3 is expressed as two isoforms in various tissues, including brain, heart, placenta, prostate, skeletal muscle, testis and thymus. ACSL4 preferentially utilizes arachidonate and is abundant in steroidogenic tissues. ACSL4 may modulate female fertility and uterine prostaglandin production.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ACSL3 (human) mapping to 2q36.1; *Acs13* (mouse) mapping to 1 C4.

SOURCE

ACSL3 (F-9) is a mouse monoclonal antibody raised against amino acids 193-288 mapping within an internal region of ACSL3 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.

APPLICATIONS

ACSL3 (F-9) is recommended for detection of ACSL3 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 ACSL3 siRNA (h): sc-60617, ACSL3 siRNA (m): sc-60618, ACSL3 shRNA Plasmid (h): sc-60617-SH, ACSL3 shRNA Plasmid (m): sc-60618-SH, ACSL3 shRNA (h) Lentiviral Particles: sc-60617-V and ACSL3 shRNA (m) Lentiviral Particles: sc-60618-V.

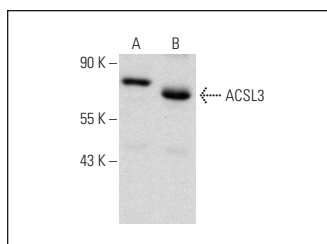
Molecular Weight of ACSL3: 79/80 kDa.

Positive Controls: RT-4 whole cell lysate: sc-364257, C2C12 whole cell lysate: sc-364188 or K-562 whole cell lysate: sc-2203.

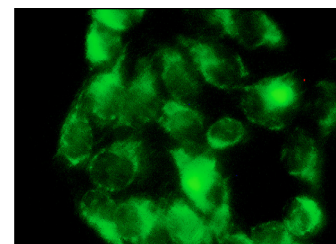
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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



ACSL3 (F-9): sc-271246. Western blot analysis of ACSL3 expression in RT-4 (A) and C2C12 (B) whole cell lysates.



ACSL3 (F-9): sc-271246. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.