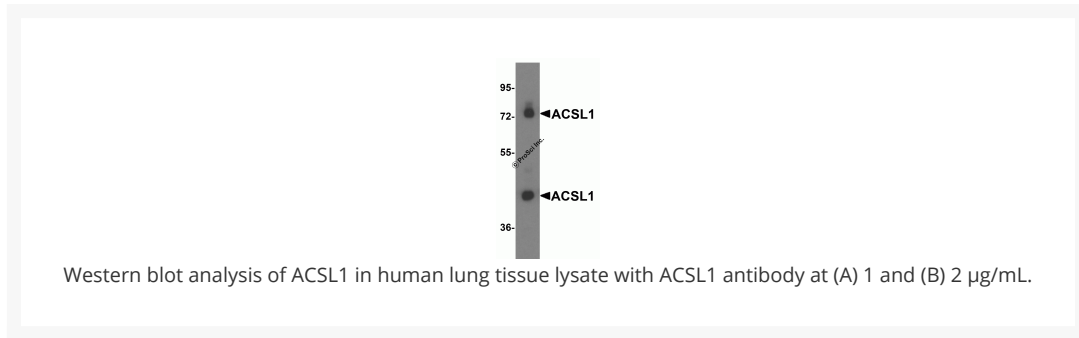




# ACSL1 Antibody

Cat. No.: 7081



## Ψ Specifications

<b>HOST SPECIES:</b>	Rabbit
<b>SPECIES REACTIVITY:</b>	Human, Mouse, Rat
<b>HOMOLOGY:</b>	Predicted species reactivity based on immunogen sequence: Guinea pig: (88%)
<b>IMMUNOGEN:</b>	Rabbit polyclonal ACSL1 antibody was raised against an 18 amino acid peptide near the center of human ACSL1.  The immunogen is located within amino acids 240 - 290 of ACSL1.
<b>TESTED APPLICATIONS:</b>	ELISA, IF, WB

<b>APPLICATIONS:</b>	ACSL1 antibody can be used for detection of ACSL1 by Western blot at 0.25 µg/mL. For immunofluorescence start at 20 µg/mL.  Antibody validated: Western Blot in human samples and Immunofluorescence in human samples. All other applications and species not yet tested.
<b>SPECIFICITY:</b>	At least three isoforms of ACSL1 are known to exist; this antibody will detect all three isoforms.
<b>POSITIVE CONTROL:</b>	1) Cat. No. 1304 – Human Liver Tissue Lysate  2) Cat. No. 10-101 - Human Lung Tissue Slide
<b>PREDICTED MOLECULAR WEIGHT:</b>	Predicted: 41, 58, 77 kDa  Observed: 45, 47 kDa

## Ψ Properties

<b>PURIFICATION:</b>	ACSL1 Antibody is affinity chromatography purified via peptide column.
<b>CLONALITY:</b>	Polyclonal
<b>ISOTYPE:</b>	IgG
<b>CONJUGATE:</b>	Unconjugated
<b>PHYSICAL STATE:</b>	Liquid
<b>BUFFER:</b>	ACSL1 Antibody is supplied in PBS containing 0.02% sodium azide.
<b>CONCENTRATION:</b>	1 mg/mL
<b>STORAGE CONDITIONS:</b>	ACSL1 antibody can be stored at 4 °C for three months and -20 °C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

## Ψ Additional Info

<b>OFFICIAL SYMBOL:</b>	ACSL1
<b>ALTERNATE NAMES:</b>	ACSL1 Antibody: ACS1, LACS, FAcl1, FAcl2, LACS1, LACS2, Long-chain-fatty-acid--CoA ligase 1, Acyl-CoA synthetase 1, ACS1
<b>ACCESSION NO.:</b>	NP_001986
<b>PROTEIN GI NO.:</b>	40807491
<b>GENE ID:</b>	2180
<b>USER NOTE:</b>	Optimal dilutions for each application to be determined by the researcher.

## Ψ Background and References

<b>BACKGROUND:</b>	ACSL1 Antibody: Long-chain acyl coenzyme A synthetase 1 (ACSL1) catalyzes the synthesis of acyl-CoA from long-chain fatty acids in an ATP-dependent manner. ACSL1 is a member of a family of long-chain acyl-CoA synthetases which differ in substrate preference, tissue expression, and subcellular localization. In mouse, ACSL1 is the major acyl-CoA enzyme in the heart, providing 60-90% of heart ATP. Loss of ACSL1 either globally or in heart ventricles resulted in impaired fatty acid oxidation, activation of the mammalian target of rapamycin (mTOR), and cardiac hypertrophy.
<b>REFERENCES:</b>	1) Black PN and DiRusso CC. Transmembrane movement of exogenous long-chain fatty acids: proteins, enzymes, and vectorial esterification. <i>Microbiol. Mol. Biol. Rev.</i> 2003; 67:454-72.
	2) Coleman RA, Lewin TM, Van Horn CG, et al. Do acyl-CoA synthetases regulate fatty acid entry into synthetic versus degradative pathways? <i>J. Nutr.</i> 2002; 132:2123-6.
	3) Clark H, Carling D, and Saggerson D. Covalent activation of heart AMP-activated protein kinase in response to physiological concentrations of long-chain fatty acids. <i>Eur. J. Biochem.</i> 2004; 271:2215-24
	4) Ellis JM, Mentock SM, DePetrillo MA, et al. Mouse cardiac acyl Coenzyme A synthetase 1 deficiency impairs fatty acid oxidation and induces cardiac hypertrophy. <i>Mol. Cell. Biol.</i> 2011; 31:1252-62.

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