Anti-ACSL1 Antibody [A9B5]

HA601112

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 78 kDa
Clone number:	A9B5

Description: Long-chain-fatty-acid—CoA ligase 1 is an enzyme that in humans is encoded by the ACSL1 gene. The ACSL1 gene is located on the 4th chromosome, with its specific location being 4q35.1. The gene contains 28 exons. The protein encoded by this gene is an isozyme of the long-chain fatty-acid-coenzyme A ligase family. Although differing in substrate specificity, subcellular localization, and tissue distribution, all isozymes of this family convert free long-chain fatty acids into fatty acyl-CoA esters, and thereby play a key role in lipid biosynthesis and fatty acid degradation. In melanocytic cells ACSL1 gene expression may be regulated by MITF. ACSL1 is known to be involved in fatty-acid metabolism critical for heart function and nonspecific mental retardation. Since the ACSL4 gene is highly expressed in brain, where it encodes a brain specific isoform, an ASCL1 mutation may be an efficient diagnostic tool in mentally retarded males.

Immunogen: Recombinant protein within human aa 151-350 / 698.

Positive control: Rat kidney tissue, human liver tissue, mouse heart tissue, Raji cell lysate, HepG2 cell lysate, LO2 cell lysate, A431 cell lysate.

Subcellular location: Mitochondrion outer membrane, Peroxisome membrane, Microsome membrane, Endoplasmic reticulum membrane.

Database links: SwissProt: P33121 Human | P41216 Mouse | P18163 Rat

Recommended Dilutions:

WB	1:1,000-1:5,000
IHC-P	1:200-1:1,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

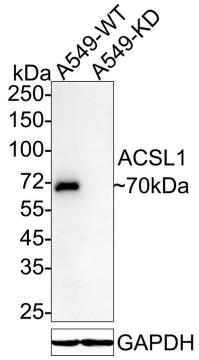

Fig1: Western blot analysis of ACSL1 on different lysates with Mouse anti-ACSL1 antibody (HA601112) at 1/5,000 dilution.

Lane 1: A549-si NT cell lysate
Lane 2: A549-si ACSL1 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 78 kDa
Observed band size: 70 kDa

Exposure time: 2 minutes; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601112) at 1/5,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

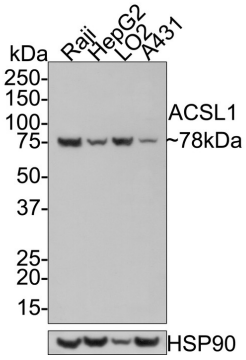

Fig2: Western blot analysis of ACSL1 on different lysates with Mouse anti-ACSL1 antibody (HA601112) at 1/1,000 dilution.

Lane 1: Raji cell lysate
Lane 2: HepG2 cell lysate
Lane 3: LO2 cell lysate
Lane 4: A431 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 78 kDa
Observed band size: 78 kDa

Exposure time: 2 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601112) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:150,000 dilution was used for 1 hour at room temperature.

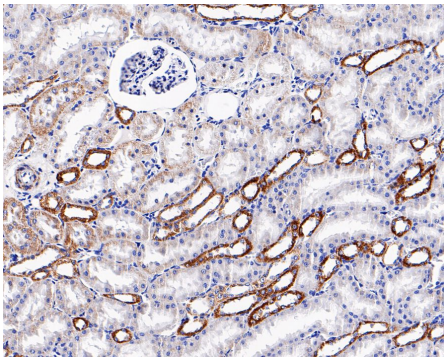

Fig3: Immunohistochemical analysis of paraffin-embedded rat kidney tissue with Mouse anti-ACSL1 antibody (HA601112) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601112) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

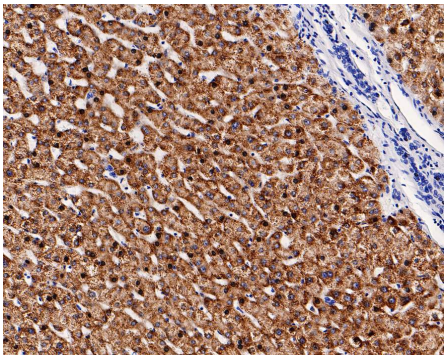

Fig4: Immunohistochemical analysis of paraffin-embedded human liver tissue with Mouse anti-ACSL1 antibody (HA601112) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601112) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

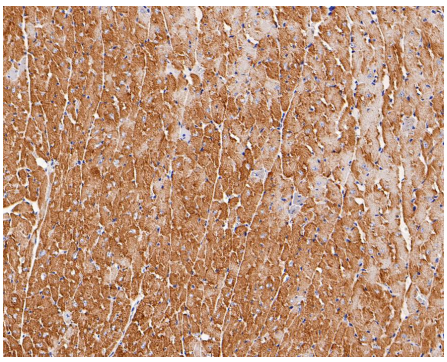

Fig5: Immunohistochemical analysis of paraffin-embedded mouse heart tissue with Mouse anti-ACSL1 antibody (HA601112) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601112) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Beatty A et al. Ferroptotic cell death triggered by conjugated linolenic acids is mediated by ACSL1. Nat Commun. 2021 Apr
2. Li T et al. ACSL1 affects Triglyceride Levels through the PPARγ Pathway. Int J Med Sci. 2020 Feb