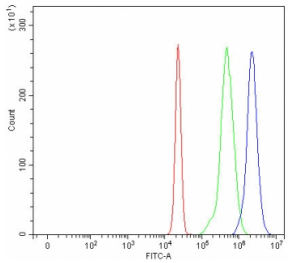
ACSL5 Antibody / Acyl-CoA Synthetase Family Member 5 Antibody (R32803)

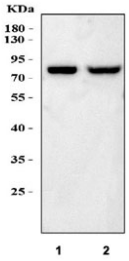
Catalog No.	Formulation	Size
R32803	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9ULC5
Applications	Western blot: 0.5-1ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This ACSL5 Antibody / Acyl-CoA Synthetase Family Member 5 Antibody is available for research use only.



ACSL5 Antibody Human HL60 Cell FACS. Flow cytometric analysis of fixed and permeabilized human HL60 cells stained with ACSL5 Antibody / Acyl-CoA Synthetase Family Member 5 Antibody at 1 ug/million cells following blocking with goat serum. Red: cells alone; green: isotype control; blue: ACSL5 antibody. The clear rightward shift of the ACSL5 antibody signal relative to the controls demonstrates specific intracellular detection of Acyl-CoA Synthetase Family Member 5 in HL60 cells. This ACSL5 Antibody, recognizing Acyl-CoA Synthetase Family Member 5, is suitable for flow cytometry studies of fatty acid activation, lipid metabolism and cellular energy homeostasis.



ACSL5 Antibody Mouse and Rat Liver WB. Western blot analysis of ACSL5 Antibody / Acyl-CoA Synthetase Family Member 5 Antibody using liver lysates from rat (lane 1) and mouse (lane 2). A prominent immunoreactive band is detected at approximately 76 kDa in both species, consistent with the predicted molecular weight of ACSL5. The comparable detection across rat and mouse liver demonstrates cross-species recognition of this lipid metabolic enzyme. This ACSL5 Antibody, recognizing Acyl-CoA Synthetase Family Member 5, is suitable for Western blot studies of fatty acid activation, lipid metabolism and mitochondrial energy metabolism.

Description

ACSL5 Antibody / Acyl-CoA Synthetase Family Member 5 Antibody recognizes Acyl-CoA Synthetase Family Member 5 (ACSL5), an enzyme that catalyzes the ATP-dependent activation of long-chain fatty acids by converting them into fatty acyl-CoA esters. This activation step is essential for directing fatty acids toward beta oxidation, phospholipid synthesis, triglyceride formation and other metabolic pathways. By determining the metabolic fate of fatty acids, ACSL5 serves as an important regulator of cellular energy metabolism and lipid homeostasis. NSJ Bioreagents provides ACSL5 antibodies for investigations of fatty acid metabolism, mitochondrial biology and metabolic disease.

ACSL5 is expressed at particularly high levels in metabolically active tissues including liver, small intestine and brown adipose tissue, where it localizes primarily to the outer mitochondrial membrane and endoplasmic reticulum. The enzyme supplies activated fatty acids for mitochondrial energy production while also supporting membrane lipid synthesis and intracellular lipid remodeling. Through these activities, ACSL5 contributes to nutrient utilization, cellular energy balance and adaptation to changing metabolic demands.

Altered ACSL5 expression has been associated with obesity, insulin resistance, nonalcoholic fatty liver disease, colorectal cancer and other disorders involving abnormal lipid metabolism. Changes in ACSL5 activity may influence mitochondrial function, apoptosis and cellular proliferation through altered fatty acid utilization and lipid signaling. Consequently, ACSL5 has become an important research target in metabolic disease, cancer biology and nutritional science, where regulation of fatty acid activation is increasingly recognized as a critical determinant of cellular physiology.

An ACSL5 Antibody is a valuable reagent for detecting Acyl-CoA Synthetase Family Member 5 by Western blotting, immunohistochemistry, immunofluorescence, immunoprecipitation and related immunoassays. An Acyl-CoA Synthetase Family Member 5 Antibody supports investigations of fatty acid activation, mitochondrial metabolism, lipid homeostasis and metabolic regulation.

For an overview of ACSL5 biology and its role in fatty acid activation and lipid metabolism, visit our ACSL5 Antibody / Long Chain Fatty Acid CoA Ligase 5 Antibody page.

Application Notes

Optimal dilution of the ACSL5 Antibody / Acyl-CoA Synthetase Family Member 5 Antibody should be determined by the researcher.

Immunogen

Amino acids 337-378 (ADDMKTLKPTLFPAVPRLLNRIYDKVQNEAKTPLKKFLLKLA) from the human protein were used as the immunogen for the ACSL5 antibody.

Storage

After reconstitution, the ACSL5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

ACSL5 antibody, Acyl-CoA Synthetase Family Member 5 antibody, Long Chain Fatty Acid CoA Ligase 5 antibody, Fatty Acid CoA Ligase 5 antibody

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