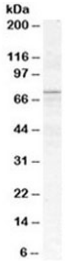
ACSL5 Antibody / FACL5 Lipid Metabolism Enzyme Antibody (R35791)

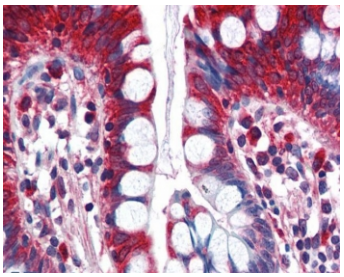
Catalog No.	Formulation	Size
R35791-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	51703
RRID	AB_3752978
Localization	Cytoplasmic
Applications	Western blot: 1-3ug/ml IHC (FFPE): 5ug/ml ELISA (peptide) LOD: 1:16000
Limitations	This ACSL5 Antibody / FACL5 Lipid Metabolism Enzyme Antibody is available for research use only.



ACSL5 Antibody Human Spleen WB. Western blot analysis of human spleen lysate using ACSL5 Antibody / FACL5 Lipid Metabolism Enzyme Antibody at 1 ug/ml. ACSL5 is predicted to have a molecular weight of approximately 76 kDa, and a specific immunoreactive band is detected near the expected size. Expression of this lipid metabolism enzyme in spleen is consistent with its role in cellular fatty acid activation and metabolic regulation. This ACSL5 Antibody, recognizing FACL5, is suitable for Western blot studies of lipid metabolism, fatty acid utilization and cellular energy homeostasis.



ACSL5 Antibody Human Small Intestine IHC. Immunohistochemical staining of FFPE human small intestine tissue using ACSL5 Antibody / FACL5 Lipid Metabolism Enzyme Antibody at 5 ug/ml. Heat-induced epitope retrieval was performed by steaming sections in pH6 citrate buffer, followed by alkaline phosphatase detection. Strong cytoplasmic staining is observed in the intestinal epithelium, consistent with the high metabolic activity and fatty acid processing capacity of these cells. This ACSL5 Antibody, recognizing FACL5, is well suited for immunohistochemical studies of lipid metabolism, fatty acid activation and intestinal energy homeostasis.

Description

ACSL5 Antibody / FACL5 Lipid Metabolism Enzyme Antibody recognizes ACSL5, also known as FACL5 (Fatty Acid CoA Ligase 5), a member of the long-chain acyl-CoA synthetase family that activates long-chain fatty acids by converting them into fatty acyl-CoA esters. This ATP-dependent reaction is required before fatty acids can participate in beta oxidation, membrane phospholipid synthesis, triglyceride production and numerous lipid signaling pathways. As a key lipid metabolism enzyme, ACSL5 regulates how cells utilize and store fatty acids in response to changing metabolic demands. NSJ Bioreagents provides ACSL5 antibodies for investigations of lipid metabolism, cellular energetics and metabolic disease.

FACL5 is expressed in tissues with high rates of lipid metabolism, including liver, intestine and brown adipose tissue. The protein localizes primarily to the outer mitochondrial membrane and the endoplasmic reticulum, where it channels activated fatty acids toward energy production or lipid biosynthesis. Through this metabolic gatekeeping function, ACSL5 helps coordinate nutrient utilization, mitochondrial activity and maintenance of cellular lipid homeostasis.

Abnormal regulation of ACSL5 has been associated with obesity, insulin resistance, fatty liver disease, colorectal cancer and other disorders characterized by altered lipid metabolism. Changes in ACSL5 expression can influence mitochondrial function, oxidative metabolism, apoptosis and cell proliferation through effects on fatty acid utilization and lipid signaling networks. Consequently, FACL5 has become an important target for studies of metabolic regulation, cancer metabolism and the development of therapies aimed at correcting dysregulated lipid homeostasis.

An ACSL5 Antibody is a valuable reagent for detecting FACL5 by Western blotting, immunohistochemistry, immunofluorescence, immunoprecipitation and related immunoassays. A FACL5 Lipid Metabolism Enzyme Antibody supports investigations of fatty acid activation, mitochondrial metabolism, lipid homeostasis and metabolic regulation.

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

Application Notes

Optimal dilution of the ACSL5 Antibody / FACL5 Lipid Metabolism Enzyme Antibody should be determined by the researcher.

1. This ACSL5 antibody will detect isoforms a and b.

Immunogen

Amino acids RTQIDSLYEHIQD were used as the immunogen for this ACSL5 antibody.

Storage

Aliquot and store the ACSL5 antibody at -20oC.

Alternate Names

ACSL5 antibody, FACL5 antibody, Fatty Acid CoA Ligase 5 antibody, Long Chain Fatty Acid CoA Ligase 5 antibody

Copyright © NSJ Bioreagents. All rights reserved.