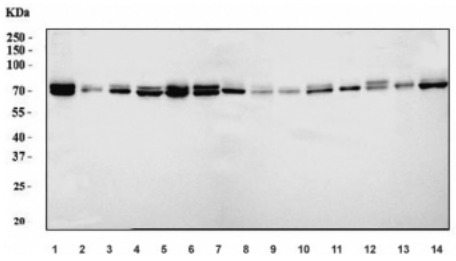
FACL4 Antibody / Long Chain Acyl-CoA Synthetase 4 Antibody (RQ6920)

Catalog No.	Formulation	Size
RQ6920	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 purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O60488
Applications	Western blot: 0.5-1 ug/ml Immunofluorescence: 5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This FACL4 Antibody / Long Chain Acyl-CoA Synthetase 4 Antibody is available for research use only.



FACL4 Antibody Human, Rat and Mouse WB. Western blot analysis of human U-2 OS (lane 1), PC-3 (lane 2), HeLa (lane 3), Caco-2 (lane 4), HEL (lane 5), and U-87 MG (lane 6) cell lysates, rat brain (lane 7), rat lung (lane 8), rat stomach (lane 9), rat PC-12 (lane 10) lysates, and mouse brain (lane 11), mouse lung (lane 12), mouse stomach (lane 13), and mouse NIH 3T3 (lane 14) cell lysates using FACL4 Antibody / Long Chain Acyl-CoA Synthetase 4 Antibody. A predominant band is detected at approximately 74-80 kDa across the tested samples, corresponding to the expected molecular weights of the short and long FACL4 isoforms. The consistent detection in multiple human, rat, and mouse tissues and cell lines demonstrates broad cross-species reactivity. This FACL4 Antibody is well suited for Western blot analysis of long chain acyl-CoA synthetase 4 expression in studies of lipid metabolism, fatty acid activation, ferroptosis, and cellular energy homeostasis.

Description

FACL4 Antibody / Long Chain Acyl-CoA Synthetase 4 Antibody recognizes FACL4, also known as acyl-CoA synthetase long chain family member 4 (ACSL4), a lipid metabolic enzyme responsible for converting long-chain fatty acids into activated acyl-CoA derivatives. This activation step is required before fatty acids can participate in phospholipid synthesis, membrane remodeling, beta oxidation, and lipid signaling pathways. FACL4 exhibits a preference for polyunsaturated fatty acids, particularly arachidonic acid and adrenic acid, making it an important regulator of membrane composition and cellular lipid homeostasis. A FACL4 Antibody is a valuable tool for investigating lipid metabolism and fatty acid activation in normal physiology and disease.

FACL4 has gained considerable attention as a key regulator of ferroptosis because it generates the activated fatty acid substrates that become incorporated into membrane phospholipids susceptible to lipid peroxidation. As a result, FACL4 expression is frequently used as an indicator of ferroptosis sensitivity and oxidative stress responses. Beyond ferroptosis, the enzyme contributes to inflammatory signaling, neuronal function, steroid hormone production, and cancer cell metabolism. These diverse biological roles have made FACL4 Antibody / Long Chain Acyl-CoA Synthetase 4 Antibody useful for studies examining the relationship between lipid metabolism, membrane dynamics, and regulated cell death.

Altered FACL4 expression has been reported in numerous malignancies, including colorectal, ovarian, liver, prostate, and bladder cancers, as well as in neurological and metabolic disorders. Because ACSL4 activity influences tumor growth, therapeutic response, and susceptibility to ferroptosis, it has become an important biomarker and potential therapeutic target. Accurate detection of FACL4 supports investigations into disease mechanisms, biomarker discovery, and metabolic adaptation. FACL4 Antibody is suitable for applications including immunohistochemistry, immunofluorescence, Western blotting, flow cytometry, immunoprecipitation, and other protein detection methods, depending on individual antibody validation. NSJ Bioreagents provides carefully validated antibodies to support investigations of lipid metabolism, ferroptosis, oxidative stress, and cancer biology. A FACL4 Antibody / Long Chain Acyl-CoA Synthetase 4 Antibody is a valuable research reagent for detecting ACSL4 and advancing studies of long-chain fatty acid activation, phospholipid remodeling, and metabolic regulation.

Visit our ACSL4 Antibody / Long Chain Fatty Acid Activation Enzyme Antibody page to explore additional validated antibodies and research tools for investigating ACSL4 expression, long chain fatty acid activation, lipid metabolism, ferroptosis, and metabolic regulation.

Application Notes

Optimal dilution of the FACL4 Antibody / Long Chain Acyl-CoA Synthetase 4 Antibody should be determined by the researcher.

Immunogen

Recombinant human FACL4/ACSL4 protein (amino acids A36-E237) was used as the immunogen for the FACL4 antibody.

Storage

After reconstitution, the FACL4 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

FACL4 antibody, long chain acyl-CoA synthetase 4 antibody, ACSL4 antibody, acyl-CoA synthetase long chain family member 4 antibody, ACS4 antibody, LACS4 antibody

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