10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ACSL4 (FACL4) Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP2536b

Specification

ACSL4 (FACL4) Antibody (Center) Blocking peptide - Product Information

Primary Accession	O60488
Other Accession	ACSL4_HUMAN

ACSL4 (FACL4) Antibody (Center) Blocking peptide - Additional Information

Gene ID 2182

Other Names
Long-chain-fatty-acid--CoA ligase 4, Long-chain acyl-CoA synthetase 4, LACS 4, ACSL4, ACS4, FACL4, LACS4

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2536b was selected from the Center region of human FACL4 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ACSL4 (FACL4) Antibody (Center) Blocking peptide - Protein Information

Name ACSL4

Synonyms ACS4, FACL4, LACS4

Function
Catalyzes the conversion of long-chain fatty acids to their active form acyl-CoA for both synthesis of cellular lipids, and degradation via beta-oxidation (PubMed:24269233, PubMed:22633490, PubMed:21242590). Preferentially activates arachidonate and eicosapentaenoate as substrates (PubMed:21242590). Preferentially activates 8,9-EET > 14,15-EET > 5,6-EET > 11,12-EET. Modulates glucose- stimulated insulin

secretion by regulating the levels of unesterified EETs (By similarity). Modulates prostaglandin E2 secretion (PubMed:21242590).

Cellular Location
Mitochondrion outer membrane; Single-pass type III membrane protein. Peroxisome membrane; Single-pass type III membrane protein. Microsome membrane; Single-pass type III membrane protein. Endoplasmic reticulum membrane; Single-pass type III membrane protein. Cell membrane

ACSL4 (FACL4) Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

ACSL4 (FACL4) Antibody (Center) Blocking peptide - Images

ACSL4 (FACL4) Antibody (Center) Blocking peptide - Background

Long chain acyl-CoA synthetase (LACS), or long chain fatty acid-CoA ligase (FACL), converts free long chain fatty acids into fatty acyl-CoA esters, key intermediates in the synthesis of complex lipids. The FACL4 gene encodes a form of LACS and is expressed in several tissues, including brain. FACL4 cDNA from brain encodes a gene product that shows preference for arachidonic acid as a substrate when expressed in mammalian cells.1 The sequence of the predicted 670-amino acid human protein is 97% identical to that of rat ACS4. FACL4 is highly expressed in adult human brain, especially in the cerebellum and hippocampus, similar to the mouse.2 A strong cytoplasmic staining was found in the Purkinje and granular cells of the cerebellum and the pyramidal layer of hippocampus, indicating that FACL4 is specifically expressed in neurons and not in glial cells. Two patients with Alport syndrome, elliptocytosis, and mental retardation carried a large deletion of the COL4A5 region that included FACL4.3 The absence of FACL4 might play a role in the development of mental retardation or other signs associated with Alport syndrome. Two point mutations, 1 missense and 1 splice site change, were reported in the FACL4 gene in 2 families with nonspecific mental retardation.2 Analysis of enzymatic activity in lymphoblastoid cell lines of affected individuals revealed low levels compared with normal cells, indicating that both mutations are null mutations.

ACSL4 (FACL4) Antibody (Center) Blocking peptide - References

Mashek, D.G., et al., J. Lipid Res. 45(10):1958-1961 (2004).Sung, Y.K., et al., Cancer Sci. 94(5):421-424 (2003).Longo, I., et al., J. Med. Genet. 40(1):11-17 (2003).Meloni, I., et al., Nat. Genet. 30(4):436-440 (2002).Cao, Y., et al., Cancer Res. 61(23):8429-8434 (2001).