

Datasheet for ABIN389113

**anti-ACSL4 antibody (AA 236-267)****2** Images**11** Publications[Go to Product page](#)

## Overview

|                      |                                                                                    |
|----------------------|------------------------------------------------------------------------------------|
| Quantity:            | 400 µL                                                                             |
| Target:              | ACSL4                                                                              |
| Binding Specificity: | AA 236-267                                                                         |
| Reactivity:          | Human                                                                              |
| Host:                | Rabbit                                                                             |
| Clonality:           | Polyclonal                                                                         |
| Conjugate:           | This ACSL4 antibody is un-conjugated                                               |
| Application:         | Western Blotting (WB), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)) |

## Product Details

|               |                                                                                                                                                                                     |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunogen:    | This ACSL4 (FACL4) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 236-267 amino acids from the Central region of human ACSL4 (FACL4). |
| Clone:        | RB04697                                                                                                                                                                             |
| Isotype:      | Ig Fraction                                                                                                                                                                         |
| Purification: | This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.                                                                       |

## Target Details

|                   |                                                  |
|-------------------|--------------------------------------------------|
| Target:           | ACSL4                                            |
| Alternative Name: | ACSL4 (FACL4) ( <a href="#">ACSL4 Products</a> ) |

## Target Details

**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.<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup> 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.<sup>2</sup> 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.

|                   |                                                       |
|-------------------|-------------------------------------------------------|
| Molecular Weight: | 79188                                                 |
| Gene ID:          | 2182                                                  |
| NCBI Accession:   | <a href="#">NP_004449</a> , <a href="#">NP_075266</a> |
| UniProt:          | <a href="#">O60488</a>                                |

## Application Details

|                    |                         |
|--------------------|-------------------------|
| Application Notes: | WB: 1:1000. IHC-P: 1:25 |
| Restrictions:      | For Research Use only   |

## Handling

|                    |                                                                                                                        |
|--------------------|------------------------------------------------------------------------------------------------------------------------|
| Format:            | Liquid                                                                                                                 |
| Buffer:            | Purified polyclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.                                           |
| Preservative:      | Sodium azide                                                                                                           |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Storage:           | 4 °C, -20 °C                                                                                                           |

## Handling

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Storage Comment: Maintain refrigerated at 2-8 °C for up to 6 months. For long term storage store at -20 °C in small aliquots to prevent freeze-thaw cycles.

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Expiry Date: 6 months

## Publications

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Product cited in: Shinjo, Jiang, Nameta, Suzuki, Kanai, Nomura, Goda: "Disruption of the mitochondria-associated ER membrane (MAM) plays a central role in palmitic acid-induced insulin resistance." in: **Experimental cell research**, Vol. 359, Issue 1, pp. 86-93, (2017) ([PubMed](#)).

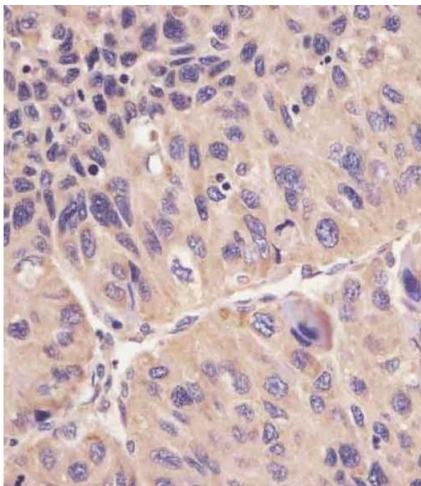
Pera, Larrea, Guardia-Laguarta, Montesinos, Velasco, Agrawal, Xu, Chan, Di Paolo, Mehler, Perumal, Macaluso, Freyberg, Acin-Perez, Enriquez, Schon, Area-Gomez: "Increased localization of APP-C99 in mitochondria-associated ER membranes causes mitochondrial dysfunction in Alzheimer disease." in: **The EMBO journal**, Vol. 36, Issue 22, pp. 3356-3371, (2017) ([PubMed](#)).

Marzesco, Flötenmeyer, Bühler, Obermüller, Staufenberg, Jucker, Baumann: "Highly potent intracellular membrane-associated A $\beta$  seeds." in: **Scientific reports**, Vol. 6, pp. 28125, (2016) ([PubMed](#)).

Williamson, Wong, Bozidis, Zhang, Colberg-Poley et al.: "Isolation of Endoplasmic Reticulum, Mitochondria, and Mitochondria-Associated Membrane and Detergent Resistant Membrane Fractions from Transfected Cells and from Human Cytomegalovirus-Infected ..." in: **Current protocols in cell biology**, Vol. 68, pp. 3.27.1-33, (2016) ([PubMed](#)).

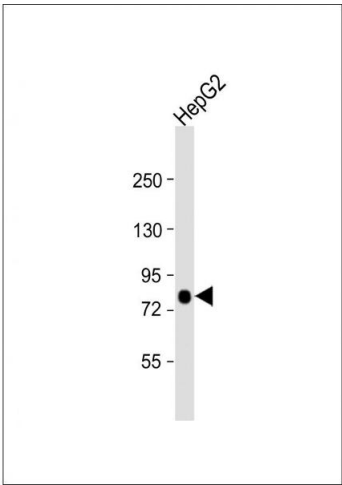
Zhang, Hildreth, Colberg-Poley: "Human cytomegalovirus inhibits apoptosis by proteasome-mediated degradation of Bax at endoplasmic reticulum-mitochondrion contacts." in: **Journal of virology**, Vol. 87, Issue 10, pp. 5657-68, (2013) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)



**Immunohistochemistry (Paraffin-embedded Sections)**

**Image 1.** B staining hFACL4 in human human hepatocarcinoma sections by Immunohistochemistry (IHC- P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3 % BSA for 0.5 hour at room temperature, antigen retrieval was by heat mediation with a citrate buffer (pH 6). Samples were incubated with primary antibody (1/25) for 1 hours at 37 °C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



**Western Blotting**

**Image 2.** Anti-FACL4 Antibody at 1:1000 dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 79 kDa Blocking/Dilution buffer: 5 % NFDm/TBST.