

**Anti-ACAA2 Picoband Antibody**  
**Catalog # ABO11640****Specification**

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**Anti-ACAA2 Picoband Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">P42765</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for 3-ketoacyl-CoA thiolase, mitochondrial(ACAA2) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-ACAA2 Picoband Antibody - Additional Information**

**Gene ID** 10449

**Other Names**

3-ketoacyl-CoA thiolase, mitochondrial, 2.3.1.16, Acetyl-CoA acyltransferase, Beta-ketothiolase, Mitochondrial 3-oxoacyl-CoA thiolase, T1, ACAA2

**Calculated MW**

41924 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat<br><br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br><br>

**Subcellular Localization**

Mitochondrion . Colocalizes with BNIP3 in the mitochondria.

**Protein Name**

3-ketoacyl-CoA thiolase, mitochondrial

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human ACAA2 (207-242aa EVKTKKGKQTMQVDEHARPQTTLEQLQKLPPVFKKD), different from the related mouse sequence by one amino acid, and from the related rat sequence by two amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-ACAA2 Picoband Antibody - Protein Information****Name** ACAA2**Function**

In the production of energy from fats, this is one of the enzymes that catalyzes the last step of the mitochondrial beta- oxidation pathway, an aerobic process breaking down fatty acids into acetyl-CoA (Probable). Using free coenzyme A/CoA, catalyzes the thiolitic cleavage of medium- to long-chain unbranched 3-oxoacyl-CoAs into acetyl-CoA and a fatty acyl-CoA shortened by two carbon atoms (Probable). Also catalyzes the condensation of two acetyl-CoA molecules into acetoacetyl-CoA and could be involved in the production of ketone bodies (Probable). Also displays hydrolase activity on various fatty acyl-CoAs (PubMed:<a href="http://www.uniprot.org/citations/25478839" target="\_blank">25478839</a>). Thereby, could be responsible for the production of acetate in a side reaction to beta-oxidation (Probable). Abolishes BNIP3-mediated apoptosis and mitochondrial damage (PubMed:<a href="http://www.uniprot.org/citations/18371312" target="\_blank">18371312</a>).

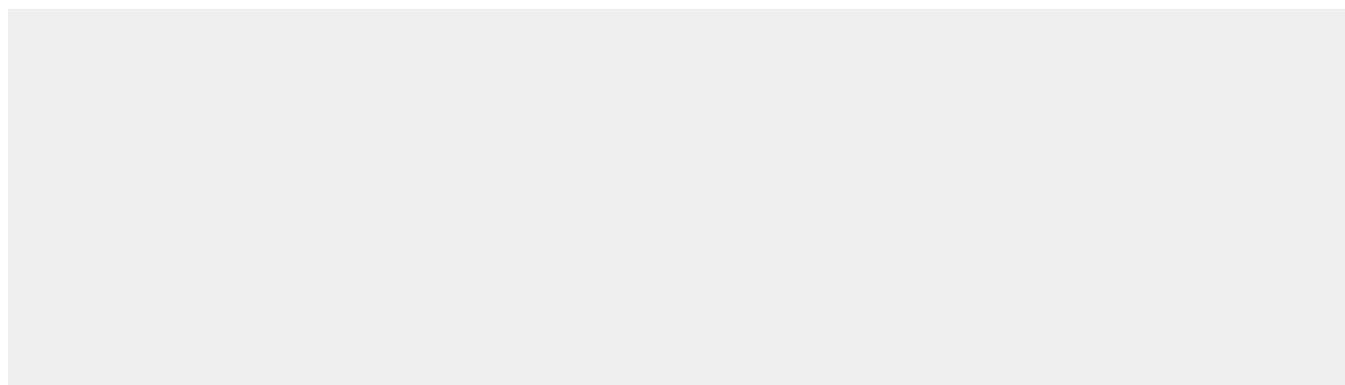
**Cellular Location**

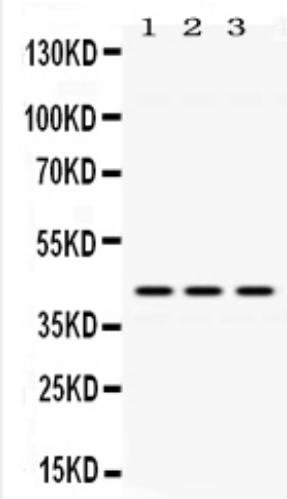
Mitochondrion.

**Anti-ACAA2 Picoband Antibody - Protocols**

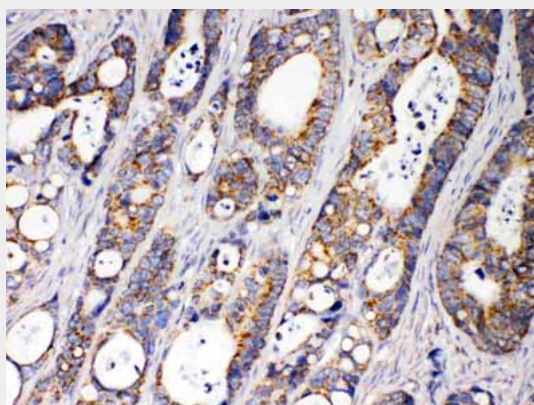
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Anti-ACAA2 Picoband Antibody - Images**



Western blot analysis of ACAA2 expression in rat lung extract (lane 1), mouse brain extract (lane 2) and HELA whole cell lysates (lane 3). ACAA2 at 42KD was detected using rabbit anti- ACAA2 Antigen Affinity purified polyclonal antibody (Catalog # ABO11640) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .



ACAA2 was detected in paraffin-embedded sections of human intestinal cancer tissues using rabbit anti- ACAA2 Antigen Affinity purified polyclonal antibody (Catalog # ABO11640) at 1 µg/mL. The immunohistochemical section was developed using SABC method .

#### Anti-ACAA2 Picoband Antibody - Background

3-Ketoacyl-CoA thiolase, mitochondrial, also known as acetyl-Coenzyme A acyltransferase 2, is an acetyl-CoA C-acyltransferase enzyme that in humans is encoded by the ACAA2 gene. The ACAA2 gene encodes a 41.9 kDa protein that is composed of 397 amino acids and contains 88 observed peptides. The encoded protein catalyzes the last step of the mitochondrial fatty acid beta oxidation spiral. Unlike most mitochondrial matrix proteins, it contains a non-cleavable amino-terminal targeting signal. Additionally, ACAA2 has been shown to be a functional BNIP3 binding partner, which provides a possible link between fatty acid metabolism and cell apoptosis.