

Specification

Mitochondrial enzyme that catalyzes the carboxylation of acetyl-CoA to malonyl-CoA and plays a central role in fatty acid metabolism (PubMed:16854592, PubMed:19236960, PubMed:20457939, PubMed:20952656, PubMed:21052656).

href="http://www.uniprot.org/citations/19900410" target="_blank">19900410, PubMed:26976583). Catalyzes a 2 steps reaction starting with the ATP-dependent carboxylation of the biotin carried by the biotin carboxyl carrier (BCC) domain followed by the transfer of the carboxyl group from carboxylated biotin to acetyl-CoA (PubMed:19236960, PubMed:20457939, PubMed:20952656, PubMed:26976583). Through the production of malonyl-CoA that allosterically inhibits carnitine palmitoyltransferase 1 at the mitochondria, negatively regulates fatty acid oxidation (By similarity). Together with its cytosolic isozyme ACACA, which is involved in de novo fatty acid biosynthesis, promotes lipid storage (By similarity).

Cellular Location

Mitochondrion.

Tissue Location

Widely expressed with highest levels in heart, skeletal muscle, liver, adipose tissue, mammary gland, adrenal gland and colon (PubMed:9099716). Isoform 3 is expressed in skeletal muscle, adipose tissue and liver (at protein level) (PubMed:19190759). Isoform 3 is detected at high levels in adipose tissue with lower levels in heart, liver, skeletal muscle and testis (PubMed:19190759)

ACACB (mouse) Antibody (internal region) - 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](#)

ACACB (mouse) Antibody (internal region) - Images

ACACB (mouse) Antibody (internal region) - References

ACC2 gene polymorphisms, metabolic syndrome, and gene-nutrient interactions with dietary fat. Phillips CM, Goumidi L, Bertrais S, Field MR, Cupples LA, Ordovas JM, McMonagle J, Defoort C, Lovegrove JA, Drevon CA, Blaak EE, Kiec-Wilk B, Riserus U, Lopez-Miranda J, McManus R, Hercberg S, Lairon D, Planells R, Roche HM. J Lipid Res. 2010 Dec;51(12):3500-7. PMID: 20855566