

## Product datasheet for **AP06366PU-N**

### ACAT1 (ACACA) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	<b>Western Blot:</b> 1/500-1/1000. <b>Immunohistochemistry on paraffin sections:</b> 1/50-1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Synthetic peptide, corresponding to amino acids 50-100 of Human ACC $\alpha$ . The immunogen sequence is around H74, total 14 AA.
Specificity:	This antibody detects endogenous levels of ACC1 protein.
Formulation:	PBS, pH 7.2 State: Aff - Purified State: Liquid purified Ig fraction (> 95% pure by SDS-PAGE). Preservative: 0.05% Sodium Azide
Concentration:	1.0 mg/ml
Purification:	Affinity Chromatography using epitope-specific immunogen.
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 265 kDa
Gene Name:	acetyl-CoA carboxylase alpha
Database Link:	<a href="#">Entrez Gene 31 Human Q13085</a>



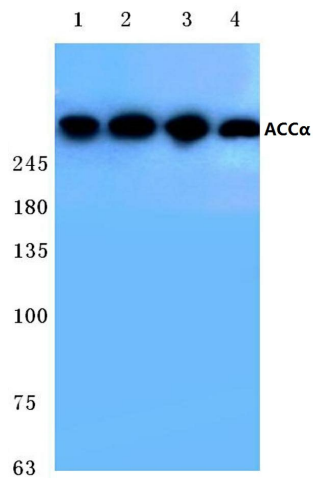
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**Background:**

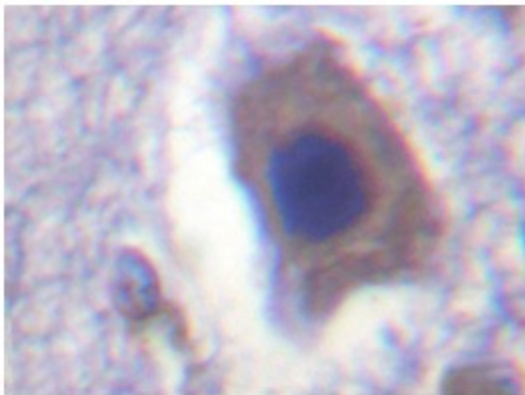
Acetyl-CoA carboxylase (ACC) is a complex multifunctional enzyme system which catalyzes the carboxylation of acetyl-CoA to malonyl-CoA, the ratelimiting step in fatty acid synthesis. Exercise diminishes the activity of acetyl- CoA carboxylase in human muscle. ACC $\alpha$  (ACC1) is the rate-limiting enzyme in the biogenesis of long-chain fatty acids, and ACC $\beta$  (ACC2) may control mitochondrial fatty acid oxidation. These two isoforms of ACC control the amount of fatty acids in the cells. The catalytic function of ACC $\alpha$  is regulated by phosphorylation (inactive) and dephosphorylation (active) of targeted Serine residues and by allosteric transformation by citrate or palmitoyl-CoA, which serve as the short-term regulatory mechanism of the enzyme. The gene encoding ACC $\alpha$ , which maps to human chromosome 17, encodes the 265 kDa  $\alpha$  form of ACC, which is the major ACC in lipogenic tissues. The catalytic core of ACC $\beta$  is homologous to that of ACC $\alpha$  except for an additional peptide of about 150 amino acids at the N-terminus.

**Synonyms:**

ACACA, ACAC, ACC1, ACCA

**Product images:**

Western blot (WB) analysis of ACC $\alpha$  antibody at 1/500 dilution Lane 1:Hela whole cell lysate Lane 2:Jurkat whole cell lysate Lane 3:NIH-3T3 whole cell lysate Lane 4:PC12 whole cell lysate



Immunohistochemistry (IHC) analyzes of ACC1 antibody in paraffin-embedded human skeletal muscle brain tissue.