

## Anti-ACACA Antibody (9D736)

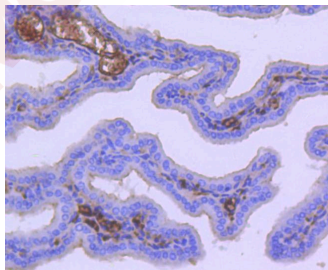
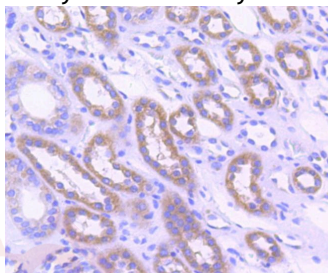
### Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse,Rat
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 265 kDa.
Clone:	9D736
Purification:	ProA affinity purified

### Applications

#### Verified Activity:

1. Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-Acetyl CoA Carboxylase 1 antibody. Counter stained with hematoxylin.
2. Immunohistochemical analysis of paraffin-embedded mouse placenta tissue using anti-Acetyl CoA Carboxylase 1 antibody. Counter stained with hematoxylin.



Application:	IHC,WB
Recommended	WB: 1:1000; IHC: 1:50-200

### Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

### Antigen Details

Immunogen:	Recombinant Protein
Uniprot ID:	Q13085
Synonyms:	ACC1;Acetyl-Coenzyme A carboxylase alpha (ACC-alpha);Acetyl-CoA carboxylase 1;ACAC;ACACA

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### Research Background

Acetyl-CoA carboxylase (ACC) is a complex multifunctional enzyme system which catalyzes the carboxylation of acetyl-CoA to malonyl-CoA, the rate-limiting 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 enzyme's short-term regulatory mechanism. The gene encoding ACC $\alpha$ ; maps to human chromosome 17 and encodes a form of ACC, which is the major ACC in lipogenic tissues. The catalytic core of ACC $\beta$ ; is homologous to that of the ACC $\alpha$ ;, except for an additional peptide of about 150 amino acids at the N-terminus.

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