



# ACACA Rabbit mAb

<b>Catalog No</b>	YP-rAb-17729
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human,Mouse,Rat
<b>Applications</b>	WB,IHC,IF,IP,ELISA
<b>Gene Name</b>	ACACA
<b>Protein Name</b>	Acetyl-CoA carboxylase 1;ACC1;Acetyl-Coenzyme A carboxylase alpha;ACC-alpha;
<b>Purification Process</b>	Protein A
<b>Specificity</b>	Endogenous
<b>Formulation</b>	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
<b>Source</b>	Monoclonal, Rabbit,IgG
<b>Dilution</b>	IHC 1:1000-1:4000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
<b>Concentration</b>	0.5 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-15° C to -25° C/1 year(Do not lower than -25° C)
<b>Synonyms</b>	ACACA ; ACAC ; ACC1 ; ACCA ; Acetyl-CoA carboxylase 1 ; ACC-alpha ;
<b>Observed Band</b>	265kD
<b>Calculated Molecular Weight</b>	265kD
<b>Cell Pathway</b>	Cytoplasm, cytosol .
<b>Tissue Specificity</b>	Expressed in brain, placenta, skeletal muscle, renal, pancreatic and adipose tissues; expressed at low level in pulmonary tissue; not detected in the liver.
<b>Function</b>	Catalytic activity:ATP + acetyl-CoA + HCO(3)(-) = ADP + phosphate + malonyl-CoA.,Catalytic activity:ATP + biotin-carboxyl-carrier protein + CO(2) = ADP + phosphate + carboxybiotin-carboxyl-carrier protein.,cofactor:Binds 2 manganese ions per subunit.,cofactor:Biotin.,Disease:Defects in ACACA are a cause of ACACA deficiency [MIM:200350]; also called ACAC or ACC deficiency. ACACA deficiency is an inborn error of de novo fatty acid synthesis. The disorder is associated with severe brain damage, persistent myopathy and poor growth.,enzyme regulation:By phosphorylation.,Function:Catalyzes the rate-limiting reaction in the biogenesis of long-chain fatty acids. Carries out three functions: biotin carboxyl carrier protein, biotin carboxylase and carboxyltransferase.,online information:Acetyl-CoA carboxylase entry,pathway:Lipid metabolism; malonyl-CoA biosynthesis; malonyl-CoA from

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acetyl-CoA: step 1/1.,PTM:Phosphorylation on Ser-1263 is required for interaction with BRCA1.,similarity:Contains 1 ATP-grasp domain.,similarity:Contains 1 biotin carboxylation domain.,similarity:Contains 1 biotinyl-binding domain.,similarity:Contains 1 carboxyltransferase domain.,subunit:Interacts in its inactive phosphorylated form with the BRCT domains of BRCA1 which prevents ACACA dephosphorylation and inhibits lipid synthesis.,tissue specificity:Expressed in brain, placental, skeletal muscle, renal, pancreatic and adipose tissues; expressed at low level in pulmonary tissue; not detected in the liver.,

## Background

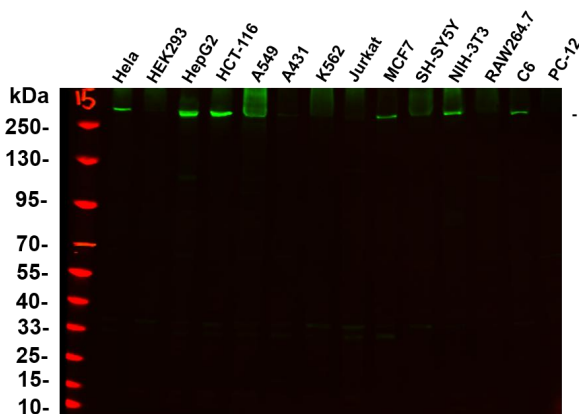
Acetyl-CoA carboxylase (ACC) is a complex multifunctional enzyme system. ACC is a biotin-containing enzyme which catalyzes the carboxylation of acetyl-CoA to malonyl-CoA, the rate-limiting step in fatty acid synthesis. There are two ACC forms, alpha and beta, encoded by two different genes. ACC-alpha is highly enriched in lipogenic tissues. The enzyme is under long term control at the transcriptional and translational levels and under short term regulation by the phosphorylation/dephosphorylation of targeted serine residues and by allosteric transformation by citrate or palmitoyl-CoA. Multiple alternatively spliced transcript variants divergent in the 5' sequence and encoding distinct isoforms have been found for this gene. [provided by RefSeq, Jul 2008],

## matters needing attention

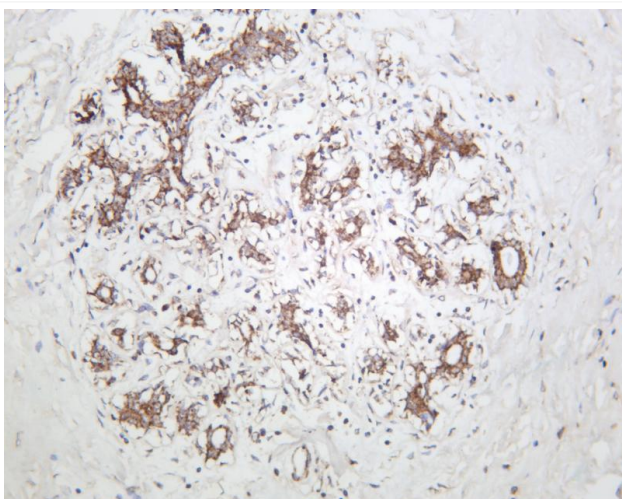
Avoid repeated freezing and thawing!

## Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

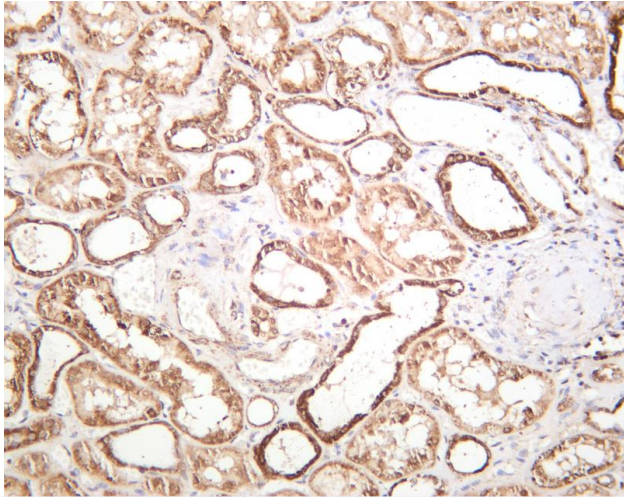


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4~C, over night with a 1:5000 dilution . The Dylight 800-conjugated Goat anti-Rabbit antibody

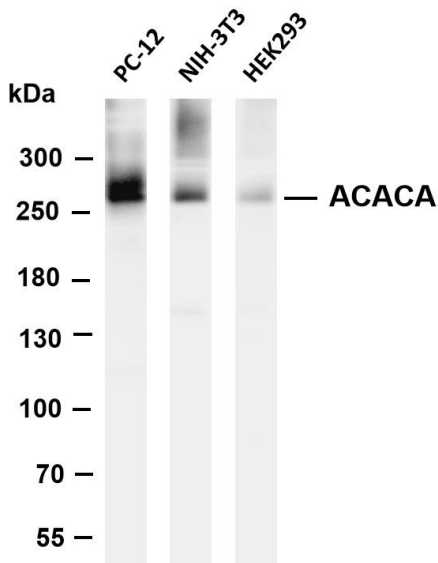


Human breast carcinoma was stained with anti-ACACA rabbit antibody

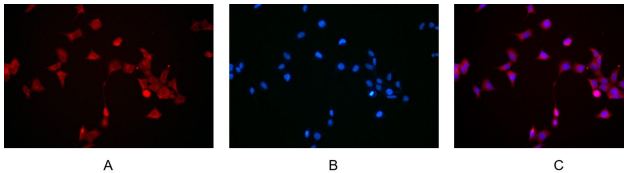




Human kidney was stained with anti-ACACA rabbit antibody



Various whole cell lysates were separated by 4-8% SDS-PAGE, and the membrane was blotted with anti-ACACA antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: PC-12 Lane 2: NIH-3T3 Lane 3: HEK293 Predicted band size: 265kDa Observed band size: 265kDa



Immunofluorescence analysis of HEK293. Picture A: ACACA antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B

