Product Name: ACCα (phospho Ser80) Rabbit Polyclonal Antibody
Catalog #: APRab04200

Summary

Production Name	ACCα (phospho Ser80) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	ELISA,IHC,WB,
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	ACACA
Alternative Names	ACACA; ACAC; ACC1; ACCA; Acetyl-CoA carboxylase 1; ACC1; ACC-alpha
Gene ID	31.0
SwissProt ID	Q13085.The antiserum was produced against synthesized peptide derived from human ACC1 around the phosphorylation site of Ser80. AA range:46-95

Application

Dilution Ratio	WB 1:500 - 1:2000 IHC 1:100 - 1:300. ELISA: 1:10000..
Molecular Weight	265kD

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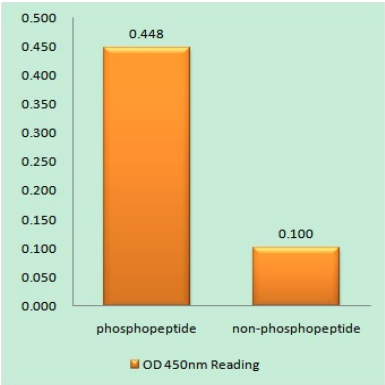
Background

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],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 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.,

Research Area

Fatty acid biosynthesis;Pyruvate metabolism;Propanoate metabolism;Insulin_Receptor;

Image Data



Enzyme-Linked Immunosorbent Assay （Phospho-ELISA） for Immunogen Phosphopeptide （Phospho-left） and Non-Phosphopeptide （Phospho-right）, using ACC1 （Phospho-Ser80） Antibody

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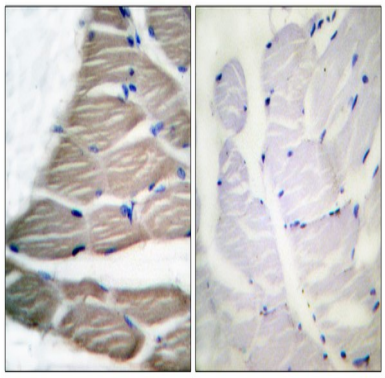
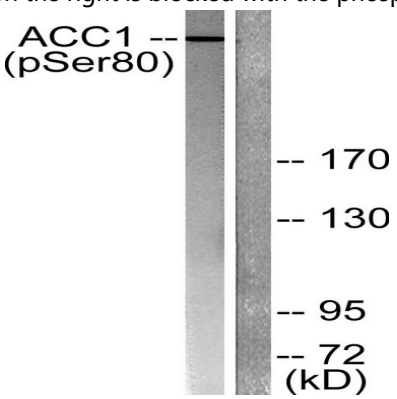
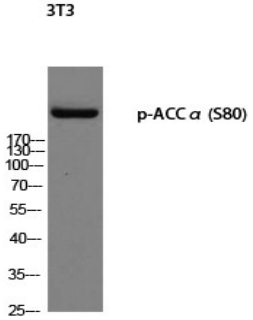


Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using ACC1 (Phospho-Ser80) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from K562 cells treated with Insulin 0.01U/ml 15 ', using ACC1 (Phospho-Ser80) Antibody. The lane on the right is blocked with the phospho peptide.



Western blot analysis of 3T3 using p-ACCα (S80) antibody. Antibody was diluted at 1:1000

Note

For research use only.