



Rabbit Anti-Phospho-Acetyl CoA Carboxylase (Ser79) antibody

SL3039R

Product Name:	Phospho-Acetyl CoA Carboxylase (Ser79)
Chinese Name:	磷酸化乙酰辅酶A羧化酶1ACC α 抗体
Alias:	p-ACACA(Phospho-Ser79); p-ACACA(Phospho S79); Acetyl Coenzyme A Carboxylase alpha (phospho S79); ACAC; ACACA; ACACA; ACACA_HUMAN; ACC alpha; ACC-alpha; ACC1; ACC1; ACCA; Acetyl Coenzyme A; Biotin carboxylase; ACACA_MOUSE; ACACA_RAT; acetyl CoA carboxylase 1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Sheep,Guinea Pig,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	266kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthesised phosphopeptide derived from mouse Acetyl CoA Carboxylase around the phosphorylation site of Ser79:SM(p-S)GL
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed

Product Detail:

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 β (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 β is homologous to that of the ACC α , except for an additional peptide of about 150 amino acids at the N-terminus.

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.

Subunit:

Monomer, homodimer, and homotetramer. Can form filamentous polymers. Interacts in its inactive phosphorylated form with the BRCT domains of BRCA1 which prevents ACACA dephosphorylation and inhibits lipid synthesis. Interacts with MID1IP1; interaction with MID1IP1 promotes oligomerization and increases its activity.

Subcellular Location:

Cytoplasm.

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.

Post-translational modifications:

Phosphorylation on Ser-1263 is required for interaction with BRCA1.

DISEASE:

Defects in ACACA are a cause of acetyl-CoA carboxylase 1 deficiency (ACACAD) [MIM:200350]; also known as ACAC deficiency or ACC deficiency. An inborn error of de novo fatty acid synthesis associated with severe brain damage, persistent myopathy and poor growth.

Similarity:

Contains 1 ATP-grasp domain.
Contains 1 biotin carboxylation domain.
Contains 1 biotinyl-binding domain.
Contains 1 carboxyltransferase domain.

SWISS:
Q5SWU9

Gene ID:
107476

Database links:

[Entrez Gene: 107476](#)Mouse

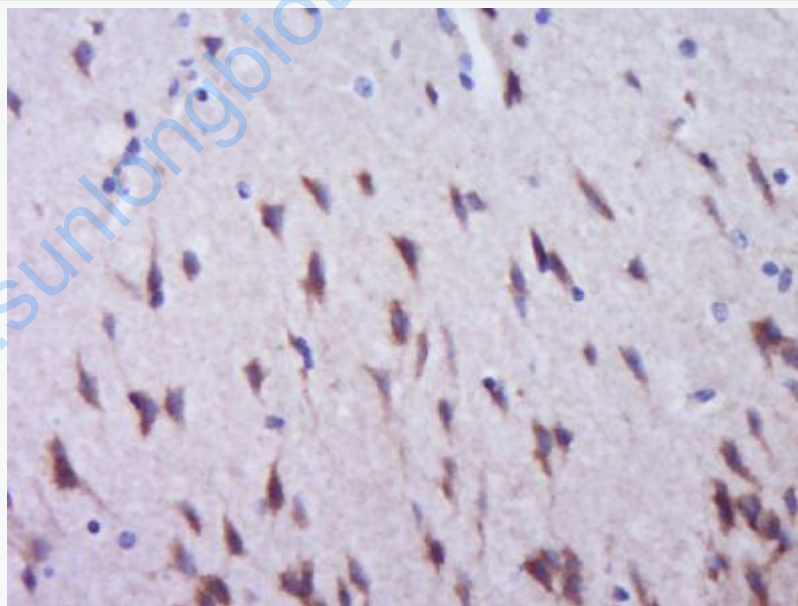
[Entrez Gene: 60581](#)Rat

[SwissProt: Q5SWU9](#)Mouse

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (P-ACACA(Ser79)) Polyclonal Antibody,

	Unconjugated (SL3039R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.
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