CELL APPLICATIONS, INC.

Acetyl-CoA Carboxylase (ACC1) Polyclonal Antibody

Cat. No. CC1041
200 ul

Applications:	**WB, IP, IHC**
Detected MW:	**280 kDa**
Species & Reactivity:	**human, mouse, rat**
Isotype:	**Rabbit IgG**

BACKGROUND

Acetyl-CoA carboxylase (ACC) catalyzes the biotin-dependent carboxylation of acetyl-CoA to produce malonyl-CoA. This is the first and the committed step in the biosynthesis of long-chain fatty acids. The most important function of ACC is to provide the malonyl-CoA substrate for the biosynthesis of fatty acids. The activity of ACC can be controlled at the transcriptional level as well as by small molecule modulators and covalent modification.[1] A second isoform of ACC, ACC2, is associated with the mitochondrial membrane and produces malonyl-CoA that regulates fatty acid oxidation by potently inhibiting the carnitine palmitoyltransferases (CPT-Is). Mice that are deficient in ACC2 have elevated fatty acid oxidation and reduced body fat content and body weight, despite consuming more food.[2] Therefore, inhibitors against ACCs might be efficacious for the treatment of obesity and diabetes (metabolic syndrome). The activity of the enzyme is also controlled by reversible phosphorylation. The enzyme is inhibited if phosphorylated; the phosphorylation can result when the hormones glucagon or epinephrine bind to their receptors, but the main cause of phosphorylation is due to a rise in AMP levels when the energy status of the cell is low, leading to the activation of the AMPK.[3]

References:
1. Tong L: Cell. Mol. Life Sci. 62:1784-1803, 2005.
2. Choi CS et al.: Proc. Natl. Acad. Sci. USA, 104: 16480-16485, 2007.
3. Janovska A et al.: Mol. and Cell. Endocrinol. 284:1-10, 2008.

TECHNICAL INFORMATION

Source:
Acetyl-CoA Carboxylase is a rabbit polyclonal antibody raised against an epitope near human Acetyl-CoA Carboxylase carboxyl terminal sequence.

Specificity and Sensitivity:
This affinity purified antibody detects endogenous levels of both Acetyl-CoA Carboxylase isoform proteins in various cell lysates.

Storage Buffer: PBS and 30% glycerol

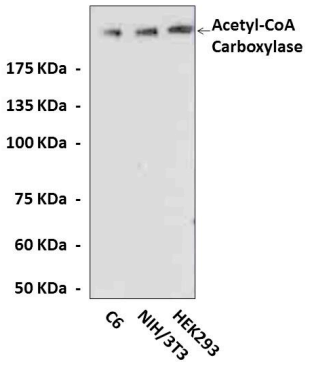
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC (Paraffin)	n/d
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Various cell lysates were subjected to Western Blot analysis using Acetyl-CoA Carboxylase Antibody.