SANTA CRUZ BIOTECHNOLOGY, INC.

ACCα (H-76): sc-30212

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. ACCα (ACC1) is the rate-limiting enzyme in the biogenesis of long-chain fatty acids, and ACCβ (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 ACCα 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 ACCα maps to human chromosome 17 and encodes a form of ACC, which is the major ACC in lipogenic tissues. The catalytic core of ACCβ is homologous to that of the ACCα, except for an additional peptide of about 150 amino acids at the N-terminus.

CHROMOSOMAL LOCATION

Genetic locus: ACACA (human) mapping to 17q12; Acaca (mouse) mapping to 11 C.

SOURCE

ACCα (H-76) is a rabbit polyclonal antibody raised against amino acids 1-114 representing full length ACCα of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ACCα (H-76) is recommended for detection of ACCα of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ACCα (H-76) is also recommended for detection of ACCα in additional species, including bovine.

Suitable for use as control antibody for ACCα siRNA (h): sc-40312, ACCα siRNA (m): sc-40313, ACCα shRNA Plasmid (h): sc-40312-SH, ACCα shRNA Plasmid (m): sc-40313-SH, ACCα shRNA (h) Lentiviral Particles: sc-40312-V and ACCα shRNA (m) Lentiviral Particles: sc-40313-V.

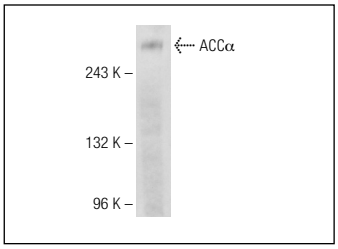
Molecular Weight of ACCα: 265 kDa.

Positive Controls: DU 145 cell lysate: sc-2268 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ACCα (H-76): sc-30212. Western blot analysis of ACCα expression in DU 145 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Xu, L., et al. 2010. Regulation of hepatocyte lipid metabolism and inflammatory response by 25-hydroxycholesterol and 25-hydroxycholesterol-3-sulfate. Lipids 45: 821-832.
2. Sartor, F., et al. 2012. Adaptive metabolic response to 4 weeks of sugar-sweetened beverage consumption in healthy, lightly active individuals and chronic high glucose availability in primary human myotubes. Eur. J. Nutr. E-published.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.