Human/Mouse/Rat Acetyl-CoA Carboxylase α/ACACA Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF6898

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human Acetyl-CoA Carboxylase α/ACACA in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Acetyl-CoA Carboxylase α/ACACA Pro1185-Phe1352 Accession # Q13085
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

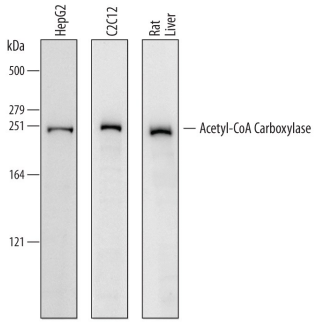
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below

DATA

Western Blot



Detection of Human, Mouse, and Rat Acetyl-CoA Carboxylase α/ACACA by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line, C2C12 mouse myoblast cell line, and rat liver tissue. PVDF membrane was probed with 0.5 µg/mL of Sheep Anti-Human/Mouse/Rat Acetyl-CoA Carboxylase α/ACACA Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6898) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Acetyl-CoA Carboxylase α/ACACA at approximately 250 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

ACAC-A (Acetyl-CoA carboxylase alpha/1; also ACC-1 and biotin carboxylase) is a 260-265 kDa cytoplasmic, phosphorylated biotinyl-enzyme. It is widely expressed, and found to be concentrated in hepatocytes, adipocytes and lactating mammary epithelium. It is one of two gene products (ACAC-B/beta being the other) that catalyze the formation of malonyl-CoA from acetyl-CoA. The formation of malonyl-CoA by ACAC-A is a rate-limiting step in fatty acid synthesis; malonyl-CoA formed by ACAC-B acts as a regulator of CPT-1 during fatty acid oxidation. Human ACAC-A is 2346 amino acids (aa) in length. It contains an N-terminal acetylated Met, one ATP-Grasp domain (aa 275-466) with an embedded biotin carboxylation domain (aa 117-618), a biotinyl-binding region (aa 752-818), and a carboxyltransferase domain (aa 1698-2194). There are at least 17 utilized phosphorylation sites, and two acetylated Lys. ACAC-A exists as either a dimer or higher-order oligomer. Multiple splice variants exist. One possesses an alternative start site at Met79, a second utilizes an alternative start site 37 aa upstream of the standard site, and a third (called PIII) shows a 17 aa substitution for aa 1-75. Over aa 1185-1352, human ACAC-A shares 95% aa identity with mouse ACAC-A, and 97% aa identity with both ovine and bovine ACAC-A.

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