

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human Acetyl-CoA Carboxylase α /ACACA in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 738421
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Acetyl-CoA Carboxylase α /ACACA Pro1185-Phe1352 Accession # Q13085
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.