

#### DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects human Acetyl-CoA Carboxylase $\alpha$ /ACACA in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 738421
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Acetyl-CoA Carboxylase $\alpha$ /ACACA Pro1185-Phe1352 Accession # Q13085
<b>Conjugate</b>	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
<b>Formulation</b>	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

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	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

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