Recombinant Human ACACA, His-tagged

Cat. No. ACACA-1848H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ACC1 (amino acids 39 – end) with C-terminal His tag expressed in*Baculovirusinfected Sf9 cell*expression system. MW= 292.5 kDa.
Species	Human
Source	Sf9 Cells
ProteinLength	39-end a.a.
Description	Acetyl-CoA carboxylase 1 also known as ACC-alpha or ACCa is an enzyme that in hu mans is encoded by the ACACA gene. Acetyl-CoA carboxylase (ACC) is a complex m ultifunctional enzyme system. ACC is a biotin-containing enzyme which catalyzes the carboxylation of acetyl-CoA to malonyl-CoA, the rate-limiting step in fatty acid synthes is. There are two ACC forms, alpha and beta, encoded by two different genes. ACC-a lpha is highly enriched in lipogenic tissues. The enzyme is under long term control at t he transcriptional and translational levels and under short term regulation by the phos phorylation/dephosphorylation of targeted serine residues and by allosteric transform ation by citrate or palmitoyl-CoA.
Purity	>60%.
Application	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.
Specific Activity	0.33 pmol/min/µg Reaction buffer: 4 µM ATP, 50mM HEPES (pH 7.5), 2mM MgCl2, 2mM potassium citrate. Substrate= 20 µM acetyl-CoA and 12mM NaHCO3. Incubate

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	1h 30min at RT, add 50µl Kinase-Glo® Plus (Promega) to 50 µl of reaction and read luminescence.
Formulated In	50mM Tris-HCl, pH 7.5, 150mM NaCl, 3 mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 50% glycerol and 3mM DTT.
Stability	>12 months at -80°C.

GENE INFORMATION

Gene Name	ACACA acetyl-Coenzyme A carboxylase alpha [Homo sapiens]
Synonyms	acetyl-Coenzyme A carboxylase alpha; ACC; ACAC; ACC1; ACCA; ACACA; ACC-alpha; acetyl-CoA carboxylase 1; acetyl-CoA carboxylase-alpha;EC 6.4.1.2
Gene ID	31
mRNA Refseq	NM_198834.1
Protein Refseq	NP_942131.1
MIM	200350
UniProt ID	Q13085
Chromosome Location	17q21
Pathway	Fatty acid biosynthesis; Insulin signaling pathway; Metabolic pathways; Propanoate metabolism; Pyruvate metabolism

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Function	ATP binding; acetyl-CoA carboxylase activity; biotin binding; biotin carboxylase activity; ligase activity; metal ion binding; nucleotide binding; protein binding

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