Acetyl-CoA Carboxylase

ACC, Acetyl Coenzyme A Carboxylase

Acetyl-CoA carboxylase (ACC) is a biotin carboxylase that catalyzes the ATP-dependent condensation of acetyl-CoA and carbonate to form malonyl-CoA. The malonyl-CoA produced by ACC serves two major physiologic functions. It is an essential and rate-limiting substrate for de novo lipogenesis (DNL), and it acts as an allosteric inhibitor of the enzyme carnitine-palmitoyl transferase I (CPT-1). Acetyl-CoA carboxylase (ACC) inhibitors offer significant potential for the treatment of type 2 diabetes mellitus (T2DM), hepatic steatosis, and cancer.

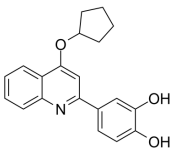
Acetyl-CoA carboxylase (ACC) in mammals is encoded by two related enzymes ACC1 and ACC2, which catalyze the ATP dependent carboxylation of acetyl-CoA to form malonyl-CoA. ACC1 encodes a cytoplasmic isoform that is thought to be the predominant isoform controlling FASyn, whereas ACC2 is tethered to the mitochondrial outer membrane, where localized malonyl-CoA production blocks CPT-1 function to prevent fatty acids from entering the mitochondria to undergo fatty acid oxidation (FAOxn).

Acetyl-CoA Carboxylase Inhibitors

CMS-121

Cat. No.: HY-135981

CMS-121 is a quinolone derivative and an orally active **acetyl-CoA carboxylase 1 (ACC1)** inhibitor. CMS-121 protects HT22 cells against ischemia and oxidative damage with **EC_{50}** values of 7 nM and 200 nM, respectively.

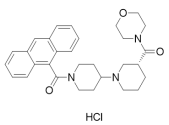


Purity: >99.0%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

CP-640186 hydrochloride

Cat. No.: HY-15259A

CP-640186 hydrochloride is a potent and cell-permeable **Acetyl-CoA carboxylase (ACC)** inhibitor with **IC_{50}**s of 53 nM and 61 nM for rat liver ACC1 and rat skeletal muscle ACC2 respectively.



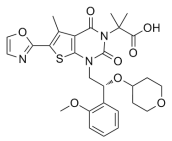
Purity: 99.60%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Firsocostat

(ND-630; GS-0976; NDI-010976)

Cat. No.: HY-16901

Firsocostat (ND-630; GS-0976; NDI-010976) is an acetyl-CoA carboxylase (**ACC**) inhibitor; inhibits human ACC1 and ACC2 with **IC_{50}** values of 2.1 and 6.1 nM, respectively.

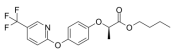


Purity: 98.61%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Fluazifop-P-butyl

Cat. No.: HY-B2007

Fluazifop-P-butyl, a graminicide from arylophenoxypropionate group, is a **acetyl-CoA carboxylase (ACCase)** inhibitor.

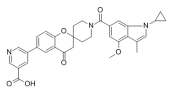


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

MK-4074

Cat. No.: HY-107709

MK-4074 is a liver-specific inhibitor of **acetyl-CoA carboxylase** ACC1 and ACC2 with **IC_{50}** values of approximately 3 nM.

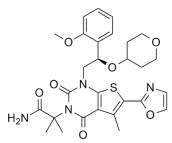


Purity: 98.72%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

ND-646

Cat. No.: HY-101842

ND-646 is an orally bioavailable and steric inhibitor of acetyl-CoA carboxylase (**ACC**) with **IC_{50}**s of 3.5 nM and 4.1 nM for recombinant hACC1 and hACC2, respectively.

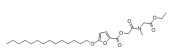


Purity: 99.53%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Olumacostat glasaretil

Cat. No.: HY-17641

Olumacostat glasaretil is a small molecule inhibitor of acetyl coenzyme A carboxylase (**ACC**).

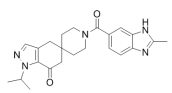


Purity: 98.78%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

PF-05175157

Cat. No.: HY-12942

PF-05175157 is broad spectrum **acetyl-CoA carboxylase** (**ACC**) inhibitor with **IC_{50}**s of 27.0, 33.0, 23.5 and 50.4 nM for ACC1 (human), ACC2 (human), ACC1 (rat), ACC2 (rat), respectively.

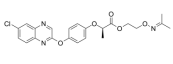


Purity: 98.77%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

Propaquizafop

Cat. No.: HY-117262

Propaquizafop is a phenoxyisopropionic acid herbicide and an **acetyl-coA carboxylase** inhibitor.



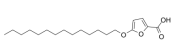
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

TOFA

(RMI14514; MDL14514)

Cat. No.: HY-101068

TOFA (RMI14514;MDL14514) is an allosteric inhibitor of acetyl-CoA carboxylase-α (**ACCA**).



Purity: 99.57%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg