

# ETC-1002

Catalog No: tcsc3952



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

738606-46-7

**Formula:**

$C_{19}H_{36}O_5$

**Pathway:**

Epigenetics;PI3K/Akt/mTOR

**Target:**

AMPK;AMPK

**Purity / Grade:**

>98%

**Solubility:**

DMSO : 100 mg/mL (290.28 mM; Need ultrasonic)

**Alternative Names:**

ESP-55016;Bempedoic acid

**Observed Molecular Weight:**

344.49

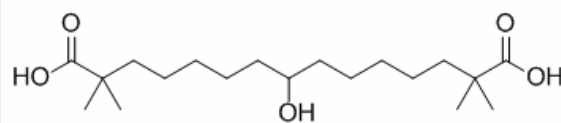
## Product Description

ETC-1002 is an activator of hepatic AMP-activated protein kinase (**AMPK**).

IC50 & Target: AMPK<sup>[1]</sup>

**In Vitro:** ETC-1002 free acid activates AMP-activated protein kinase in a  $\text{Ca}^{2+}$ /calmodulin-dependent kinase  $\beta$ -independent and liver kinase  $\beta$  1-dependent manner, without detectable changes in adenylate energy charge. ETC-1002 is shown to rapidly form a CoA thioester in liver, which directly inhibits ATP-citrate lyase<sup>[1]</sup>. In cells treated with ETC-1002, increased levels of AMP-activated protein kinase (AMPK) phosphorylation coincide with reduced activity of MAP kinases and decreased production of proinflammatory cytokines and chemokines<sup>[2]</sup>.

**In Vivo:** A marked and sustained increase in AMPK and ACC phosphorylation is found in rat livers following two weeks of treatment with ETC-1002. ETC-1002 free acid is >100-fold more prevalent than the CoA thioester in rat liver and is associated with AMPK activation<sup>[1]</sup>. ETC-1002 suppresses thioglycollate-induced homing of leukocytes into mouse peritoneal cavity. In a mouse model of diet-induced obesity, ETC-1002 restores adipose AMPK activity, reduces JNK phosphorylation, and diminishes expression of macrophage-specific marker 4F/80<sup>[2]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!