Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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

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Product Description

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

IC50 & Target: AMPK[1]

In Vitro: ETC-1002 free acid activates AMP-activated protein kinase in a Ca^{2+}/calmodulin-dependent kinase β-independent and liver kinase β 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[1]. 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[2].

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[1]. 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[2].