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

MK-4074

Catalog No: tcsc0029249

Available Sizes

Size: 5mg

Size: 10mg

Size: 25mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
1039758-22-9

Formula:
$C_{33}H_{31}N_3O_6$

Pathway:
Metabolic Enzyme/Protease

Target:
Acetyl-CoA Carboxylase

Purity / Grade:
>98%

Solubility:
DMSO : 83.3 mg/mL (147.27 mM; Need ultrasonic)

Observed Molecular Weight:
565.62

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

Product Description

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

IC50 & Target: IC50: 3 nM (Acetyl-CoA Carboxylase)[1]

In Vitro: MK-4074 strongly inhibits both ACC1 and ACC2 with IC_{50} values of approximately 3 nM. MK-4074 is highly liver specific because it is a substrate of organic anion transport protein (OATP) transporters that are present only in hepatocytes, and excretion of MK-4074 from hepatocytes into bile is dependent on the MRP2 efflux transporter[1].

In Vivo: In male KKAy mice, a mouse model of obesity, type 2 diabetes, and fatty liver, a single oral dose of MK-4074 (0.3-3 mg/kg) significantly decreases DNL in a dose-dependent manner with an ID_{50} value of 0.9 mg/kg 1 hr post-administration. In a time course study, MK-4074 orally at 30 mg/kg reduces hepatic DNL by 83%, 70%, and 51% at 4, 8, and 12 hr post-dose, respectively. Single oral doses of MK-4074 at 30 and 100 mg/kg significantly increases plasma total ketones, a surrogate biomarker for hepatic FAO, by 1.5-fold to 3-fold for up to 8 hr[1].