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

C75

Catalog No: tcsc3562

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
218137-86-1

Formula:
$C_{14}H_{22}O_4$

Pathway:
Metabolic Enzyme/Protease

Target:
Fatty Acid Synthase (FAS)

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 83.3 mg/mL (327.54 mM)

Observed Molecular Weight:
254.32

Product Description

C75 is a synthetic fatty-acid synthase (**FASN**) inhibitor; inhibits prostate cancer cells PC3 with an $\mathbf{IC_{50}}$ of 35 μM.

IC50 & Target: IC50: 35 μM (PC3 cell)[1]

In Vitro:

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C75 inhibits PC3 cell growht with an IC_{50} of 35 μM at 24 h. C75 (10-50 μM) also reduces the growth of LNCaP spheroids in a concentration-dependent manner with an IC_{50} of 50 μM[1]. (-)-C75 inhibits FAS activity and has a cytotoxic effect on tumor cell lines, without affecting food consumption. (+)-C75 inhibits CPT1 and its administration produces anorexia, suggesting that central inhibition of CPT1 is essential for the anorectic effect of C75. The differential activity of C75 enantiomers may lead to the development of potential new specific drugs for cancer and obesity[2].

In Vivo: C75 blocks fasting-induced c-Fos expression in the arcuate nucleus (Arc), lateral hypothalamic area (LHA), and paraventricular nucleus (PVN) 10–24 h after i.p. injection. Intraperitoneal administration of C75 at 30 mg/kg body weight inhibits food intake of mice by ≥95% within 2 h after i.p. injection[3]. C75-treated DIO mice has a 50% greater weight loss, and a 32.9% increased production of energy because of fatty acid oxidation. C75 treatment of rodent adipocytes and hepatocytes and human breast cancer cells increases fatty acid oxidation and ATP levels by increasing CPT-1 activity, even in the presence of elevated concentrations of malonyl-CoA[4].