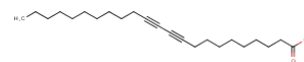


Catalog Number: CM20704

产品信息

Catalog Number:
CM20704CAS号:
66990-30-5分子式:
C₂₃H₃₈O₂主要靶点:
Acyltransferase主要通路:
代谢分子量:
346.55溶解度:
DMSO:2.75 mg/mL (7.94 mM)

体外活性

10,12-Tricosadiynoic acid-CoA rapidly inhibits ACOX1 activity in a time- and concentration-dependent manner. The activity of ACOX1 decreases by nearly 95% after 5 min of incubation with 10 eq of 10,12-Tricosadiynoic acid-CoA. ACOX1 activity is inhibited only if free 10,12-Tricosadiynoic Acid is activated as the CoA thioester, the substrate form. The inhibition of ACOX1 by 10,12-Tricosadiynoic acid-CoA is irreversible. And the kinetics parameters K_i and k_{inact} are calculated to be 680 nM and 3.18/min, respectively.

体内活性

10,12-Tricosadiynoic acid (100 μ g/kg; oral gavage; daily; for 8 weeks; male Wistar rats) treatment increases hepatic mitochondrial fatty acid oxidation (FAO) via activation of the SIRT1-AMPK pathway and proliferator activator receptor α and reduces hydrogen peroxide accumulation in high fat diet-fed rats, which significantly decreases hepatic lipid and ROS contents, reduces body weight gain, and decreases serum triglyceride and insulin levels.

动物实验

Animal Model: Male Wistar rats (210-230 g) fed with high-fat diet. Dosage: 100 μ g/kg. Administration: Oral gavage; daily; for 8 weeks

描述

10,12-Tricosadiynoic acid is a highly selective and orally active inhibitor of acyl-CoA oxidase-1 (ACOX1). It can treat the high-fat diet- or obesity-induced metabolic diseases by improving mitochondrial lipid and ROS metabolism.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years