Web: www.taiclone.com
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Palmitelaidic Acid

Catalog No: tcsc6346

Available Sizes

Size: 10mg

Specifications

CAS No:
10030-73-6

Formula:
$C_{16}H_{30}O_2$

Pathway:
Cell Cycle/DNA Damage;Metabolic Enzyme/Protease;Epigenetics;PI3K/Akt/mTOR

Target:
PPAR;Glucokinase;AMPK;AMPK

Purity / Grade:
>98%

Solubility:
Ethanol : 100 mg/mL (393.07 mM; Need ultrasonic)

Alternative Names:
9-trans-Hexadecenoic acid;trans-Palmitoleic acid

Observed Molecular Weight:
254.41

Product Description

Palmitelaidic acid is the trans isomer of palmitoleic acid. Palmitoleic acid is one of the most abundant fatty acids in serum and tissue.

IC50 & Target: AMPK, PPARα, Glucokinase[2]

In Vitro: The monounsaturated fatty acid palmitoleate (palmitoleic acid) is one of the most abundant fatty acids in serum and

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tissues, particularly adipose tissue and liver. Its endogenous production by stearoyl-CoA desaturase 1 gives rise to its cis isoform, cis-palmitoleate. Palmitoleic acid has been correlated with multiple cardiometabolic risk factors, including high blood pressure, total cholesterol, TGs, apoA-I, apoB, and endothelial dysfunction[1].

In Vivo: Palmitoleic acid promotes a faster uptake of glucose in the body, associated with higher insulin concentration. Palmitoleic acid increases the phosphorylation of AMPK, up-regulates glucokinase and down-regulates SREBP-1. Regarding AMPK downstream, palmitoleic acid increases the production of FGF-21 and stimulates the expression of PPARα[2]. Palmitoleic acid reduces body weight increase, ameliorates the development of hyperglycemia and hypertriglyceridemia, and improves insulin sensitivity. Furthermore, palmitoleic acid down-regulates mRNA expressions of proinflammatory adipocytokine genes (TNFα and resistin) in white adipose tissue and lipogenic genes (SREBP-1, FAS, and SCD-1) in liver[3].