

# 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

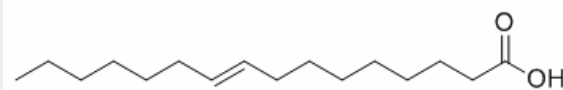
Palmitelaidic acid is the trans isomer of palmitoleic acid. Palmitoleic acid is one of the most abundant fatty acids in serum and tissue.

IC50 & Target: AMPK, PPAR $\alpha$ , Glucokinase<sup>[2]</sup>

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

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<sup>[1]</sup>.

***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 PPAR $\alpha$ <sup>[2]</sup>. 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 (TNF $\alpha$  and resistin) in white adipose tissue and lipogenic genes (SREBP-1, FAS, and SCD-1) in liver<sup>[3]</sup>.



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