Lignoceric acid

Cat. No.: HY-121883

CAS No.: 557-59-5

Molecular Formula: $C_{24}H_{48}O_2$

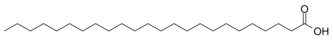
Molecular Weight: 368.64

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 8.33 mg/mL (22.60 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7127 mL	13.5634 mL	27.1267 mL
	5 mM	0.5425 mL	2.7127 mL	5.4253 mL
	10 mM	0.2713 mL	1.3563 mL	2.7127 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 0.83 mg/mL (2.25 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lignoceric acid (Tetracosanoic acid) is a 24-carbon saturated (24:0) fatty acid, which is synthesized in the developing brain. Lignoceric acid is also a by-product of lignin production. Lignoceric acid can be used for Zellweger cerebro□hepato□renal syndrome and adrenoleukodystrophy research[1][2].

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

Heat flux induced by lignoceric acid in HepG2 peroxisomes was exothermic, indicating normal peroxisomal metabolism[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Anna Petroni, et al. Thermogenic flux induced by lignoceric acid in peroxisomes isolated from HepG2 cells and from X-adrenoleukodystrophy and control fibroblasts. J Cell Physiol. 2019 Aug;234(10):18344-18348.

[2]. J M Bourre, et al. Lignoceric acid biosynthesis in the developing brain. Activities of mitochondrial acetyl-CoA-dependent synthesis and microsomal malonyl-CoA chain-elongating system in relation to myelination. Comparison between normal mouse and dysmyeli

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