Lignoceric acid-d_4-2

Cat. No.: HY-121883S4

CAS No.: 1219794-61-2

Molecular Formula: $C_{24}H_{44}D_4O_2$

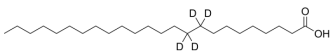
Molecular Weight: 372.66

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

DMSO : 0.5 mg/mL (1.34 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6834 mL	13.4171 mL	26.8341 mL
5 mM	---	---	---
10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

Lignoceric acid-d_4-2 is the deuterium labeled Lignoceric acid. 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].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[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 dysmyelinating mutants (quaking and jimpy). Eur J Biochem. 1977 Jan 3;72(1):41-7.

[3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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