Data Sheet (Cat.No.TN6953)

TargetMol

Lignoceric Acid

Chemical Properties

CAS No. : 557-59-5

Formula: C24H48O2

Molecular Weight: 368.64

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Lignoceric Acid (tetracosanoic acid) is a 24-carbon saturated (24:0) fatty acid and a by-product of lignin production, which is synthesized in the developing brain.
Targets(IC50)	Endogenous Metabolite
In vitro	The thermogenic flux induced by Lignoceric Acid was estimated by isothermal titration calorimetry in peroxisomes isolated from HepG2 cells and from fibroblasts obtained from patients with X-ALD and healthy subjects. Heat flux induced by lignoceric acid in HepG2 peroxisomes was exothermic, indicating normal peroxisomal metabolism[2].

Solubility Information

Solubility	DMSO: 3.69 mg/mL (10.01 mM),Sonication is recommended. Ethanol: 1 mg/mL (2.71 mM),Sonication and heating to 50°C are recommended. 0.1M NaOH: < 1 mg/mL (insoluble or slightly soluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0543 mL	0.2713 mL	0.5425 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Chung HK, et al. Plasma phospholipid arachidonic acid and lignoceric acid are associated with the risk of cardioembolic stroke. Nutr Res. 2015 Nov;35(11):1001-8.

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.

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