

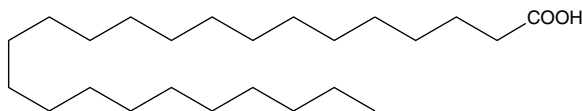
Product Information



Lignoceric Acid

Item No. 13353

CAS Registry No.: 557-59-5
Formal Name: tetracosanoic acid
Synonym: FL 88
MF: C₂₄H₄₈O₂
FW: 368.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that lignoceric acid be stored as supplied at -20°C. It should be stable for at least two years.

Lignoceric acid is supplied as a crystalline solid. A stock solution may be made by dissolving the lignoceric acid in an organic solvent purged with an inert gas. Lignoceric acid is soluble in organic solvents such as chloroform and THF. The solubility of lignoceric acid in these solvents is approximately 2 mg/ml.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Lignoceric acid is a 24-carbon saturated (24:0) fatty acid. In mammals it is synthesized during brain development and is found in cerebroside.¹ The deficient peroxisomal oxidation of very-long-chain fatty acids including lignoceric acid, contributes to certain syndromes including Zellweger cerebro-hepato-renal syndrome and X chromosome-linked adrenoleukodystrophy.² Lignoceric acid is also a by-product of lignin production.

References

1. Bourre, J.-M., Paturneau-Jouas, M.Y., Daudu, O.L., *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. *Eur. J. Biochem* **72**, 41-47 (1977).
2. Singh, I., Moser, A.E., Goldfischer, S., *et al.* Lignoceric acid is oxidized in the peroxisome: Implications for the Zellweger cerebro-hepato-renal syndrome and adrenoleukodystrophy. *Proc. Natl. Acad. Sci. USA* **81**, 4203-4207 (1984).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/13353

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com