

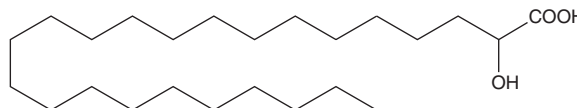
PRODUCT INFORMATION



2-hydroxy Lignoceric Acid

Item No. 22680

CAS Registry No.: 544-57-0
Formal Name: 2-hydroxy-tetracosanoic acid
Synonyms: Cerebronic Acid, FA 24:0;O
MF: C₂₄H₄₈O₃
FW: 384.6
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

2-hydroxy Lignoceric acid is supplied as a solid. A stock solution may be made by dissolving the 2-hydroxy lignoceric acid in the solvent of choice. 2-hydroxy Lignoceric acid is soluble in a 5:1 solution of chloroform:methanol.

Description

2-hydroxy Lignoceric acid is an α -hydroxy very long chain fatty acid that is normally present in the mammalian nervous system.¹ In the brain, 2-hydroxy lignoceric acid is derived from lignoceric acid (Item No. 13353) and further converted to ceramides and cerebrosides during the process of nerve sheath myelination.¹⁻³ 2-hydroxy Lignoceric acid is produced by the α -oxidation of lignoceric acid in the peroxisome and defects in this pathway are associated with disorders such as Zellweger syndrome.^{4,5}

References

1. Hoshi, M. and Kishimoto, Y. Synthesis of cerebronic acid from lignoceric acid by rat brain preparation. Some properties and distribution of the α -hydroxylation system. *J. Biol. Chem.* **248(11)**, 4123-4130 (1973).
2. 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(1)**, 41-47 (1977).
3. Murad, S. and Kishimoto, Y. α hydroxylation of lignoceric acid to cerebronic acid during brain development. Diminished hydroxylase activity in myelin-deficient mouse mutants. *J. Biol. Chem.* **250(15)**, 5841-5846 (1975).
4. 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).
5. Jung, K., Reszka, R., Kamlage, B., *et al.* Tissue metabolite profiling identifies differentiating and prognostic biomarkers for prostate carcinoma. *Int. J. Cancer* **133(12)**, 2914-2924 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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