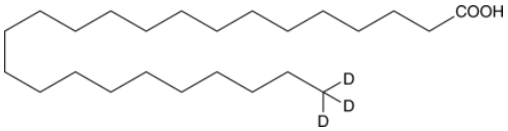
Product Data Sheet

Product Name: Lignoceric Acid-d3
Cat. No.: GC45495

Chemical Properties

Cas. No.	851073-55-7		
SMILES	[2H]C([2H])([2H])CCCCCCCCCCCCCCCCCCCCCCCC(O)=O		
Formula	C24H45D3O2	M.Wt	371.7
Solubility	Chloroform: 2 mg/ml,THF: 5 mg/ml	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Lignoceric acid-d3 is intended for use as an internal standard for the quantification of lignoceric acid by GC- or LC-MS. Lignoceric acid is a 24-carbon saturated (24:0) fatty acid. In mammals, it is synthesized during brain development and is found in cerebrosides.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(1), 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(13), 4203-4207 (1984).

Caution: Product has not been fully validated for medical applications. For research use only.
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