

PRODUCT DATA SHEET

Methyl 2-fluoropalmitate

Catalog number: 1718

Activity: Inactive ester of 2-fluoropalmitic acid

Source: synthetic

Solubility: chloroform, ethanol, methanol

CAS number: 137676-82-5

Molecular Formula: C₁₇H₃₃FO₂

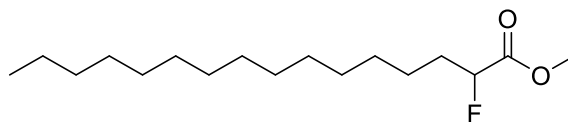
Molecular Weight: 288

Storage: -20C

Purity: TLC: >98%; identity confirmed by MS

TLC System: hexane/ethyl ether (70:30 by vol.)

Appearance: solid



Application Notes:

This product is the inactive methyl ester of the acyl-CoA synthase inhibitor 2-fluoropalmitic acid. 2-Fluoropalmitic acid is a synthetic inhibitor of palmitoyl-CoA formation by long chain acyl-CoA synthetase thereby inhibiting sphingosine biosynthesis and protein palmitoylation. This product is very useful in the investigation of sphingosine synthesis¹, protein acylation², and other biological mechanisms³. Other *alpha*-fluoro-fatty acids also inhibit their respective acyl-CoAs.⁴

Selected References:

1. R. Soltysiak et al. "D,L-*alpha*-Fluoropalmitic acid inhibits sphingosine base formation and accumulates in membrane lipids of cultured mammalian cells" *Biochim Biophys Acta*, Vol. 792(2) pp. 214-226, 1984
2. J. Zhang et al. "Novel bimodal effects of the G-protein tissue transglutaminase on adrenoreceptor signaling" *Journal of Biochemistry*, Vol. 343, 541-549, 1999
3. G. DeJesus and O. Bizzozero "Effect of 2-Fluoropalmitate, Cerulenin and Tunicamycin on the Palmitoylation and Intracellular Translocation of Myelin Proteolipid Protein" *Neurochemical Research*, Vol. 27(12) pp. 1669-1675, 2002
4. M. Grillo et al. "Effect of *alpha*-Fluorination of Valproic Acid on Valproyl-S-Acyl-CoA Formation in Vivo in Rats" *Drug Metabolism and Disposition*, Vol. 29(9) pp. 1210-1215, 2001

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