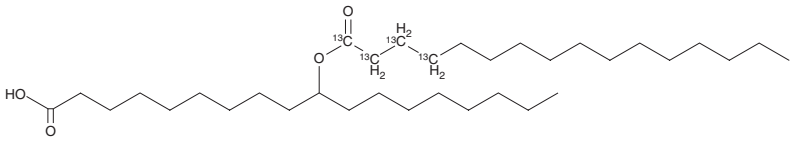
PRODUCT INFORMATION

10-PAHSA $^{13}C_4$

Item No. 22657

CAS Registry No.: 2705244-93-3
Formal Name: 10-[(1-oxohexadecyl-1,2,3,4-$^{13}C_4$)oxy]-octadecanoic acid
MF: $C_{30}[^{13}C]_4H_{66}O_4$
FW: 542.9
Purity: ≥95%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

10-PAHSA $^{13}C_4$ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 10-PAHSA $^{13}C_4$ in ethanol and DMF is approximately 20 mg/ml and approximately 15 mg/ml in DMSO.

10-PAHSA $^{13}C_4$ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 10-PAHSA $^{13}C_4$ should be diluted with the aqueous buffer of choice. 10-PAHSA $^{13}C_4$ has a solubility of 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

10-PAHSA $^{13}C_4$ is intended for use as an internal standard for the quantification of 10-PAHSA (Item No. 19973) by GC- or LC-MS. 10-PAHSA is a newly identified endogenous lipid that belongs to a collection of branched fatty acid esters of hydroxy fatty acids (FAHFAs). It is a FAHFA in which palmitic acid (Item No. 10006627) is esterified to 10-hydroxy stearic acid. Among the FAHFA family members, PAHSAs are the most abundant in the adipose tissue of glucose tolerant AG4OX mice, which overexpress the Glut4 glucose transporter specifically in adipose tissue.[1] As other FAHFAs improve glucose tolerance, stimulate insulin secretion, and have anti-inflammatory effects, 10-PAHSA may be a bioactive lipid with roles in metabolic syndrome and inflammation.

Reference

1. Yore, M.M., Syed, I., Moraes-Vieira, P.M., *et al.* Discovery of a class of endogenous mammalian lipids with anti-diabetic and anti-inflammatory effects. *Cell.* **159(2)**, 318-332 (2014).

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