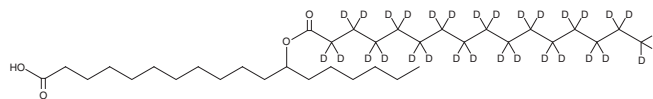


PRODUCT INFORMATION



12-PAHSA-d₃₁ Item No. 17194

CAS Registry No.: 2749293-89-6
Formal Name: 12-[(1-oxohexadecyl)oxy]-octadecanoic-2,2',3,3',4,4',5,5',6,6',7,7',8,8',9,9',10,10',11,11',12,12',13,13',14,14',15,15',16,16,16-d₃₁ acid
MF: C₃₄H₃₅D₃₁O₄
FW: 570.1
Chemical Purity: ≥95% (12-PAHSA)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃₁); ≤1% d₀
Supplied as: A 1 mg/ml solution in methyl acetate
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

12-PAHSA-d₃₁ is intended for use as an internal standard for the quantification of 12-PAHSA by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

12-PAHSA-d₃₁ 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 12-PAHSA-d₃₁ in DMSO is approximately 15 mg/ml and approximately 20 mg/ml in ethanol and DMF.

Description

Branched fatty acid esters of hydroxy fatty acids (FAHFAs) are newly identified endogenous lipids regulated by fasting and high-fat feeding and associated with insulin sensitivity.¹ Structurally, these esters are comprised of a C-16 or C-18 fatty acid (e.g., palmitoleic, palmitic, oleic, or stearic acid) linked to either a C-16 or C-18 hydroxy substituent. 12-PAHSA is a FAHFA in which palmitic acid is esterified on the 12th carbon of 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 12-PAHSA is present at 2- to 3-fold higher levels in adipose tissue of AG4OX mice compared to wild type mice.¹ Levels of 12-PAHSA are also higher in fasted wild-type mice compared to fed mice and are reduced upon high-fat diet-induced obesity in insulin-resistant mice.¹

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).

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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