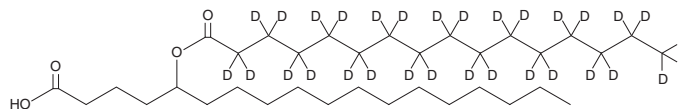


PRODUCT INFORMATION



5-PAHSA-d₃₁ Item No. 17197

CAS Registry No.: 2749807-01-8
Formal Name: 5-(palmitoyloxy-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) octadecanoic acid
MF: C₃₄H₃₅D₃₁O₄
FW: 570.1
Chemical Purity: ≥95% (5-PAHSA)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃₁); ≤1% d₀
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

5-PAHSA-d₃₁ is intended for use as an internal standard for the quantification of 5-PAHSA (Item No. 17043) 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). *NOTE: Please be advised that this product will elute 3-5 minutes sooner than its corresponding non-deuterated standard when using the analytical method described by Yore, M.M., et al.*

5-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 5-PAHSA-d₃₁ in ethanol and DMF is approximately 20 mg/ml and approximately 15 mg/ml in DMSO.

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 5-PAHSA is a FAHFA in which palmitic acid is esterified at the 5th carbon of hydroxy stearic acid. PAHSA isoforms are the most abundant forms of FAHFA identified in the adipose tissue of glucose tolerant AG4OX mice.¹ PAHSAs are synthesized *in vivo* in both mice and humans and are regulated by fasting and high-fat feeding in mice.¹ PAHSA levels correlate highly with insulin sensitivity and are reduced in adipose tissue and serum of insulin-resistant humans. PAHSA administration lowers ambient glycemia, improves glucose tolerance, and stimulates GLP-1 and insulin secretion in 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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