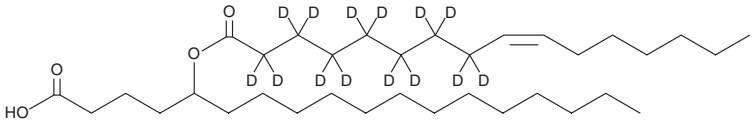
PRODUCT INFORMATION

5-POHSA-d_{14}

Item No. 17196

CAS Registry No.: 2749982-66-7
Formal Name: 5-[[(9Z)-1-oxo-9-hexadecen-1-yl-2,2,3,3,4,4,5,5,6,6,7,7,8,8-d_{14}]oxy]-octadecanoic acid
MF: $C_{34}H_{50}D_{14}O_4$
FW: 551.0
Chemical Purity: ≥95% (5-POHSA)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_{14}); ≤1% d_0
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-POHSA-d_{14} is intended for use as an internal standard for the quantification of 5-POHSA (Item No. 17114) 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.*[1]

5-POHSA-d_{14} 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-POHSA-d_{14} 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 in mice.[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. 5-POHSA is a FAHFA consisting of palmitoleic acid esterified at the 5th carbon of hydroxy stearic acid. The levels of POHSA are significantly elevated in serum of glucose tolerant AG4OX mice, which overexpress the Glut4 glucose transporter specifically in adipose tissue.[1] As other FAHFA improve glucose tolerance, stimulate insulin secretion, and have anti-inflammatory effects, 5-POHSA may be a bioactive lipid with roles in metabolic syndrome and inflammation.[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.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 03/26/2024

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM