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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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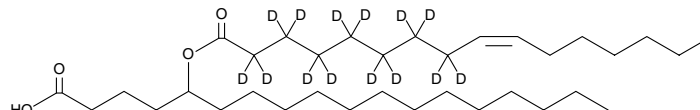
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Product Information



5-POHSA-d₁₄ Item No. 17196

Formal Name: (Z)-5-(hexadec-9-enoyloxy-2,2',3,3',4,4',5,5',6,6',7,7',8,8'-d₁₄) octadecanoic acid
MF: C₃₄H₆₄D₁₄O₄
FW: 551.0
Chemical Purity: ≥95% 5-POHSA
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₁₄); ≤1% d₀
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

5-POHSA-d₁₄ contains 14 deuterium atoms at the 2, 2', 3, 3', 4, 4', 5, 5', 6, 6', 7, 7', 8, and 8' positions. It is intended for use as an internal standard for the quantification of 5-POHSA (Item No. 17114) by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 5-POHSA-d₁₄ be stored as supplied at -20°C. It should be stable for at least one year.

5-POHSA-d₁₄ 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-d₁₄ in ethanol and DMF is approximately 20 mg/ml and approximately 15 mg/ml in DMSO.

5-POHSA-d₁₄ is used as an internal standard for the quantification of 5-POHSA by stable isotope dilution 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

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).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/17196

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

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