

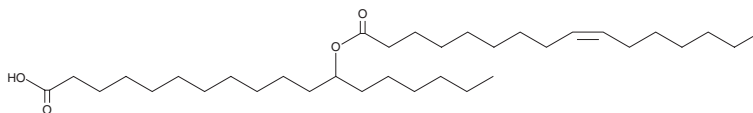
# PRODUCT INFORMATION



## 12-POHSA

Item No. 17105

CAS Registry No.: 2042646-31-9  
Formal Name: 12-[[[(9Z)-1-oxo-9-hexadecen-1-yl]oxy]-octadecanoic acid  
MF:  $C_{34}H_{64}O_4$   
FW: 536.9  
Purity:  $\geq 95\%$   
Supplied as: A 5 mg/ml solution in methyl acetate  
Storage:  $-20^{\circ}\text{C}$   
Stability:  $\geq 2$  years



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

### Laboratory Procedures

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

12-POHSA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 12-POHSA should be diluted with the aqueous buffer of choice. 12-POHSA 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

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.<sup>1</sup> 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-POHSA is a FAHFA consisting of palmitoleic acid esterified at the 12th carbon of 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.<sup>1</sup> As other FAHFAs improve glucose tolerance, stimulate insulin secretion, and have anti-inflammatory effects, 12-POHSA may be a bioactive lipid with roles in metabolic syndrome and inflammation.<sup>1</sup>

### 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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