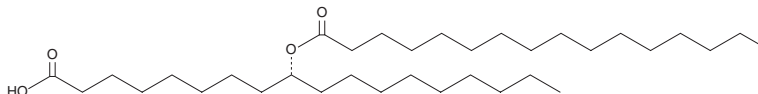


PRODUCT INFORMATION



9(R)-PAHSA Item No. 18022

CAS Registry No.: 2097130-84-0
Formal Name: 9R-[(1-oxohexadecyl)oxy]-
octadecanoic acid
MF: C₃₄H₆₆O₄
FW: 538.9
Purity: ≥95%
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

9(R)-PAHSA 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 9(R)-PAHSA in ethanol and DMF is approximately 20 mg/ml and approximately 15 mg/ml in DMSO.

9(R)-PAHSA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 9(R)-PAHSA should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 9(R)-PAHSA has a solubility of approximately 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

9(R)-PAHSA is a stereoisomer of 9-PAHSA (Item No. 17037), an endogenous lipid that belongs to a collection of branched fatty acid esters of hydroxy fatty acids (FAHFAs).¹ 9-PAHSA is a FAHFA in which palmitic acid (Item No. 10006627) is esterified to 9-hydroxy stearic acid. 9(R)-PAHSA is the predominant form that accumulates in adipose tissues in AG4OX mice, which overexpress Glut4 specifically in adipose tissue.² Also, cell lines favor the production of 9(R)-PAHSA, and carboxyl ester lipase selectively hydrolyzes 9(S)-PAHSA (Item No. 18023).

References

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).
2. Nelson, A.T., Kolar, M.J., Chu, Q., *et al.* Stereochemistry of endogenous palmitic acid ester of 9-hydroxystearic acid and relevance of absolute configuration to regulation. *J. Am. Chem. Soc.* **139(13)**, 4943-4947 (2017).

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