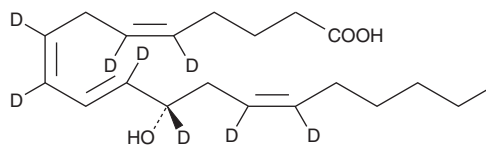


PRODUCT INFORMATION



12(S)-HETE-d₈ Item No. 334570

CAS Registry No.: 84807-90-9
Formal Name: 12S-hydroxy-5Z,8Z,10E,14Z-eicosatetraenoic-5,6,8,9,11,12,14,15-d₈ acid
Synonym: 12(S)-Hydroxyeicosatetraenoic Acid-d₈
MF: C₂₀H₂₄D₈O₃
FW: 328.5
Chemical Purity: ≥98% (12(S)-HETE)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
UV/Vis.: λ_{max}: 237 nm
Supplied as: A solution in acetonitrile
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

12(S)-HETE-d₈ is intended for use as an internal standard for the quantification of 12-HETE 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).

12(S)-HETE-d₈ is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. 12(S)-HETE-d₈ is miscible in these solvents.

Description

(±)12-HETE is formed *via* non-enzymatic oxidation of arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607).^{1,2} 12(S)- and 12(R)-HETE are formed by 12(S)- and 12(R)-lipoxygenase-mediated oxidation of arachidonic acid, respectively.^{3,4} 12(R)-HETE can also be formed by oxidation of arachidonic acid mediated by cytochrome P450s (CYP450s).¹

References

- Powell, W.S. and Rokach, J. Biosynthesis, biological effects, and receptors of hydroxyeicosatetraenoic acids (HETEs) and oxoeicosatetraenoic acids (oxo-ETEs) derived from arachidonic acid. *Biochim. Biophys. Acta* **1851(4)**, 340-355 (2014).
- Derogis, P.B.M.C., Chaves-Filho, A.B., and Miyamoto, S. Characterization of hydroxy and hydroperoxy polyunsaturated fatty acids by mass spectrometry. *Bioactive lipids in health and disease*. Trostchansky, A. and Rubbo, H., editors, *Springer* (2019).
- Kühn, H., Banthiya, S., and van Leyen, K. Mammalian lipoxygenases and their biological relevance. *Biochim. Biophys. Acta* **1851(4)**, 308-330 (2015).
- Bürger, F., Krieg, P., Marks, F., *et al.* Positional- and stereo-selectivity of fatty acid oxygenation catalysed by mouse (12S)-lipoxygenase isoenzymes. *Biochem J.* **348(Pt 2)**, 329-335 (2000).

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

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