

PRODUCT INFORMATION



(±)12(13)-EpOME-d₄

Item No. 10009996

Formal Name: (±)12(13)epoxy-9Z-octadecenoic-9,10,12,13-d₄ acid

Synonyms: (±)12,13-EODE-d₄, Isoleukotoxin-d₄,

(±)-Vernolic Acid-d₄

MF: C₁₈H₂₈D₄O₃

FW: 300.5

Chemical Purity: ≥98%

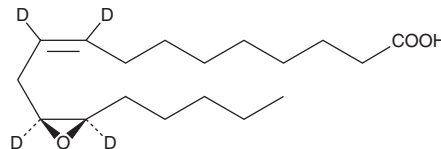
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀

Supplied as: A solution in methyl acetate

Storage: -20°C

Stability: ≥1 year



NOTE: Relative stereochemistry shown in chemical structure

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

Laboratory Procedures

(±)12(13)-EpOME-d₄ contains four deuterium atoms at the 9, 10, 12, and 13 positions. It is intended for use as an internal standard for the quantification of (±)12(13)-EpOME (Item No. 52450) 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(13)-EpOME-d₄ 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 purged with an inert gas can be used. The solubility of (±)12(13)-EpOME-d₄ in these solvents is approximately 50 mg/ml.

Description

(±)12(13)-EpOME-d₄ is intended for use as an internal standard for the quantification of 12(13)-EpOME by GC- or LC-MS. 12(13)-EpOME is an epoxide formed primarily via metabolism of linoleic acid (Item Nos. 90150 | 90150.1 | 21909) by the cytochrome P450 (CYP) isoforms CYP2J2, CYP2C8, and CYP2C9, however, CYP1A1 can contribute to 12(13)-EpOME production when pharmacologically induced.¹ 12(S),13(R)-EpOME and 12(R),13(S)-EpOME are produced at equal proportions from linoleic acid by peroxygenase, whereas CYP450-mediated metabolism of linoleic acid exclusively produces 12(S),13(R)-EpOME, in *E. lagascae* microsomes.²

References

- Hildreth, K., Kodani, S.D., Hammock, B.D., *et al.* Cytochrome P450-derived linoleic acid metabolites EpOMEs and DiHOMEs: A review of recent studies. *J. Nutr. Biochem.* **19**, 108484 (2020).
- Blee, E., Ståhl, U., Schuber, F., *et al.* Regio- and stereoselectivity of cytochrome P-450 and peroxygenase-dependent formation of cis-12,13-epoxy-9(Z)-octadecenoic acid (vernolic acid) in *Euphorbia lagascae*. *Biochem. Biophys. Res. Commun.* **197**(2), 778-784 (1993).

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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