

PRODUCT INFORMATION



(±)12(13)-EpOME

Item No. 52450

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

Synonyms: (±)2,13-EODE, Isoleukotoxin,
(±)-Vernolic Acid

MF: C₁₈H₃₂O₃

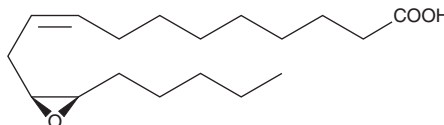
FW: 296.5

Chemical Purity: ≥98%

Supplied as: A solution in methyl acetate

Storage: -20°C

Stability: ≥2 years



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 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 in these solvents is approximately 50 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of (±)12(13)-EpOME is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of (±)12(13)-EpOME in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(±)12(13)-EpOME is the 12,13-*cis* epoxide form of linoleic acid (Item Nos. 90150 | 90150.1 | 21909).^{1,2} It is formed primarily *via* linoleic acid metabolism by the cytochrome P450 (CYP) isoforms CYP2J2, CYP2C8, and CYP2C9, however, CYP1A1 can contribute to (±)12(13)-EpOME production when pharmacologically induced.² (±)12(13)-EpOME (500 μM) induces mitochondrial dysfunction and cell death in renal proximal tubule epithelial cells.

References

- Hayakawa, M., Sugiyama, S., Takamura, T., *et al.* Neutrophils biosynthesize leukotoxin, 9,10-epoxy-12-octadecenoate. *Biochem. Biophys. Res. Commun.* **137**(1), 424-430 (1986).
- 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).

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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