

PRODUCT INFORMATION



(±)9(10)-EpOME

Item No. 52400

Formal Name:	(±)9,10-epoxy-12Z-octadecenoic acid
Synonyms:	Coronaric Acid, (±)9,10-EODE, Leukotoxin
MF:	C ₁₈ H ₃₂ O ₃
FW:	296.5
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

(±)9(10)-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 (±)9(10)-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 (±)9(10)-EpOME is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of (±)9(10)-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

(±)9(10)-EpOME is the 9,10-*cis* epoxide of linoleic acid, generated by neutrophils during the oxidative burst.¹ It has been recovered from the lungs of hyperoxic rats and from humans with acute respiratory distress syndrome.² Mitochondrial dysfunction is the main feature of (±)9(10)-EpOME cytotoxicity, which may be due to the diol metabolites as well as the parent epoxide.^{3,4}

References

1. 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).
2. Ozawa, T., Hayakawa, M., Takamura, T., *et al.* Biosynthesis of leukotoxin, 9,10-epoxy-12 octadecenoate, by leukocytes in lung lavages of rat after exposure to hyperoxia. *Biochem. Biophys. Res. Commun.* **134(3)**, 1071-1078 (1986).
3. Kosaka, K., Suzuki, K., Hayakawa, M., *et al.* Leukotoxin, a linoleate epoxide: Its implication in the late death of patients with extensive burns. *Mol. Cell. Biochem.* **139(2)**, 141-148 (1994).
4. Moran, J.H., Weise, R., Schnellmann, R.G., *et al.* Cytotoxicity of linoleic acid diols to renal proximal tubular cells. *Toxicol. Appl. Pharmacol.* **146(1)**, 53-59 (1997).

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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