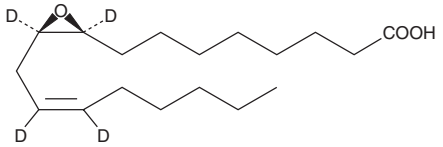
PRODUCT INFORMATION

(±)9(10)-EpOME-d_4

Item No. 10009995

Formal Name:	(±)9(10)epoxy-12Z-octadecenoic 9,10,12,13-d_4 acid
Synonyms:	(±)9,10-EODE-d_4, Leukotoxin-d_4
MF:	$C_{18}H_{28}D_4O_3$
FW:	300.5
Chemical Purity:	≥98%
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_4); ≤1% d_0
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-d_4 is intended for use as an internal standard for the quantification of (±)9(10)-EpOME (Item No. 52400) 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).

(±)9,10-EpOME-d_4 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-d_4 in is these solvents is approximately 50 mg/ml.

Description

(±)9(10)-EpOME is the 9,10-*cis* epoxide of linoleic acid (Item No. 90150), 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**, 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**, 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**, 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**, 53-59 (1997).

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