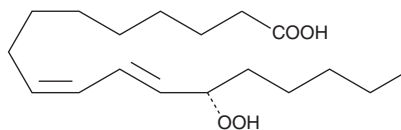


PRODUCT INFORMATION

13(S)-HpODE

Item No. 48610

CAS Registry No.: 33964-75-9
Formal Name: 13S-hydroperoxy-9Z,11E-octadecadienoic acid
MF: C₁₈H₃₂O₄
FW: 312.4
Purity: ≥95%
UV/Vis.: λ_{max}: 234 nm
Supplied as: A solution in ethanol
Storage: -80°C
Stability: ≥2 years



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

Laboratory Procedures

13(S)-HpODE is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 13(S)-HpODE 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 13(S)-HpODE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 13(S)-HpODE in PBS (pH 7.2) is approximately 1 mg/ml. 13(S)-HpODE is highly unstable in aqueous solutions. We recommend that aqueous solutions of 13(S)-HpODE be kept on ice and used as soon as possible, preferably within 15 minutes.

Description

13(S)-HpODE is produced by the oxidation of linoleic acid by lipoxygenase-1 (LO-1) in many plants including soybean, flaxseed, apples, and tea leaves,^{1,2} and by 15-LO in mammals.³ In plants, 13(S)-HpODE is the preferred substrate for the garlic bulb divinyl ether synthase.⁴ In mammalian tissues, 13(S)-HpODE is generally reduced to 13(S)-HODE (Item No. 38610), a compound which exhibits many biological activities.³ A direct action for 13(S)-HpODE has been demonstrated in Syrian hamster embryo cells where it stimulates EGF-dependent mitogenesis and up-regulation of EGF-dependent tyrosine phosphorylation.⁵ Membrane-esterified 13(S)-HpODE has been identified in human atherosclerotic plaques.⁶

References

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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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