

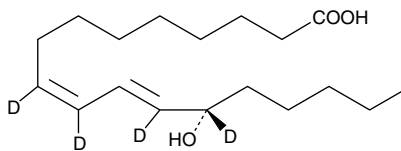
Product Information



13(S)-HODE-d₄

Item No. 338610

CAS Registry No.: 139408-39-2
Formal Name: 13S-hydroxy-9Z,11E-octadecadienoic-9,10,12,13-d₄ acid
MF: C₁₈H₂₈D₄O₃
FW: 300.5
Chemical Purity: ≥98%
Deuterium Incorporation: ≥ 99% deuterated forms (d₁-d₄); ≤1% d₀
Stability: ≥1 year at -20°C
Supplied as: A solution in acetonitrile
UV/Vis.: λ_{max}: 234 nm ε: 23,000



Laboratory Procedures

13(S)-HODE-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 13(S)-HODE by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 13(S)-HODE-d₄ be stored as supplied at -20°C. It will be stable for at least one year.

13(S)-HODE-d₄ is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile 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 13(S)-HODE-d₄ in these solvents is approximately 50 mg/ml.

13(S)-HODE-d₄ is used as an internal standard for the quantification of 13(S)-HODE by stable isotope dilution 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).

13(S)-HODE is produced by incubation of linoleic acid with plant and mammalian lipoxygenases. It has been shown to inhibit the adhesion of tumor cells to the endothelium at concentrations around 1 μM,^{1,2} and down regulates the expression of the IRGpIIb/IIIa receptor.³

References

1. Buchanan, M.R., Haas, T.A., Lagarde, M., *et al.* 13-Hydroxyoctadecadienoic acid is the vessel wall chemorepellant factor, LOX. *J. Biol. Chem.* **260**, 16056-16059 (1985).
2. Honn, K.V., Nelson, K.K., Renaud, C., *et al.* Fatty acid modulation of tumor cell adhesion to microvessel endothelium and experimental metastasis. *Prostaglandins* **44**, 413-429 (1992).
3. Grossi, I.M., Fitzgerald, L.A., Umbarger, L.A., *et al.* Bidirectional control of membrane expression and/or activation of the tumor cell IRGpIIb/IIIa receptor and tumor cell adhesion by lipoxygenase products of arachidonic acid and linoleic acid. *Cancer Res.* **49**, 1029-1037 (1989).

Related Products

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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