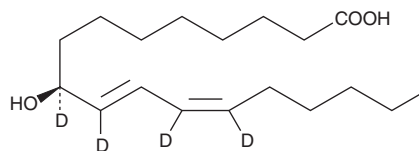


# PRODUCT INFORMATION



## 9(S)-HODE-d<sub>4</sub> Item No. 338410

**CAS Registry No.:** 890955-25-6  
**Formal Name:** 9S-hydroxy-10E,12Z-octadecadienoic-9,10,12,13-d<sub>4</sub> acid  
**MF:** C<sub>18</sub>H<sub>28</sub>D<sub>4</sub>O<sub>3</sub>  
**FW:** 300.5  
**Chemical Purity:** ≥95% (9(S)-HODE)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**UV/Vis.:** λ<sub>max</sub>: 234 nm  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥1 year



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

### Laboratory Procedures

9(S)-HODE-d<sub>4</sub> is intended for use as an internal standard for the quantification of 9(S)-HODE 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(S)-HODE-d<sub>4</sub> 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 9(S)-HODE-d<sub>4</sub> in these solvents is approximately 50 mg/ml.

### Description

(±)-9-HODE is formed *via* non-enzymatic oxidation of linoleic acid (Item Nos. 90150 | 90150.1 | 21909).<sup>1</sup> 9(S)-HODE and 9(R)-HODE are formed by lipoxygenase- and cyclooxygenase-mediated oxidation of linoleic acid, respectively.<sup>2-4</sup>

### References

1. Spiteller, P. and Spiteller, G. 9-Hydroxy-10,12-octadecadienoic acid (9-HODE) and 13-hydroxy-9,11-octadecadienoic acid (13-HODE): Excellent markers for lipid peroxidation. *Chem. Phys. Lipids* **89**(2), 131-139 (1997).
2. Gardner, H.W. Soybean lipoxygenase-1 enzymically forms both (9S)- and (13S)-hydroperoxides from linoleic acid by a pH-dependent mechanism. *Biochim. Biophys. Acta* **1001**(3), 274-281 (1989).
3. Kühn, H., Belkner, J., and Wiesner, R. Subcellular distribution of lipoxygenase products in rabbit reticulocyte membranes. *Eur. J. Biochem.* **191**(1), 221-227 (1990).
4. Godessart, N., Camacho, M., López-Belmonte, J., *et al.* Prostaglandin H-synthase-2 is the main enzyme involved in the biosynthesis of octadecanoids from linoleic acid in human dermal fibroblasts stimulated with interleukin-1β. *J. Invest. Dermatol.* **107**(5), 726-732 (1996).

#### 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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