

# PRODUCT INFORMATION



## 9(S)-HODE-<sup>13</sup>C<sub>18</sub>

Item No. 31160

**Formal Name:** (S,10E,12Z)-9-hydroxyoctadeca-10,12-dienoic-1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18-<sup>13</sup>C<sub>18</sub> acid

**Synonym:** (+)- $\alpha$ -Dimorphecolic Acid

**MF:** [<sup>13</sup>C]<sub>18</sub>H<sub>32</sub>O<sub>3</sub>

**FW:** 314.3

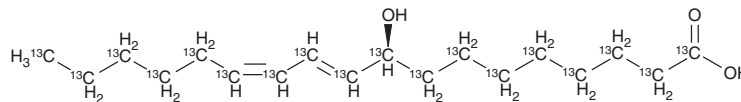
**Purity:**  $\geq$ 98%

**UV/Vis.:**  $\lambda_{\max}$ : 234 nm

**Supplied as:** A 100  $\mu$ g/ml solution in ethanol

**Storage:** -20°C

**Stability:**  $\geq$ 2 years



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

### Laboratory Procedures

9(S)-HODE-<sup>13</sup>C<sub>18</sub> is supplied as a solution in ethanol. A stock solution may be made by dissolving the 9(S)-HODE-<sup>13</sup>C<sub>18</sub> in the solvent of choice, which should be purged with an inert gas. 9(S)-HODE-<sup>13</sup>C<sub>18</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 9(S)-HODE-<sup>13</sup>C<sub>18</sub> 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. Organic solvent-free aqueous solutions of 9(S)-HODE-<sup>13</sup>C<sub>18</sub> can be prepared by directly dissolving the solution in aqueous buffers. The solubility of 9(S)-HODE-<sup>13</sup>C<sub>18</sub> 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(S)-HODE-<sup>13</sup>C<sub>18</sub> is intended for use as an internal standard for the quantification of 9-HODE by GC- or LC-MS. ( $\pm$ )-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-1 $\beta$ . *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.

#### WARRANTY AND LIMITATION OF REMEDY

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM