# PRODUCT INFORMATION

## 13-OxoODE-$d_3$

*Item No. 338620*

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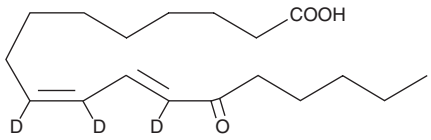
|---|---|
| **Formal Name:** | 13-oxo-9Z,11E-9,10,12,-$d_3$-octadecadienoic acid |
| **Synonym:** | 13-KODE-$d_3$ |
| **MF:** | $C_{18}H_{27}D_3O_3$ |
| **FW:** | 297.5 |
| **Chemical Purity:** | ≥98% 13-OxoODE |
| **Deuterium Incorporation:** | ≥99% deuterated forms ($d_1$-$d_3$); ≤1% $d_0$ |
| **UV/Vis.:** | $\lambda_{max}$: 275 nm ε: 22,000 |
| **Supplied as:** | A solution in acetonitrile |
| **Storage:** | -80°C |
| **Stability:** | ≥1 year |




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

### Laboratory Procedures

13-OxoODE-$d_3$ is intended for use as an internal standard for the quantification of 13-oxoODE (Item No. 38620) 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).

13-OxoODE-$d_3$ 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-oxoODE-$d_3$ in these solvents is approximately 50 mg/ml.

### Description

13-OxoODE is produced from 13-HODE by a $NAD^+$-dependent dehydrogenase present in rat colonic mucosa.[1] 13-OxoODE has been shown to stimulate cell proliferation when instilled intra-rectally in rats.[2] 13-OxoODE has also been detected in preparations of rabbit reticulocyte plasma and mitochondrial membranes, mostly still esterified to phospholipids. Production of 13-oxoODE is putatively linked to the maturation of reticulocytes to erythrocytes through the activity of 15-lipoxygenase.[3,4]

### References


1. Earles, S.M., Bronstein, J.C., Winner, D.L., *et al.* Metabolism of oxidized linoleic acid: Characterization of 13-hydroxyoctadecadienoic acid dehydrogenase activity from rat colonic tissue. *Biochim. Biophys. Acta* **1081**, 174-180 (1991).
2. Bull, A.W., and Bronstein, J.C. Production of unsaturated carbonyl compounds during metabolism of hydroperoxy fatty acids by colonic homogenates. *Carcinogenesis* **11**, 1699-1704 (1990).
3. Kühn, H., Belkner, J., Wiesner, R., *et al.* Occurrence of 9- and 13-keto-octadecadienoic acid in biological membranes oxygenated by the reticulocyte lipoxygenase. *Arch. Biochem. Biophys.* **279**, 218-224 (1990).
4. Kühn, H., Belkner, J., and Wiesner, R. Subcellular distribution of lipoxygenase products in rabbit reticulocyte membranes. *Eur. J. Biochem.* **191**, 221-227 (1990).





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