

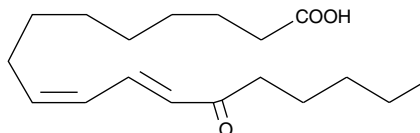
Product Information



13-OxoODE

Item No. 38620

CAS Registry No.: 54739-30-9
Formal Name: 13-oxo-9Z,11E-octadecadienoic acid
Synonym: 13-KODE
MF: C₁₈H₃₀O₃
FW: 294.4
Purity: ≥98%
Stability: ≥1 year at -80°C
Supplied as: A solution in ethanol
UV/Vis: λ_{max}: 279 nm ε: 22,000



Laboratory Procedures

For long term storage, we suggest that 13-OxoODE be stored as supplied at -80°C. It should be stable for at least one year.

13-OxoODE 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-OxoODE 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-OxoODE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 13-OxoODE in PBS (pH 7.2) is approximately 1 mg/ml. Store aqueous solutions of 13-OxoODE on ice and use within 2 hours of preparation.

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).

Related Product

13(S)-HODE - Item No. 38610

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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