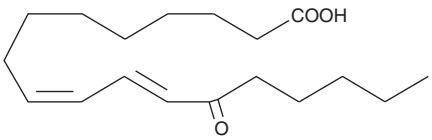
PRODUCT INFORMATION

13-OxoODE

Item No. 38620

CAS Registry No.:	54739-30-9
Formal Name:	13-oxo-9Z,11E-octadecadienoic acid
Synonyms:	13-keto-9(Z),11(E)-Octadecadienoic Acid, 13-keto-9(Z),11(E)-ODE, 13-KODE, 13-oxo-*cis*-9-*trans*-11-Octadecadienoic Acid, 13-oxo-*cis*-9-*trans*-11-ODE
MF:	$C_{18}H_{30}O_3$
FW:	294.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 279 nm
Supplied as:	A 100 µg/ml solution in ethanol
Storage:	-80°C
Stability:	≥4 years



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

Laboratory Procedures

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. We do not recommend storing the aqueous solution for more than one day.

Description

13-oxoODE is produced from 13-HODE by a NAD^+-dependent dehydrogenase present in rat colonic mucosa.[1] 13-OxoODE stimulates cell proliferation when instilled intrarectally in rats.[2] 13-OxoODE has also been detected in preparations of rabbit reticulocyte plasma and mitochondrial membranes, mostly esterified to phospholipids. Production of 13-oxoODE is putatively linked to the maturation of reticulocytes to erythrocytes through the activity of 15-LO.[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(2)**, 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(10)**, 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(2)**, 218-224 (1990).
4. Kühn, H., Belkner, J., and Wiesner, R. Subcellular distribution of lipoxygenase products in rabbit reticulocyte membranes. *Eur. J. Biochem.* **191(1)**, 221-227 (1990).

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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