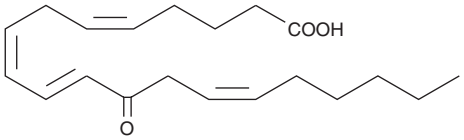
PRODUCT INFORMATION

12-OxoETE

Item No. 34580

CAS Registry No.:	108437-64-5
Formal Name:	12-oxo-5Z,8Z,10E,14Z-eicosatetraenoic acid
Synonym:	12-KETE
MF:	$C_{20}H_{30}O_3$
FW:	318.5
Purity:	≥90%
UV/Vis.:	λ_{max}: 280 nm
Supplied as:	A 100 µg/ml solution in ethanol
Storage:	-80°C
Stability:	≥2 years



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

Laboratory Procedures

12-OxoETE 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. 12-OxoETE is miscible in these solvents.

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 12-oxoETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 12-oxoETE in PBS, pH 7.2, is approximately 0.8 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

12-OxoETE is synthesized by human platelets and *Aplysia* nervous tissue after incubation with arachidonic acid.[1,2] Microsomal fractions of various tissues will reduce 12-oxoETE to 12(S)-HETE or a mixture of 12(S)- and 12(R)-HETE.[1,3] 12-OxoETE induces a rapid, dose dependent increase of cytoplasmic free calcium *via* a leukotriene B_4 receptor or a common activation sequence.[4]

References

1. Falgueyret, J-P., Leblanc, Y., and Riendeau, D. Stereoselective carbonyl reductases from rat skin and leukocyte microsomes converting 12-keto eicosatetraenoic acid to 12(S)-HETE. *FEBS Lett.* **262**, 197-200 (1990).
2. Fruteau De Laclos, B., Maclouf, J., Poubelle, P., *et al.* Conversion of arachidonic acid into 12-oxo derivatives in human platelets. A pathway possibly involving the heme-catalysed transformation of 12-hydroperoxy-eicosatetraenoic acid. *Prostaglandins* **33**, 315-337 (1987).
3. Falgueyret, J-P., Leblanc, Y., Rokach, J., *et al.* NAD(P)H-dependent reduction of 12-ketoeicosatetraenoic acid to 12(R)-hydroxyeicosatetraenoic acid by rat liver microsomes. *Biochem. Biophys. Res. Commun.* **156**, 1083-1089 (1988).
4. Naccache, P.H., Leblanc, Y., Rokach, J., *et al.* Calcium mobilization and right-angle light scatter responses to 12-oxo-derivatives of arachidonic acid in neutrophils: Evidence for the involvement of the leukotriene B_4 receptor. *Biochem. Biophys. Acta.* **1133**, 102-106 (1991).

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