

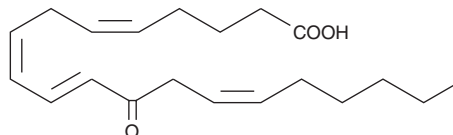
# Product Information



## 12-OxoETE

Catalog No. 34580

**CAS Registry No.:** 108437-64-5  
**Formal Name:** 12-oxo-5Z,8Z,10E,14Z-eicosatetraenoic acid  
**Synonym:** 12-KETE  
**MF:** C<sub>20</sub>H<sub>30</sub>O<sub>3</sub>  
**FW:** 318.5  
**Purity:** ≥90%  
**Stability:** ≥6 months at -80°C  
**Supplied as:** A solution in ethanol



### Laboratory Procedures

For long term storage, we suggest that 12-oxoETE be stored as supplied at -80°C. It will be stable for at least six months.

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.

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

### References

1. Falguyret, 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. Falguyret, 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, PH., 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<sub>4</sub> receptor. *Biochim. Biophys. Acta* **1133**, 102-106 (1991).

### Related Products

5-OxoETE - Cat. No. 34250 • (±)12-HETE - Cat. No. 34550 • 12(R)-HETE - Cat. No. 34560 • 12(S)-HETE - Cat. No. 34570 • 15-OxoETE - Cat. No. 34730 • 12-OxoETE Lipid Maps MS Standard - Cat. No. 10007249

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**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 under separate cover to the MSD supervisor at your institution.

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