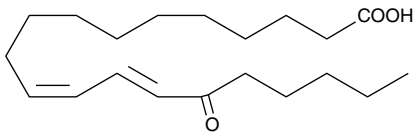
Product Information

15-OxoEDE

Item No. 37730

CAS Registry No.:	105835-44-7
Formal Name:	15-oxo-11Z,13E-eicosadienoic acid
Synonym:	15-KEDE
MF:	$C_{20}H_{34}O_3$
FW:	322.5
Purity:	≥95%
Stability:	≥1 year at -80°C
Supplied as:	A solution in ethanol
UV/Vis:	λ_{max}: 234 nm ε: 23,000



Laboratory Procedures

For long term storage, we suggest that 15-oxoEDE be stored as supplied at -80°C. It should be stable for at least one year.

15-OxoEDE 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 15-oxoEDE 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 15-oxoEDE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 15-oxoEDE in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

15-OxoEDE is produced by the oxidation of 15-HEDE. 15-oxoEDE inhibits 5-LO from RBL-1 cells with an IC_{50} of 55 µM, which is about 2-fold lower than 15(S)-HEDE.[1] A related oxo-eicosanoid, 5-oxoETE, is biosynthesized from 5(S)-HETE by a specific dehydrogenase and has potent inflammatory activity.[2]

References

1. Haviv, F., Ratajczyk, J.D., DeNet, R.W., *et al.* Structural requirements for the inhibition of 5-lipoxygenase by 15-hydroxyeicosa-5,8,11,13-tetraenoic acid analogues. *J. Med. Chem.* **30**, 254-263 (1987).
2. Powell, W.S., Gravelle, F., and Gravel, S. Metabolism of 5(S)-hydroxy-6,8,11,14-eicosatetraenoic acid and other 5(S)-hydroxyeicosanoids by a specific dehydrogenase in human polymorphonuclear leukocytes. *J. Biol. Chem.* **267**, 19233-19241 (1992).

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