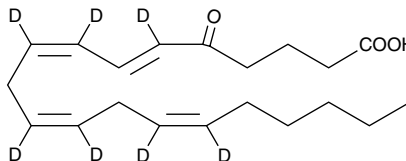


Product Information



5-OxoETE-d₇ Item No. 334250

Formal Name:	5-oxo-6E,8Z,11Z,14Z-eicosatetraenoic-6,8,9,11,12,14,15-d ₇ acid
Synonym:	5-KETE-d ₇
MF:	C ₂₀ H ₂₃ D ₇ O ₃
FW:	325.5
Chemical Purity:	≥98%
Deuterium Incorporation:	≥99% deuterated forms (d ₁ -d ₇); ≤1% d ₀
Stability:	≥1 year at -80°C
Supplied as:	A solution in acetonitrile
UV/Vis.:	λ _{max} : 279 nm ε: 22,100



Laboratory Procedures

5-OxoETE-d₇ contains seven deuterium atoms at the 6, 8, 9, 11, 12, 14, and 15 positions. It is intended for use as an internal standard for the quantification of 5-oxoETE by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 5-oxoETE-d₇ be stored as supplied at -80°C. It will be stable for at least one year.

5-OxoETE-d₇ is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. 5-OxoETE-d₇ is miscible in these solvents, and will be stable for at least six months in these solvents if stored at -80°C.

5-OxoETE-d₇ is used as an internal standard for the quantification of 5-oxoETE by stable isotope dilution MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the weight indicated on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard 5-oxoETE by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

5-OxoETE is a polyunsaturated keto acid formed by the oxidation of 5-HETE in human neutrophils.¹ It stimulates cytosolic calcium levels in neutrophils with an EC₅₀ value of 2 nM.² 5-OxoETE selectively stimulates the migration and degranulation of eosinophils and activates the MAPK pathway in stimulated neutrophils.^{3,4}

References

1. 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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3. O'Flaherty, J.T., Kuroki, M., Nixon, A.B., *et al.* 5-Oxo-eicosatetraenoate is a broadly active, eosinophil-selective stimulus for human granulocytes. *J. Immunol.* **157**, 336-342 (1996).
4. O'Flaherty, J.T., Kuroki, M., Nixon, A.B., *et al.* 5-Oxo-eicosanoids and hematopoietic cytokines cooperate in stimulating neutrophil function and the mitogen-activated protein kinase pathway. *J. Biol. Chem.* **271**, 17821-17828 (1996).

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