

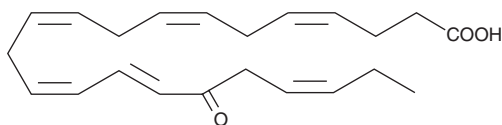
PRODUCT INFORMATION



17-oxo-4(Z),7(Z),10(Z),13(Z),15(E),19(Z)-Docosahexaenoic Acid

Item No. 9000346

CAS Registry No.: 1233715-28-0
Formal Name: 4Z,7Z,10Z,13Z,15E,19Z-17-oxo-docosapentaenoic acid
Synonyms: EFOX, 17-oxo-DHA, 17-oxo-4(Z),7(Z),10(Z),13(Z),15(E),19(Z)-DHA
MF: C₂₂H₃₀O₃
FW: 342.5
Purity: ≥90%
UV/Vis.: λ_{max}: 281 nm
Supplied as: A solution in ethanol
Storage: -80°C
Stability: ≥6 months



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

Laboratory Procedures

17-oxo-4(Z),7(Z),10(Z),13(Z),15(E),19(Z)-Docosahexaenoic Acid (17-oxo-DHA) is supplied as a solution in ethanol. To change the solvent, simply evaporate the 17-oxo-DHA 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. The solubility of 17-oxo-DHA in these solvents is approximately 20, 10, and 15 mg/ml, respectively.

Description

17-oxo-DHA is a metabolite of lipoxygenase-mediated oxidation of DHA that is produced endogenously by aspirin-enhanced COX-2 activity.¹⁻³ It has been shown to activate Nrf2-dependent antioxidant gene expression, to act as a PPAR γ agonist (EC₅₀ = ~200 nM), and to inhibit pro-inflammatory cytokine and nitric oxide production at biological concentration ranges (5-25 μ M).³

References

1. Butovich, I.A. A one-step method of 10,17-dihydro(pero)xydocosahexa-4Z,7Z,11E,13Z,15E,19Z-enoic acid synthesis by soybean lipoxygenase. *J. Lipid. Res.* **47**, 854-863 (2006).
2. Lie Ken Jie, M.S.F.L.K. and Pasha, M.K. Fatty acids, fatty acid analogues and their derivatives. *Nat. Prod. Rep.* 607-629 (1998).
3. Groeger, A.L., Cipollina, C., Cole, M.P., *et al.* Cyclooxygenase-2 generates anti-inflammatory mediators from omega-3 fatty acids. *Nat. Chem. Biol.* (2010).

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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