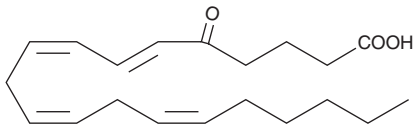
PRODUCT INFORMATION

5-OxoETE

Item No. 34250

CAS Registry No.: 106154-18-1
Formal Name: 5-oxo-6E,8Z,11Z,14Z-eicosatetraenoic acid
Synonym: 5-KETE
MF: $C_{20}H_{30}O_3$
FW: 318.5
Purity: ≥95%
UV/Vis.: λ_{max}: 279 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

5-oxoETE is supplied as a solution in ethanol. To change the solvent, 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. 5-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 5-oxoETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 5-oxoETE in PBS, pH 7.2, is approximately 0.8 mg/ml. For greater aqueous solubility, 5-oxoETE can be directly dissolved in 0.1 M Na_2CO_3 (solubility of 2 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. Store aqueous solutions of 5-oxoETE on ice and use within 12 hours of preparation. We do not recommend storing the aqueous solution for more than one day.

Description

5-OxoETE is a polyunsaturated keto acid formed by the oxidation of 5-HETE in human neutrophils by a specific dehydrogenase.[1] It stimulates cytosolic calcium levels in neutrophils with an EC_{50} value of 2 nM.[2] 5-OxoETE selectively stimulates the migration and degranulation of eosinophils and activates the MAPK pathway in stimulated neutrophils *via* a specific G protein-coupled receptor.[3-6]

References

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2. Powell, W.S., Zhang, Y., and Gravel, S. *Biochemistry* **33**, 3927-3933 (1994).
3. O'Flaherty, J.T., Kuroki, M., Nixon, A.B., *et al. J. Biol. Chem.* **271**, 17821-17828 (1996).
4. O'Flaherty, J.T., Kuroki, M., Nixon, A.B., *et al. J. Immunol.* **157**, 336-342 (1996).
5. Hosoi, T., Koguchi, Y., Sugikawa, E., *et al. J. Biol. Chem.* **277** (35), 31459-31465 (2002).
6. Jones, C.E., Holden, S., Tenaillon, L., *et al. Mol. Pharmacol.* **63(3)**, 471-477 (2003).

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