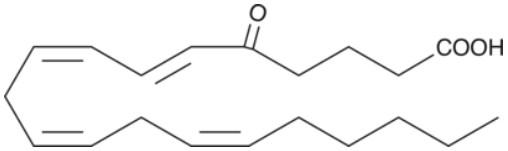
Product Data Sheet

Product Name: 5-OxoETE
Cat. No.: GC40380

Chemical Properties

Cas. No.	106154-18-1		
Chemical Name	5-oxo-6E,8Z,11Z,14Z-eicosatetraenoic acid		
SMILES	CCCCC/C=C\C/C=C\C/C=C\C=C/C(=O)CCCC(=O)O		
Formula	C20H30O3	M.Wt	318.5
Solubility	DMF: Miscible,DMSO: Miscible,Ethanol: Miscible,PBS pH 7.2: 0.8 mg/ml	Storage	Store at -80°C,protect from light
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

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 EC50 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],[4],[5],[6]

Reference:

[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(27), 19233-19241 (1992).

Caution: Product has not been fully validated for medical applications. For research use only.

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[2]. Powell, W.S., Zhang, Y., and Gravel, S. Effects of phorbol myristate acetate on the synthesis of 5-oxo-6,8,11,14-eicosatetraenoic acid by human polymorphonuclear leukocytes. Biochemistry 33(13), 3927-3933 (1994).
[3]. 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(30), 17821-17828 (1996).
[4]. 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(1), 336-342 (1996).
[5]. Hosoi, T., Koguchi, Y., Sugikawa, E., et al. Identification of a novel human eicosanoid receptor coupled to Gi/o. J. Biol. Chem. 277 (35), 31459-31465 (2002).
[6]. Jones, C.E., Holden, S., Tenaillon, L., et al. Expression and characterization of a 5-oxo-6E,8Z,11Z,14Z-eicosatetraenoic acid receptor highly expressed on human eosinophils and neutrophils. Mol. Pharmacol. 63(3), 471-477 (2003).

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