

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/C(=O)CCCC(=O)O

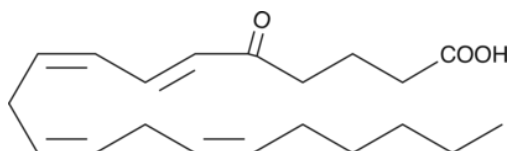
Formula C₂₀H₃₀O₃ M.Wt 318.5

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.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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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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