

Product Data Sheet

Product Name: 15(S)-HpETE

Cat. No.: GC41124

Chemical Properties

Cas. No. 70981-96-3

Chemical Name 15S-hydroperoxy-5Z,8Z,11Z,13E-eicosatetraenoic acid

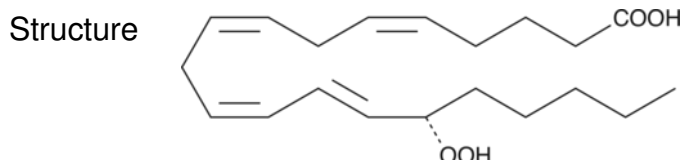
SMILES CCCC[C@H](OO)/C=C/C=C\C/C=C\C/C=C\C/C=C\CCCC(O)=O

Formula C₂₀H₃₂O₄ M.Wt 336.5

Solubility 0.1 M Na₂CO₃: 2 mg/ml, 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.



Background

15(S)-HpETE is a monohydroperoxy polyunsaturated fatty acid (PUFA) produced by the action of 15-lipoxygenase (15-LO) on arachidonic acid. It is either metabolized to 14,15-leukotriene A₄ [1] or reduced to 15(S)-HETE by peroxidases.[2] [1] 15(S)-HpETE mediates a number of biological functions including the induction of c-fos and c-jun, and activation of AP-1. [3] 15(S)-HpETE inhibits prostacyclin synthesis in porcine aortic microsomes and bovine endothelial cells, and can cause the suicide inactivation of porcine 12-LO.[2][4][5]

Reference:

[1]. Bryant, R.W., Schewe, T., Rapoport, S.M., et al. Leukotriene formation by a purified reticulocyte lipoxygenase enzyme. Conversion of arachidonic acid and 15-hydroperoxyeicosatetraenoic acid to

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

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14,15-leukotriene A4. J. Biol. Chem. 260(6), 3548-3555 (1985).

[2]. Kishimoto, K., Nakamura, M., Suzuki, H., et al. Suicide inactivation of porcine leukocyte 12-lipoxygenase associated with its incorporation of 15-hydroperoxy-5,8,11,13-eicosatetraenoic acid derivative. Biochimica et Biophysica Acta 1300, 56-62 (1996).

[3]. Rao, G.N., Glasgow, W.C., Eling, T.E., et al. Role of hydroperoxyeicosatetraenoic acids in oxidative stress-induced activating protein 1 (AP-1) activity. The Journal of Biological Chemistry 271, 27760-27764 (1996).

[4]. Moncada, S., Gryglewski, R.J., Bunting, S., et al. A lipid peroxide inhibits the enzyme in blood vessel microsomes that generates from prostaglandin endoperoxides the substance (prostaglandin X) which prevents platelet aggregation. Prostaglandins 12(5), 715-737 (1976).

[5]. Mayer, B., Moser, R., Gleispach, H., et al. Possible inhibitory function of endogenous 15-hydroperoxyeicosatetraenoic acid on prostacyclin formation in bovine aortic endothelial cells. Biochim. Biophys. Acta 875(3), 641-653 (1986).

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