

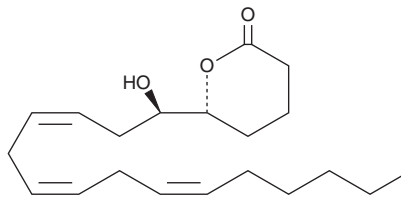
PRODUCT INFORMATION



(±)5(6)-DiHET lactone

Item No. 51212

CAS Registry No.: 213126-92-2
Formal Name: tetrahydro-6-[(3Z,6Z,9Z)-1-hydroxy-3,6,9-pentadecatrien-1-yl]-2H-pyran-2-one
Synonym: (±)5,6-DiHETrE lactone
MF: C₂₀H₃₂O₃
FW: 320.5
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



NOTE: Relative stereochemistry shown in chemical structure

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

Laboratory Procedures

(±)5(6)-DiHET lactone is supplied as a solution in ethanol. To change the solvent, simply 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. The solubility of (±)5(6)-DiHET lactone in these solvents is approximately 50 mg/ml. (±)5(6)-DiHET lactone is stable for at least six months in these solvents if stored at -20°C.

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(6)-DiHET lactone is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (±)5(6)-DiHET lactone in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

5,6-DiHET lactone is a lactonized form of 5,6-EET and 5,6-DiHET. In solution, 5(6)-EET degrades into 5(6)-DiHET and 5(6)-δ-lactone, which can be converted to 5(6)-DiHET and quantified by GC-MS.¹ 5,6-DiHET potently induces vasodilation of isolated canine coronary arterioles, with 41 and 100% inhibition occurring at 0.01 and 100 pM, respectively.² It also induces vasodilation in isolated human microvessels and increases intracellular calcium levels in a dose-dependent manner, an effect that can be blocked by the nitric oxide scavenger L-NAME (Item No. 80210).³

Reference

1. Fulton, D., Falck, J.R., McGiff, J.C., *et al.* A method for the determination of 5,6-EET using the lactone as an intermediate in the formation of the diol. *J. Lipid Res.* **39(8)**, 1713-1721 (1998).
2. Oltman, C.L., Weintraub, N.L., VanRollins, M., *et al.* Epoxyeicosatrienoic acids and dihydroeicosatrienoic acids are potent vasodilators in the canine coronary microcirculation. *Circ. Res.* **83(9)**, 932-939 (1998).
3. Levi-Rosenzvig, R., Beyer, A.M., Hockenberry, J., *et al.* 5,6-δ-DHTL, a stable metabolite of arachidonic acid, is a potential EDHF that mediates microvascular dilation. *Free Rad. Biol. Med.* **103**, 87-94 (2017).

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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