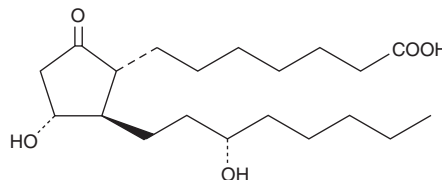


PRODUCT INFORMATION



13,14-dihydro Prostaglandin E₁ Item No. 13610

CAS Registry No.: 19313-28-1
Formal Name: 9-oxo-11 α ,15S-dihydroxy-prostan-1-oic acid
Synonyms: PGE₀, 13,14-dihydro PGE₁
MF: C₂₀H₃₆O₅
FW: 356.5
Purity: \geq 98%
Stability: \geq 1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that 13,14-dihydro Prostaglandin E₁ (13,14-dihydro PGE₁) be stored as supplied at -20°C. It should be stable for at least one year.

13,14-dihydro PGE₁ is supplied as a solution in methyl acetate. If methyl acetate is undesirable, evaporate the methyl acetate with an inert gas and add the solvent of choice. 13,14-dihydro PGE₁ is soluble in organic solvents such as ethanol, DMSO, and DMF. The solubility of 13,14-dihydro PGE₁ in these solvents is approximately 50 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. If an organic solvent-free solution of 13,14-dihydro PGE₁ is needed, the methyl acetate can be evaporated under a gentle stream of nitrogen and the neat oil dissolved in the buffer of choice. The solubility of 13,14-dihydro PGE₁ is approximately 1.67 mg/ml in PBS (pH 7.2). Avoid adding 13,14-dihydro PGE₁ to basic solutions (pH >7.4), since base treatment will degrade 13,14-dihydro PGE₁ to PGA and PGB compounds. Also, ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

13,14-dihydro PGE₁ is a potent inhibitor of platelet aggregation. 13,14-dihydro PGE₁ is an inhibitor of ADP-induced platelet aggregation in human platelet-rich plasma and washed platelets with IC₅₀ values of 31 and 21 nM, respectively.¹ 13,14-dihydro PGE₁ is a slightly more potent inhibitor of ADP-induced human platelet aggregation than PGE₁ (Item No. 13010) which has an IC₅₀ value of 40 nM.² Also, 13,14-dihydro PGE₁ activates adenylate cyclase in NCB-20 hybrid cells with a K_{act} value of 668 nM.³

References

1. Kobzar, G., Mardla, V., Järving, I., *et al.* Comparison of the inhibitory effect of E-prostaglandins in human and rabbit platelet-rich plasma and washed platelets. *Comp. Biochem. Physiol.* **106C**, 489-494 (1993).
2. Kobzar, G., Mardla, V., Järving, I., *et al.* Antiaggregating potency of E-type prostaglandins in human and rabbit platelets. *Proc. Estonian Acad. Sci. Chem.* **40**, 179-180 (1991).
3. Blair, I.A., Hensby, C.N., and MacDermot, J. Prostacyclin-dependent activation of adenylate cyclase in a neuronal somatic cell hybrid: Prostanoid structure-activity relationships. *Br. J. Pharmacol.* **69**, 519-525 (1980).

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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