

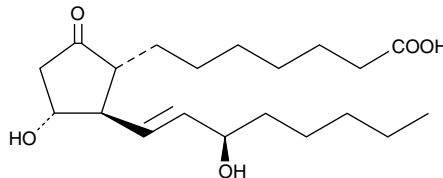
Product Information



15(R)-Prostaglandin E₁

Item No. 13710

CAS Registry No.: 20897-91-0
Formal Name: 9-oxo-11 α ,15R-dihydroxy-prost-13E-en-1-oic acid
Synonym: 15-*epi* Prostaglandin E₁
MF: C₂₀H₃₄O₅
FW: 354.5
Purity: \geq 95%
Stability: \geq 1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that 15(R)-prostaglandin E₁ (15(R)-PGE₁) be stored as supplied at -20°C. It will be stable for at least one year.

15(R)-PGE₁ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO, dimethyl formamide, or ethanol purged with an inert gas can be used. The solubility of 15(R)-PGE₁ in these solvents is approximately 50 mg/ml. 15(R)-PGE₁ 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. Organic solvent-free solutions of 15(R)-PGE₁ can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 15(R)-PGE₁ in PBS (pH 7.2) is approximately 1.6 mg/ml. Avoid adding 15(R)-PGE₁ to basic solutions (pH > 7.4) as base treatment will cause 15(R)-PGE₁ to undergo β -elimination to give the corresponding A and B prostaglandins. Store aqueous solutions of 15(R)-PGE₁ on ice and use within 12 hours. We strongly recommend using a fresh preparation each day.

15(R)-PGE₁ is the "unnatural" C-15 stereoisomer of PGE₁.¹ It is essentially inactive biologically when compared to PGE₁. 15(R)-PGE₁ is a non-competitive inhibitor of 15-hydroxyprostaglandin dehydrogenase with an IC₅₀ value of 189 μ M.²

References

1. Nakano, J. Relationship between the chemical structure of prostaglandins and their vasoactivities in dogs. *Br. J. Pharmacol.* **44**, 63-70 (1972).
2. Jarabak, J. and Braithwaite, S.S. Kinetic studies on a 15-hydroxyprostaglandin dehydrogenase from human placenta. The reaction mechanism and the mechanism of action of various inhibitors. *Arch. Biochem. Biophys.* **177**, 245-254 (1976).

Related Products

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MATERIAL SAFETY DATA

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