

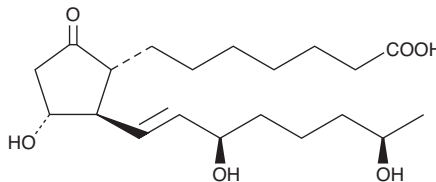
PRODUCT INFORMATION



15(R),19(R)-hydroxy Prostaglandin E₁

Item No. 13920

Formal Name: 9-oxo-11 α ,15R,19R-trihydroxy-prost-13E-en-1-oic acid
Synonym: 15(R),19(R)-hydroxy PGE₁
MF: C₂₀H₃₄O₆
FW: 370.5
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 year



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

Laboratory Procedures

15(R),19(R)-hydroxy Prostaglandin E₁ (15(R),19(R)-hydroxy PGE₁) 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 15(R),19(R)-hydroxy PGE₁ in these solvents is approximately 50 and 100 mg/ml respectively.

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 15(R),19(R)-hydroxy PGE₁ is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 15(R),19(R)-hydroxy PGE₁ in PBS (pH 7.2) is approximately 1.67 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

19(R)-Hydroxylated prostaglandins occur in $\mu\text{g/ml}$ concentrations in the semen of certain mammalian species, especially primates. In the case of humans, the compounds are primarily of the PGE series, and the hydroxyl stereochemistry is 15(S),19(R).¹ 19(R)-Hydroxylated prostaglandins are also found in the seminal plasma of marsupials, where F-type compounds of the 1 and 2-series predominate.² The 15(R)-hydroxy epimer of these 19-hydroxylated prostaglandins is the inverse or “unnatural” isomer at C-15. The biological role of 19(R)-hydroxylated prostaglandins is not well established. In the E-series, 19(R)-hydroxylation has been identified with EP₂ receptor subtype selectivity.³

References

1. Cooper, I. and Kelly, R.W. The measurement of E and 19-hydroxy E prostaglandins in human seminal plasma. *Prostaglandins* **10(3)**, 507-514 (1975).
2. Marley, P.B., Rodger, J.C., White, I.G., et al. 19-Hydroxylated prostaglandins in the semen of the marsupial *Trichosurus vulpecula* (brush-tailed possum). *Comp. Biochem. Physiol. B Biochem. Mol. Biol.* **70(3)**, 619-621 (1981).
3. Woodward, D.F., Protzman, C.E., Krauss, A.H.P., et al. Identification of 19(R)-OH prostaglandin E₂ as a selective prostanoid EP₂-receptor agonist. *Prostaglandins* **46(4)**, 371-383 (1993).

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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