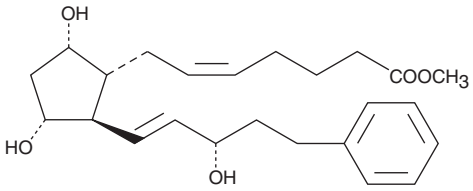
PRODUCT INFORMATION

17-phenyl trinor Prostaglandin $F_{2\alpha}$ methyl ester

Item No. 10010110

CAS Registry No.: 38315-47-8
Formal Name: 7-[3R,5S-dihydroxy-2R-[3S-hydroxy-5Z-phenyl-1R-penten-1E-yl]cyclopentyl]-5-heptenoic acid, methyl ester
Synonyms: Bimatoprost methyl ester, 17-phenyl trinor $PGF_{2\alpha}$ methyl ester
MF: $C_{24}H_{34}O_5$
FW: 402.5
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

17-phenyl trinor Prostaglandin $F_{2\alpha}$ methyl ester 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 acetonitril, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 17-phenyl trinor prostaglandin $F_{2\alpha}$ methyl ester in acetonitrile is approximately 3 mg/ml and approximately 25 mg/ml in DMSO and DMF.

17-phenyl trinor Prostaglandin $F_{2\alpha}$ methyl ester is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 17-phenyl trinor prostaglandin $F_{2\alpha}$ methyl ester should be diluted with the aqueous buffer of choice. The solubility of 17-phenyl trinor prostaglandin $F_{2\alpha}$ methyl ester in PBS (pH 7.2) is approximately 0.25 mg.ml. We do not recommend storing the aqueous solution for more than one day.

Description

Prostaglandin F2α ($PGF_{2\alpha}$) drives luteolysis and smooth muscle contraction by activating the FP receptor. 17-phenyl trinor $PGF_{2\alpha}$ methyl ester is a lipophilic analog of 17-phenyl trinor $PGF_{2\alpha}$, a potent agonist for the FP receptor. 17-phenyl trinor $PGF_{2\alpha}$ binds the FP receptor on ovine luteal cells with a relative potency of 756% compared to that of $PGF_{2\alpha}$.[1] Esters of PGs serve as prodrugs, as they are efficiently hydrolyzed in certain tissues to generate the bioactive free acid.

Reference

1. Balapure, A.K., Rexroad, C.E., Jr., Kawada, K., *et al.* Structural requirements for prostaglandin analog interaction with the ovine corpus luteum prostaglandin $F_{2\alpha}$ receptor. *Biochem. Pharmacol.* **38(14)**, 2375-2381 (1989).

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