

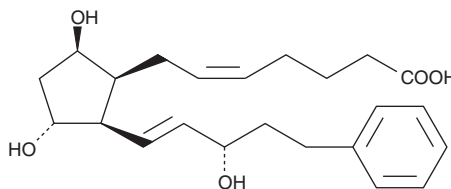
PRODUCT INFORMATION



8-iso-17-phenyl trinor Prostaglandin F_{2β}

Item No. 10008436

Formal Name: 9β,11α,15S-trihydroxy-17-phenyl-(8β)-prosta-5Z,13E-dien-1-oic acid
Synonym: 8-iso-17-phenyl PGF_{2β}
MF: C₂₃H₃₂O₅
FW: 388.5
Purity: ≥98%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

8-iso-17-phenyl trinor Prostaglandin F_{2β} (8-iso-17-phenyl PGF_{2β}) 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 ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 8-iso-17-phenyl PGF_{2β} 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. 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 8-iso-17-phenyl PGF_{2β} is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 8-iso-17-phenyl PGF_{2β} in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Bimatoprost (free acid) is a metabolically stable analog of prostaglandin F_{2α} (PGF_{2α}) and a potent agonist for the FP receptor. It binds to the FP receptor on ovine luteal cells with a relative potency of 756% compared to that of PGF_{2α}.¹ At the rat recombinant FP receptor expressed in CHO cells bimatoprost inhibits PGF_{2α} binding with a K_i of 1.1 nM.² The isopropyl ester of bimatoprost is slightly better than PGF_{2α} isopropyl ester in reducing the intraocular pressure in the cat eye without any irritation.³ 8-iso-17-phenyl PGF_{2β} is an isomer of bimatoprost that is epimerized at the 8 and 9 positions. There are no published reports on the biological activity of 8-iso-17-phenyl PGF_{2β}.

References

- Balapure, A.K., Rexroad, C.E., Jr., Kawada, K., *et al.* Structural requirements for prostaglandin analog interaction with the ovine corpus luteum prostaglandin F_{2α} receptor. *Biochem. Pharmacol.* **38(14)**, 2375-2381 (1989).
- Lake, S., Gullberg, H., Wahlqvist, J., *et al.* Cloning of the rat and human prostaglandin F_{2α} receptors and the expression of the rat prostaglandin F_{2α} receptor. *FEBS Lett.* **355(3)**, 317-325 (1994).
- Stjernschantz, J. and Resul, B. Phenyl substituted prostaglandin analogs for glaucoma treatment. *Drug. Future* **17**, 691-704 (1992).

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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