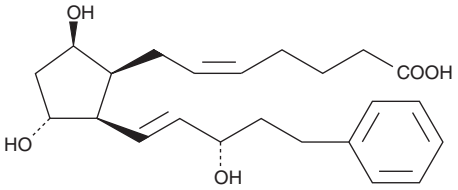
PRODUCT INFORMATION

8-*iso*-17-phenyl trinor Prostaglandin $F_{2\beta}$

Item No. 10008436

Formal Name:	9β,11α,15S-trihydroxy-17-phenyl-(8β)-prosta-5Z,13E-dien-1-oic acid
Synonym:	8-*iso*-17-phenyl $PGF_{2\beta}$
MF:	$C_{23}H_{32}O5$
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 $F_{2\beta}$ (8-*iso*-17-phenyl $PGF_{2\beta}$) 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 $PGF_{2\beta}$ 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 $PGF_{2\beta}$ 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 $PGF_{2\beta}$ 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 $F_{2\alpha}$ ($PGF_{2\alpha}$) 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 $PGF_{2\alpha}$.[1] At the rat recombinant FP receptor expressed in CHO cells bimatoprost inhibits $PGF_{2\alpha}$ binding with a K_i of 1.1 nM.[2] The isopropyl ester of bimatoprost is slightly better than $PGF_{2\alpha}$ isopropyl ester in reducing the intraocular pressure in the cat eye without any irritation.[3] 8-*iso*-17-phenyl $PGF_{2\beta}$ 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 $PGF_{2\beta}$.

References

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).
2. Lake, S., Gullberg, H., Wahlqvist, J., *et al*. Cloning of the rat and human prostaglandin $F_{2\alpha}$ receptors and the expression of the rat prostaglandin $F_{2\alpha}$ receptor. *FEBS Lett.* **355(3)**, 317-325 (1994).
3. Stjernschantz, J. and Resul, B. Phenyl substituted prostaglandin analogs for glaucoma treatment. *Drug. Future* **17**, 691-704 (1992).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM