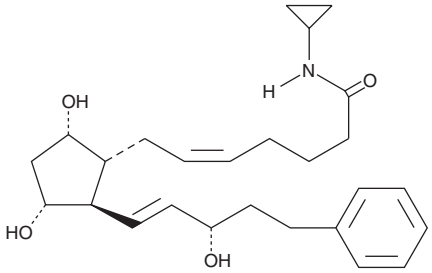
PRODUCT INFORMATION

17-phenyl trinor Prostaglandin F2α cyclopropyl amide

Item No. 10010605

CAS Registry No.: 1138395-12-6
Formal Name: N-ethyl-9α,11α,15S-trihydroxy-17-phenyl-18,19,20-trinor-prosta-5Z,13E-dien-1-cyclopropyl amide
Synonyms: Bimatoprost cyclopropyl amide, 17-phenyl trinor PGF2α cyclopropyl amide
MF: $C_{26}H_{37}NO_4$
FW: 427.6
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

17-phenyl trinor Prostaglandin $F_{2\alpha}$ cyclopropyl amide (17-phenyl trinor $PGF_{2\alpha}$ cyclopropyl amide) is supplied as a solid. A stock solution may be made by dissolving the 17-phenyl trinor $PGF_{2\alpha}$ cyclopropyl amide in the solvent of choice, which should be purged with an inert gas. 17-phenyl trinor $PGF_{2\alpha}$ cyclopropyl amide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 17-phenyl trinor $PGF_{2\alpha}$ cyclopropyl amide in ethanol is approximately 30 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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 aqueous solutions of 17-phenyl trinor $PGF_{2\alpha}$ cyclopropyl amide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 17-phenyl trinor $PGF_{2\alpha}$ cyclopropyl amide 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

17-phenyl trinor PGF_{2a} ethyl amide is sold under the Allergan trade name Bimatoprost and is an F-series PG analog which has been approved for use as an ocular hypotensive drug.[1] The free acid, 17-phenyl trinor $PGF_{2\alpha}$, is a potent FP receptor agonist.[2,3] 17-phenyl trinor PGF_{2a} cyclopropyl amide is a novel analog of 17-phenyl trinor PGF_{2a} ethyl amide. There are no published reports on the biological activity of 17-phenyl trinor PGF_{2a} cyclopropyl amide.

References

1. Woodward, D.F., Krauss, A.H.-P., Chen, J., *et al.* The pharmacology of Bimatoprost (Lumigan™). *Survey of Ophthalmology* **45**, S337-S345 (2001).
2. 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**, 2375-2381 (1989).
3. 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**, 317-325 (1994).

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