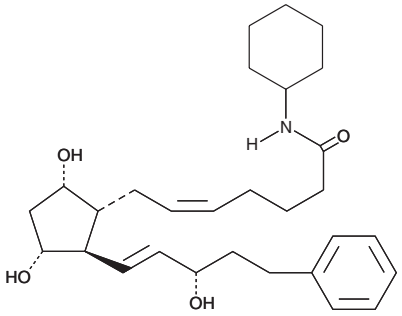
PRODUCT INFORMATION

17-phenyl trinor Prostaglandin $F_{2\alpha}$ cyclohexyl amide

Item No. 9000686

Formal Name:	N-cyclohexyl-9α,11α,15S-trihydroxy-17-phenyl-18,19,20-trinor-prosta-5Z,13E-dien-1-amide
Synonym:	Bimatoprost cyclohexyl amide
MF:	$C_{29}H_{43}NO_4$
FW:	469.7
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 $F_{2\alpha}$ (17-phenyl trinor $PGF_{2\alpha}$) is supplied as a crystalline solid. A stock solution may be made by dissolving the 17-phenyl trinor $PGF_{2\alpha}$ in the solvent of choice, which should be purged with an inert gas. 17-phenyl trinor $PGF_{2\alpha}$ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 17-phenyl trinor $PGF_{2\alpha}$ in these solvents is approximately 30, 15, and 10 mg/ml, respectively.

17-phenyl trinor $PGF_{2\alpha}$ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 17-phenyl trinor $PGF_{2\alpha}$ should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 17-phenyl trinor $PGF_{2\alpha}$ has a solubility of approximately 0.1 mg/ml in a 1:10 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

17-phenyl trinor $PGF_{2\alpha}$ is a metabolically stable, potent agonist of the PGF (FP) receptor.[1,2] FP agonists can be effective in modulating intraocular pressure, luteolysis, and parturition.[3-5] 17-phenyl trinor $PGF_{2\alpha}$ cyclohexyl amide is a form of 17-phenyl trinor $PGF_{2\alpha}$ with a modification of the α carbon. The addition of a cyclohexane moiety at this position strongly decreases its solubility in aqueous media, leaving it soluble solely in organic solvents. The activity of this compound at the FP receptor has not been evaluated.

References

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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. *Drugs Future* 17(8), 691-704 (1992).
4. Dukes, M., Russell, W., and Walpole, A.L. Potent luteolytic agents related to prostaglandin $F_{2\alpha}$. *Nature* 250(464), 330-331 (1974).
5. Kobayashi, T. and Narumiya, S. Function of prostanoid receptors: Studies on knockout mice. *Prostaglandins Other Lipid Mediat.* **68-69**, 557-573 (2002).

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