

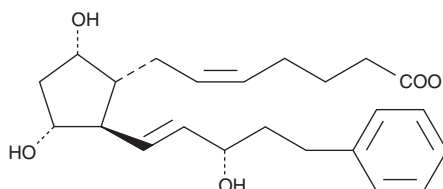
# PRODUCT INFORMATION



## 17-phenyl trinor Prostaglandin F<sub>2α</sub>

Item No. 16810

**CAS Registry No.:** 38344-08-0  
**Formal Name:** (5Z)-7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-phenyl-1-penten-1-yl]cyclopentyl]-5-heptenoic acid  
**Synonyms:** Bimatoprost (free acid), 17-phenyl trinor PGF<sub>2α</sub>  
**MF:** C<sub>23</sub>H<sub>32</sub>O<sub>5</sub>  
**FW:** 388.5  
**Purity:** ≥98%  
**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<sub>2α</sub> (17-phenyl trinor PGF<sub>2α</sub>) is supplied as a crystalline solid. A stock solution may be made by dissolving the 17-phenyl trinor PGF<sub>2α</sub> in the solvent of choice, which should be purged with an inert gas. 17-phenyl trinor PGF<sub>2α</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 17-phenyl trinor PGF<sub>2α</sub> in these solvents is approximately 100 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. Organic solvent-free aqueous solutions of 17-phenyl trinor PGF<sub>2α</sub> can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 17-phenyl trinor PGF<sub>2α</sub> in PBS (pH 7.2) is approximately 0.8 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

17-phenyl trinor PGF<sub>2α</sub> is a metabolically stable analog of PGF<sub>2α</sub> and is 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<sub>2α</sub>.<sup>1</sup> At the rat recombinant FP receptor expressed in CHO cells bimatoprost inhibits PGF<sub>2α</sub> binding with a K<sub>i</sub> of 1.1 nM.<sup>2</sup> The isopropyl ester of 17-phenyl trinor PGF<sub>2α</sub> ethyl amide is slightly better than PGF<sub>2α</sub> isopropyl ester in reducing the intraocular pressure in the cat eye without any irritation.<sup>3</sup>

### 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<sub>2α</sub> 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<sub>2α</sub> receptors and the expression of the rat prostaglandin F<sub>2α</sub> 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).

#### 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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