

# PRODUCT INFORMATION



## 17-phenyl trinor Prostaglandin F<sub>2α</sub> ethyl amide Item No. 16820

CAS Registry No.: 155206-00-1

Formal Name: N-ethyl-9α,11α,15S-trihydroxy-17-phenyl-18,19,20-trinor-prosta-5Z,13E-dien-1-amide

Synonyms: Bimatoprost, 15(S)-Bimatoprost, 17-phenyl trinor PGF<sub>2α</sub> ethyl amide

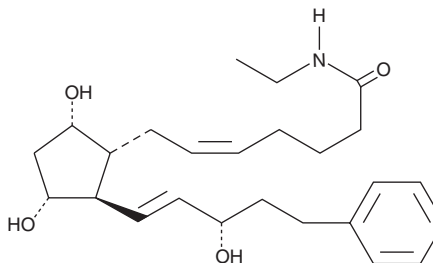
MF: C<sub>25</sub>H<sub>37</sub>NO<sub>4</sub>  
FW: 415.6

Purity: ≥97%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥2 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> ethyl amide (17-phenyl trinor PGF<sub>2α</sub> ethyl amide) is supplied as a crystalline solid. A stock solution may be made by dissolving the 17-phenyl trinor PGF<sub>2α</sub> ethyl amide in an organic solvent purged with an inert gas. 17-phenyl trinor PGF<sub>2α</sub> ethyl amide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 17-phenyl trinor PGF<sub>2α</sub> ethyl amide in ethanol is approximately 50 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<sub>2α</sub> ethyl amide can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of 17-phenyl trinor PGF<sub>2α</sub> ethyl amide in PBS (pH 7.2) is approximately 300 µg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

17-phenyl trinor PGF<sub>2α</sub> ethyl amide is an F-series PG analog which has been approved for use as an ocular hypotensive drug.<sup>1</sup> Investigations in our lab have shown that 17-phenyl trinor PGF<sub>2α</sub> ethyl amide is converted by an amidase enzymatic activity in the bovine and human cornea to yield the corresponding free acid, with a conversion rate of about 40 µg/g corneal tissue/24 hours.<sup>2</sup> The free acid, 17-phenyl trinor PGF<sub>2α</sub>, is a potent FP receptor agonist.<sup>3</sup> In human and animal models of glaucoma, FP receptor agonist activity corresponds very closely with intraocular hypotensive activity.

### 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. Maxey, K.M., Johnson, J., Camras, C.B., *et al.* The hydrolysis of bimatoprost in corneal tissue generates a potent prostanoid FP receptor agonist, *Survey of Ophthalmology* **47(4)**, 34-40 (2002).
3. Abramovitz, M., Adam, M., Boie, Y., *et al.* The utilization of recombinant prostanoid receptors to determine the affinities and selectivities of prostaglandins and related analogs. *Biochim. Biophys. Acta* **1483**, 285-293 (2000).

#### WARNING

THIS PRODUCT IS FOR RESEARCH USE - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE. It is the responsibility of the purchaser to determine suitability for other applications.

#### 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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