# **PRODUCT** INFORMATION



17-phenyl trinor Prostaglandin  $F_{2\alpha}$  1,15-lactone

Item No. 13992

Formal Name:	9a,11a,15S-trihydroxy-17-phenyl- 18 19 20-tripor-prosta-57 13E-diep-1-	
	oic acid. 1.15-lactone	ОН
Synonyms:	Bimatoprost free acid 1,15 lactone,	$\dot{\wedge}$ $\dot{\wedge}$
	17-phenyl trinor PGF <sub>2a</sub> 1,15-lactone	
MF:	C <sub>23</sub> H <sub>30</sub> O <sub>4</sub>	
FW:	370.5	HO
Purity:	≥98%	
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  $F_{2\alpha}$  1,15-lactone (17-phenyl trinor  $PGF_{2\alpha}$  1,15-lactone) is supplied as a crystalline solid. A stock solution may be made by dissolving the 17-phenyl trinor PGF<sub>20</sub> 1,15-lactone in the solvent of choice, which should be purged with an inert gas. 17-phenyl trinor PGF<sub>2a</sub> 1,15-lactone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 17-phenyl trinor  $PGF_{2a}$  1,15-lactone in these solvents is approximately 16, 12.5, and 14 mg/ml, respectively.

17-phenyl trinor  $PGF_{2\alpha}$  1,15-lactone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 17-phenyl trinor  $PGF_{2\alpha}$  1,15-lactone should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 17-phenyl trinor  $PGF_{2\alpha}$  1,15-lactone has a solubility of approximately 0.5 mg/ml in a 1:1 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  $PGF_{2a}$  (Item No. 16810) is a metabolically stable analog of  $PGF_{2a}$  (Item No. 16010) with potent FP receptor agonist activity and well known intraocular pressure-reducing effects.<sup>1-3</sup> 17-phenyl trinor PF2a 1,15-lactone is the 1,15 lactone of 17-phenyl-trinor PGF2a. Selective F-series PG derivatives such as this compound have been developed for suitable pharmacologic activity and an improved side-effect profile over current glaucoma therapeutics.<sup>4,5</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  $F_{2\alpha}$  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).
- Woodward, D.F., Krauss, A.H., Chen, J., et al. The pharmacology of bimatoprost (Lumigan<sup>TM</sup>). 3. Surv. Ophthalmol. 45(Suppl 4), S337-S345 (2001).
- Stjernschantz, J.W. From PGF<sub>2a</sub>-isopropyl ester to latanoprost: A review of the development of xalatan. 4. The proper lecture. Invest. Ophthalmol. Vis. Sci. 42(6), 1134-1145 (2001).
- 5. Maxey, K.M. and Stanton, M.L. Internal 1,15-lactones of fluprostenol and related prostaglandin  $F_{2\alpha}$  analogs and their use in the treatment of glaucoma and intraocular hypertension. Cayman Chemical Company, Inc. US7,674,921B2 (2010).

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.

WARRANTY AND LIMITATION OF REMEDY

uyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website

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### 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