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# Produktinformation

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- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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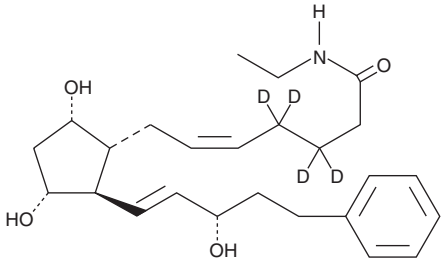
# PRODUCT INFORMATION

## 17-phenyl trinor Prostaglandin $F_{2\alpha}$ ethyl amide-$d_4$

*Item No. 316820*

| | |
|---|---|
| **Formal Name:** | N-ethyl-9α,11α,15S-trihydroxy-17-phenyl-18,19,20-trinor-prosta-5Z,13E-dien-1-amide-3,3,4,4-$d_4$ |
| **Synonyms:** | Bimatoprost-$d_4$, 15(S)-Bimatoprost-$d_4$, 17-phenyl trinor $PGF_{2\alpha}$ ethyl amide-$d_4$ |
| **MF:** | $C_{25}H_{33}D_4NO_4$ |
| **FW:** | 419.6 |
| **Chemical Purity:** | ≥95% (17-phenyl trinor Prostaglandin $F_{2\alpha}$ ethyl amide) |
| **Deuterium Incorporation:** | ≥99% deuterated forms ($d_1$-$d_4$); ≤1% $d_0$ |
| **Supplied as:** | A solution in methyl acetate |
| **Storage:** | -20°C |
| **Stability:** | ≥1 year |




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

### Laboratory Procedures

17-phenyl trinor Prostaglandin $F_{2\alpha}$ ethyl amide-$d_4$ (17-phenyl trinor $PGF_{2\alpha}$ ethyl amide-$d_4$) is intended for use as an internal standard for the quantification of 17-phenyl trinor $PGF_{2\alpha}$ ethyl amide (Item No. 16820) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

17-phenyl trinor $PGF_{2\alpha}$ ethyl amide-$d_4$ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 17-phenyl trinor $PGF_{2\alpha}$ ethyl amide-$d_4$ in ethanol is approximately 30 mg/ml and approximately 25 mg/ml in DMSO and DMF.

### Description

17-phenyl trinor $PGF_{2\alpha}$ 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] Investigations in our lab have shown that 17-phenyl trinor $PGF_{2\alpha}$ 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.[2] The free acid, 17-phenyl trinor $PGF_{2\alpha}$, is a potent FP receptor agonist.[3,4] 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., Chen, J., *et al.* The pharmacology of bimatoprost (Lumigan™). *Surv. Ophthalmol.* **45(Suppl 4)**, S337-S345 (2001).
2. Maxey, K.M., Johnson, J., and LaBrecque, J. The hydrolysis of bimatoprost in corneal tissue generates a potent prostanoid FP receptor agonist. *Surv. Ophthalmol.* **47(Suppl 1)**, S34-S40 (2002).
3. 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).
4. 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).





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