

Product Information



17-phenyl trinor Prostaglandin F_{2α}-d₄

Item No. 316810

Formal Name: 9α,11α,15S-trihydroxy-17-phenyl-18,19,20-trinor-prosta-5Z,13E-dien-1-oic-3,3,4,4-d₄ acid

Synonyms: Bimatoprost (free acid)-d₄, 17-phenyl trinor PGF_{2α}-d₄

MF: C₂₃H₂₈D₄O₅

FW: 392.5

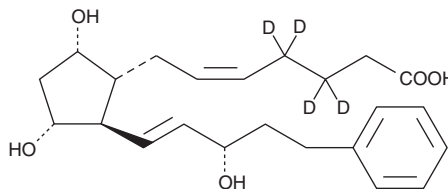
Chemical Purity: ≥98%

Deuterium

Incorporation: ≤1% d₀

Stability: ≥1 year at -20°C

Supplied as: A solution in methyl acetate



Laboratory Procedures

17-phenyl trinor Prostaglandin F_{2α}-d₄ (17-phenyl trinor PGF_{2α}-d₄) contains four deuterium atoms at the 3, 3', 4, and 4' positions. It is intended for use as an internal standard for the quantification of 17-phenyl trinor PGF_{2α} by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 17-phenyl trinor PGF_{2α}-d₄ be stored as supplied at -20°C. It should be stable for at least one year.

17-phenyl trinor PGF_{2α}-d₄ 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 purged with an inert gas can be used. The solubility of 17-phenyl trinor PGF_{2α}-d₄ in these solvents is approximately 25 mg/ml.

17-phenyl trinor PGF_{2α}-d₄ is used as an internal standard for the quantification of 17-phenyl trinor PGF_{2α} by stable isotope dilution 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_{2α} is a metabolically stable analog of PGF_{2α} 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_{2α}.¹ At the rat recombinant FP receptor expressed in CHO cells, 17-phenyl trinor PGF_{2α} inhibits PGF_{2α} binding with a K_i value of 1.1 nM.² The isopropyl ester of 17-phenyl trinor PGF_{2α} is slightly better than PGF_{2α} isopropyl ester in reducing the intraocular pressure in the cat eye without any irritation.³

References

1. Balapure, A.K., Rexroad, C.E., Jr., Kawada, K., *et al. Biochem. Pharmacol.* **38**, 2375-2381 (1989).
2. Lake, S., Gullberg, H., Wahlqvist, J., *et al. FEBS Lett.* **355**, 317-325 (1994).
3. Stjernerantz, J. and Resul, B. *Drugs of the Future* **17**, 691-704 (1992).

Related Products

17-phenyl trinor Prostaglandin D₂ - Item No. 12810 • 17-phenyl trinor Prostaglandin E₂ - Item No. 14810 • 17-phenyl trinor Prostaglandin F_{2α} - Item No. 16810 • 15(R)-17-phenyl trinor Prostaglandin F_{2α} - Item No. 16814 • 17-phenyl trinor Prostaglandin F_{2α} ethyl amide - Item No. 16820 • 17-phenyl trinor Prostaglandin F_{2α} amide - Item No. 16821 • 17-phenyl trinor Prostaglandin F_{2α} diethyl amide - Item No. 16823 • 17-phenyl trinor Prostaglandin F_{2α} isopropyl ester - Item No. 16824 • 15(R)-17-phenyl trinor Prostaglandin F_{2α} isopropyl ester - Item No. 16825 • 17-phenyl trinor Prostaglandin F_{2α} ethyl amide-d₄ - Item No. 316820 • 17-phenyl trinor Prostaglandin F_{2α} ethyl amide EIA Kit - Item No. 516821 • 17-phenyl trinor Prostaglandin F_{2α} ethyl amide EIA Kit (Solid Plate) - Item No. 516821.1 • 17-phenyl trinor Prostaglandin F_{2α} serinol amide - Item No. 10004237 • 15(R)-17-phenyl trinor Prostaglandin F_{2α} ethyl amide - Item No. 10008127 • 5-*trans*-17-phenyl trinor Prostaglandin F_{2α} ethyl amide - Item No. 10008132 • 15-keto-17-phenyl trinor Prostaglandin F_{2α} ethyl amide - Item No. 10010405 • 17-phenyl trinor Prostaglandin F_{2α} cyclopropyl amide - Item No. 10010605 • 17-phenyl trinor Prostaglandin F_{2α} cyclopropyl methyl amide - Item No. 10010810

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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