

Produktinformation



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Product Information



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

Item No. 316810

CAS Registry No.: 58976-50-4

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 $PGF_{2\alpha}$ - d_4

MF: $C_{23}H_{28}D_4O_5$ FW: 392.5

Chemical Purity: ≥98%

Deuterium

Incorporation: \geq 99% deuterated forms (d₁-d₄); \leq 1% d₀

Stability: ≥1 year at -20°C

Supplied as: A solution in methyl acetate

ОН ÓН

Laboratory Procedures

17-phenyl trinor Prostaglandin $F_{2\alpha}$ -d₄ (17-phenyl trinor PGF $_{2\alpha}$ -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_{2 α} by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 17-phenyl trinor $PGF_{2\alpha}^{-}d_4$ be stored as supplied at -20°C. It should be stable for at least one year.

17-phenyl trinor PGF₂₀-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 $PGF_{2\alpha}$ -d₄ in is these solvents is approximately 25 mg/ml.

17-phenyl trinor PGF_{2 α}-d₄ is used as an internal standard for the quantification of 17-phenyl trinor PGF_{2 α} 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_{2 α} is a metabolically stable analog of PGF_{2 α} 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 $PGF_{2\alpha}$. At the rat recombinant FP receptor expressed in CHO cells, 17-phenyl trinor $PGF_{2\alpha}$ inhibits $PGF_{2\alpha}$ binding with a K_i value of 1.1 nM.² The isopropyl ester of 17-phenyl trinor PGF_{2 α} is slightly better than PGF_{2 α} 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. Stjernschantz, J. and Resul, B. Drugs of the Future 17, 691-704 (1992).

Related Products

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WARNING: This product is for laboratory research only: not for administration to humans. Not for human or veterinary DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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