

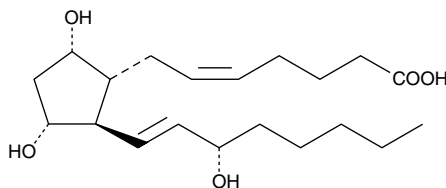
Product Information



Prostaglandin F_{2α} Quant-PAK Item No. 10006848

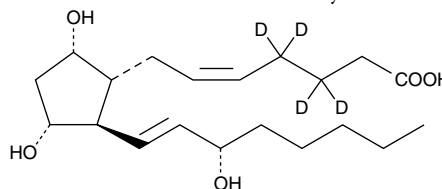
Prostaglandin F_{2α}

CAS Registry No.: 551-11-1
Formal Name: 9α,11α,15S-trihydroxy-prosta-5Z,13E-dien-1-oic acid
Synonyms: Dinoprost, PGF_{2α}
MF: C₂₀H₃₄O₅
FW: 354.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Prostaglandin F_{2α}-d₄

CAS Registry No.: 34210-11-2
Formal Name: 9α,11α,15S-trihydroxy-prosta-5Z,13E-dien-1-oic-3,3,4,4-d₄ acid
Synonyms: Dinoprost-d₄, PGF_{2α}-d₄
MF: C₂₀H₃₀D₄O₅
FW: 358.5
Chemical Purity: ≥99% Prostaglandin F_{2α}-d₄
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate



This prostaglandin F_{2α} (PGF_{2α}) Quant-PAK contains 50 μg of PGF_{2α}-d₄ and 2-4 mg of PGF_{2α} (please see the vial for exact amount and concentration). For long term storage, we suggest that PGF_{2α} and PGF_{2α}-d₄ be stored as supplied at -20°C. They will be stable for at least one year.

PGF_{2α} is supplied as a crystalline solid. A stock solution may be made by dissolving the PGF_{2α} in an organic solvent purged with an inert gas. PGF_{2α} is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PGF_{2α} in these solvents is 100 mg/ml.

PGF_{2α}-d₄ is supplied as solutions 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 PGF_{2α}-d₄ in these solvents is at least 100 mg/ml.

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 PGF_{2α} by GC- or LC-mass spectrometry. The accuracy of the sample weight in the PGF_{2α}-d₄ vial is between 5% over and 2% under the weight indicated on the vial. For better precision we have provided a precisely weighed unlabeled PGF_{2α} with the precise weight (2-4 mg) indicated on the vial. Using this vial the deuterated standard can be quantified by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

PGF_{2α} is a widely distributed prostaglandin occurring in many species.¹⁻³ It causes contraction of vascular, bronchial, intestinal, and myometrial smooth muscle, and also exhibits potent luteolytic activity.¹ PGF_{2α} exhibits its receptor mediated physiological activity at 50-100 nM.¹ Maximal ovine myometrial contraction can be achieved at 125 nM PGF_{2α} *in vitro*.⁴

References

1. Samuelsson, B., Goldyne, M., Granström, E., *et al. Ann. Rev. Biochem.* **47**, 997-1029 (1978).
2. Speroff, L. and Ramwell, P.W. *Am. J. Obstet. Gynecol.* **107**, 1111-1130 (1970).
3. Watanabe, K., Iguchi, Y., Iguchi, S., *et al. Proc. Natl. Acad. Sci. USA* **83**, 1583-1587 (1986).
4. Crankshaw, D.J. and Gaspar, V. *J. Reprod. Fertil.* **103**, 55-61 (1995).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10006848

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

SAFETY DATA

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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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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