

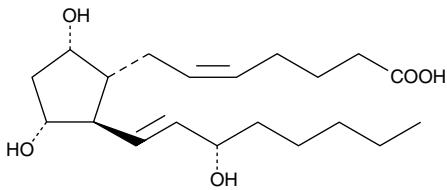
# Product Information



## Prostaglandin F<sub>2α</sub> Quant-PAK Item No. 10006848

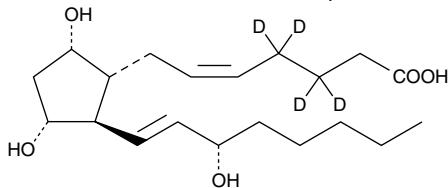
### Prostaglandin F<sub>2α</sub>

**CAS Registry No.:** 551-11-1  
**Formal Name:** 9α,11α,15S-trihydroxy-prosta-5Z,13E-dien-1-oic acid  
**Synonyms:** Dinoprost, PGF<sub>2α</sub>  
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>5</sub>  
**FW:** 354.5  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Prostaglandin F<sub>2α</sub>-d<sub>4</sub>

**CAS Registry No.:** 34210-11-2  
**Formal Name:** 9α,11α,15S-trihydroxy-prosta-5Z,13E-dien-1-oic-3,3,4,4-d<sub>4</sub> acid  
**Synonyms:** Dinoprost-d<sub>4</sub>, PGF<sub>2α</sub>-d<sub>4</sub>  
**MF:** C<sub>20</sub>H<sub>30</sub>D<sub>4</sub>O<sub>5</sub>  
**FW:** 358.5  
**Chemical Purity:** ≥99% Prostaglandin F<sub>2α</sub>-d<sub>4</sub>  
**Deuterium**  
**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in methyl acetate



This prostaglandin F<sub>2α</sub> (PGF<sub>2α</sub>) Quant-PAK contains 50 µg of PGF<sub>2α</sub>-d<sub>4</sub> and 2-4 mg of PGF<sub>2α</sub> (please see the vial for exact amount and concentration). For long term storage, we suggest that PGF<sub>2α</sub> and PGF<sub>2α</sub>-d<sub>4</sub> be stored as supplied at -20°C. They will be stable for at least one year.

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

PGF<sub>2α</sub>-d<sub>4</sub> 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<sub>2α</sub>-d<sub>4</sub> in these solvents is at least 100 mg/ml.

PGF<sub>2α</sub>-d<sub>4</sub> 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<sub>2α</sub> by GC- or LC-mass spectrometry. The accuracy of the sample weight in the PGF<sub>2α</sub>-d<sub>4</sub> 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<sub>2α</sub>, 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<sub>2α</sub> is a widely distributed prostaglandin occurring in many species.<sup>1-3</sup> It causes contraction of vascular, bronchial, intestinal, and myometrial smooth muscle, and also exhibits potent luteolytic activity.<sup>1</sup> PGF<sub>2α</sub> exhibits its receptor mediated physiological activity at 50-100 nM.<sup>1</sup> Maximal ovine myometrial contraction can be achieved at 125 nM PGF<sub>2α</sub> *in vitro*.<sup>4</sup>

### 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](http://www.caymanchem.com/catalog/10006848)

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### SAFETY DATA

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