



# SZABO SCANDIC

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## Produktinformation



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# Product Information

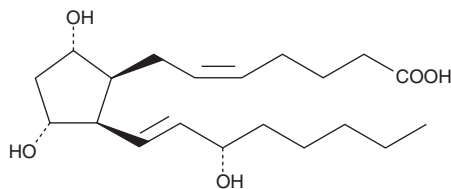


## 8-*iso*-Prostaglandin F<sub>2α</sub> Quant-PAK

Catalog No. 10007652

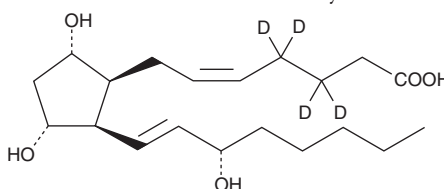
### 8-*iso*-Prostaglandin F<sub>2α</sub>

**CAS Registry No.:** 27415-26-5  
**Formal Name:** 9α,11α,15S-trihydroxy-(8β)-prosta-5Z,13E-dien-1-oic acid  
**Synonyms:** 8-*epi* Prostaglandin F<sub>2α</sub>;  
8-Isoprostane  
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>5</sub>  
**FW:** 354.5  
**Purity:** ≥99%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



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

**CAS Registry No.:** 211105-40-7  
**Formal Name:** 9α,11α,15S-trihydroxy-(8β)-prosta-5Z,13E-dien-1-oic-3,3,4,4-d<sub>4</sub> acid  
**Synonyms:** 8-*epi* Prostaglandin F<sub>2α</sub>-d<sub>4</sub>;  
8-Isoprostane-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:** ≥98%  
**Deuterium Incorporation:** ≤1% d<sub>0</sub>  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in methyl acetate



This 8-*iso*-prostaglandin F<sub>2α</sub> (8-*iso*-PGF<sub>2α</sub>) Quant-PAK contains 50 µg of 8-*iso*-PGF<sub>2α</sub>-d<sub>4</sub> and 2-4 mg of 8-*iso*-PGF<sub>2α</sub> (please see the vial for exact amount and concentration). For long term storage, we suggest that 8-*iso*-PGF<sub>2α</sub> and 8-*iso*-PGF<sub>2α</sub>-d<sub>4</sub> be stored as supplied at -20°C. They should be stable for at least one year.

8-*iso*-PGF<sub>2α</sub> is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-*iso*-PGF<sub>2α</sub> in an organic solvent purged with an inert gas. 8-*iso*-PGF<sub>2α</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 8-*iso*-PGF<sub>2α</sub> in these solvents is approximately 100 mg/ml.

8-*iso*-PGF<sub>2α</sub>-d<sub>4</sub> 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 8-*iso*-PGF<sub>2α</sub>-d<sub>4</sub> in these solvents is approximately 100 mg/ml.

8-*iso*-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 8-*iso*-PGF<sub>2α</sub> by GC- or LC-mass spectrometry. The accuracy of the sample weight in the 8-*iso*-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 8-*iso*-PGF<sub>2α</sub>, with the precise weight 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).

8-*iso* PGF<sub>2α</sub> circulates in human plasma in two distinct forms - esterified in phospholipids and as the free acid. The ratio of these two forms is approximately 2:1, with a total plasma 8-*iso* PGF<sub>2α</sub> level of about 150 pg/ml in normal volunteers.<sup>4</sup> In normal human urine, 8-*iso* PGF<sub>2α</sub> levels are about 180-200 pg/mg of creatinine.<sup>1,2</sup> 8-*iso* PGF<sub>2α</sub> is a weak TP receptor agonist in vascular smooth muscle.<sup>5</sup> Conversely, 8-*iso* PGF<sub>2α</sub> inhibits platelet aggregation induced by U-46619 (10<sup>-6</sup> M) and I-BOP (3 x 10<sup>-7</sup> M) with IC<sub>50</sub> values of 1.6 x 10<sup>-6</sup> M and 1.8 x 10<sup>-6</sup> M, respectively.<sup>3</sup>

### References

1. Morrow, J.D., Hill, K.E., Burk, R.F., *et al.* *Proc. Natl. Acad. Sci. USA* **87**, 9383-9387 (1990).
2. Morrow, J.D., Harris, T.M., Roberts, L.J., II. *Anal. Biochem.* **184**, 1-10 (1990).
3. Morrow, J.D., Minton, T.A., Roberts, L.J., II. *Prostaglandins* **44**, 155-163 (1992).
4. Morrow, J.D., Frei, B., Longmire, A.W., *et al.* *N. Engl. J. Med.* **332**, 1198-1203 (1995).
5. Kiriya, M., Ushikubi, F., Kobayashi, T., *et al.* *Br. J. Pharmacol.* **122**, 217-224 (1997).

### Related Products

8-*iso* Prostaglandin F<sub>2α</sub> - Cat. No. 16350 • 8-*iso* Prostaglandin F<sub>2α</sub>-d<sub>4</sub> - Cat. No. 316350 • 6-keto Prostaglandin F<sub>1α</sub> Quant-PAK - Cat. No. 10006830 • Prostaglandin A<sub>2</sub> Quant-PAK - Cat. No. 10006840 • Prostaglandin B<sub>2</sub> Quant-PAK - Cat. No. 10006841 • Prostaglandin D<sub>1</sub> Quant-PAK - Cat. No. 10006842 • Prostaglandin D<sub>2</sub> Quant-PAK - Cat. No. 10006843 • Prostaglandin E<sub>1</sub> Quant-PAK - Cat. No. 10006844 • 13,14-dihydro Prostaglandin E<sub>1</sub> Quant-PAK - Cat. No. 10006845 • Prostaglandin E<sub>2</sub> Quant-PAK - Cat. No. 10006846 • Prostaglandin F<sub>2α</sub> Quant-PAK - Cat. No. 10006848 • 15-deoxy-Δ<sup>12,14</sup>-Prostaglandin J<sub>2</sub> Quant-PAK - Cat. No. 10006850

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

### MATERIAL 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 Material Safety Data Sheet, which has been sent via email to your institution.

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