

Product Information



8,12-*iso*-iPF_{2α}-VI-d₁₁

Item No. 10006878

Formal Name: 5S,5R,9α,11α-trihydroxy-(12α)-prosta-6E,14Z-dien-1-oic-16,16,17,17,18,18,19,19,20,20,20-d₁₁ acid

Synonym: 8,12-*epi*-iPF_{2α}-VI-d₁₁

MF: C₂₀H₂₃D₁₁O₅

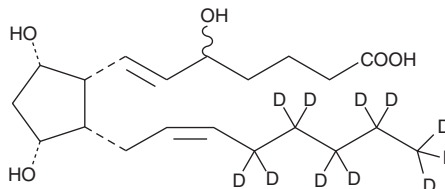
FW: 365.6

Chemical Purity: ≥95%

Deuterium Incorporation: ≤1% d₀

Stability: ≥1 year at -80°C

Supplied as: A solution in acetonitrile



Laboratory Procedures

8,12-*iso*-isoprostane-F_{2α}-VI-d₁₁ (8,12-*iso*-iPF_{2α}-VI-d₁₁) contains eleven deuterium atoms at the 16, 16', 17, 17', 18, 18', 19, 19', 20, 20, 20 positions. It is intended for use as an internal standard for the quantification of 8,12-*iso*-iPF_{2α}-VI by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 8,12-*iso*-iPF_{2α}-VI-d₁₁ be stored as supplied at -80°C. It should be stable for at least one year.

8,12-*iso*-iPF_{2α}-VI-d₁₁ is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile 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 8,12-*iso*-iPF_{2α}-VI-d₁₁ in these solvents is approximately 100 mg/ml.

8,12-*iso*-iPF_{2α}-VI-d₁₁ is used as an internal standard for the quantification of 8,12-*iso*-iPF_{2α}-VI 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).

Isoprostanes are non-enzymatic, non-cyclooxygenase prostanoid products of peroxidative damage to membrane lipids.¹ Among the many isoprostane isomers, 8,12-*iso*-iPF_{2α}-VI has been demonstrated to be one of the predominant isomers formed and is also present in urine as one of the major isoprostane products.² 8,12-*iso*-iPF_{2α}-VI-d₁₁ is a deuterated internal standard for use in isoprostane quantitation by MS modalities. The compound is diastereomeric at C-5, but is otherwise an optically active, single enantiomer.

References

1. Diaz, M.N., Frei, B., Vita, J.A., *et al.* Antioxidants and atherosclerotic heart disease. *N. Engl. J. Med.* **337**, 408-416 (1997).
2. Lawson, J.A., Li, H., Rokach, J., *et al.* Identification of two major F₂ isoprostanes, 8,12-*iso*- and 5-*epi*-8,12-*iso*-isoprostane F_{2α}-VI, in human urine. *J. Biol. Chem.* **273**, 29295-29301 (1998).

Related Products

iPF_{2α}-VI-d₄ - Item No. 316300 • iPF_{2α}-VI-d₁₁ - Item No. 10006654

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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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.

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