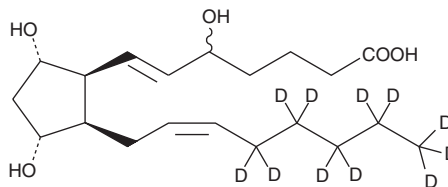


Product Information



5-iPF_{2α}-VI-d₁₁ Catalog No. 10006654

Formal Name: 5,9α,11α-trihydroxy-(8β)-prosta-6E,14Z-dien-1-oic-16,16,17,17,18,18,19,19,20,20,20-d₁₁ acid
MF: C₂₀H₂₃D₁₁O₅
FW: 365.6
Chemical Purity: ≥95%
Deuterium Incorporation: ≤1% d₀
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

5-iPF_{2α}-VI-d₁₁ contains 11 deuterium atoms at the 16, 16', 17, 17', 18, 18', 19, 19', 20, 20, and 20 positions. 5-iPF_{2α}-VI-d₁₁ is intended for use as an internal standard for quantification of 5-iPF_{2α}-VI by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 5-iPF_{2α}-VI-d₁₁ be stored as supplied at -20°C. It should be stable for at least one year.

5-iPF_{2α}-VI-d₁₁ is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 5-iPF_{2α}-VI-d₁₁ in these solvents is approximately 50 mg/ml.

5-iPF_{2α}-VI-d₁₁ is used as an internal standard for the quantification of 5-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 weight indicated on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard 5-iPF_{2α}-VI by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Isoprostanes are prostaglandin (PG)-like products of free-radical induced lipid peroxidation.¹ Although the isoprostanes derived from arachidonic acid are the best characterized, many other polyunsaturated fatty acids can form isoprostanes.² iPF_{2α}-VI is one of dozens of possible stereo- and regioisomeric isoprostanes which can be formed from arachidonic acid. To date, the most extensively studied of these is 8-isoprostane (8-*epi*-PGF_{2α}; iPF_{2α}-III).^{3,4} However, 8-isoprostane is a minor isoprostane constituent when compared to some of the other isomers which form in natural conditions of oxidative stress,⁵ including iPF_{2α}-VI of the type-VI isoprostanes. This class has been shown to be one of the major isoprostane products, in contrast to 8-isoprostane. In addition to being produced in greater abundance than 8-isoprostane, Type VI isoprostanes form internal lactones which facilitate their extraction and purification from biological samples.⁵⁻⁸

References

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Related Products

5-iPF_{2α}-VI - Cat. No. 16300 • 8-*iso* Prostaglandin F_{2α} - Cat. No. 16350 • iPF_{2α}-IV-d₄ - Cat. No. 316230 • 8-*iso* Prostaglandin F_{2α}-d₄ - Cat. No. 316350 • 8-*iso* Prostaglandin F_{2α}-17,18,19,20-d₄ - Cat. No. 316351 • iPF_{2α}-VI EIA Kit - Cat. No. 516301 • iPF_{2α}-VI EIA Kit (Solid Plate) - Cat. No. 516301.1 • 8-Isoprostane EIA Kit - Cat. No. 516351 • 8-Isoprostane EIA Kit (Solid Plate) - Cat. No. 516351.1 • 8,12-*iso*-iPF_{2α}-VI-d₁₁ - Cat. No. 10006878

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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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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