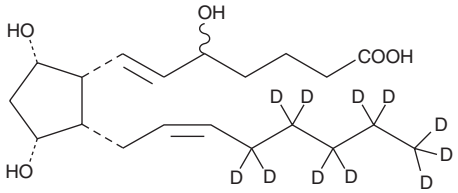
PRODUCT INFORMATION

8,12-*iso*-iPF$_{2\alpha}$-VI-d$_{11}$

Item No. 10006878

CAS Registry No.: 1616977-85-5
Formal Name: (12α)-5,9α,11α-trihydroxy-prosta-6E,14Z-dien-1-oic-16,16,17,17,18,18,19,19,20,20,20-d$_{11}$ acid
Synonyms: 8,12-*iso*-Isoprostane-F$_{2\alpha}$-VI-d$_{11}$, 12-*iso*-5,6E,14Z-PGF$_{2\alpha}$-d$_{11}$, 12-*iso*-5,6E,14Z-Prostaglandin F$_{2\alpha}$-d$_{11}$
MF: $C_{20}H_{34}O_5$
FW: 354.5
Chemical Purity: ≥95% (8,12-*iso*-iPF$_{2\alpha}$-V)
Deuterium Incorporation: ≥99% deuterated forms (d$_1$-d$_{11}$); ≤1% d$_0$
Supplied as: A solution in acetonitrile
Storage: -80°C
Stability: ≥1 year



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

8,12-*iso*-Isoprostane-F$_{2\alpha}$-VI-d$_{11}$ (8,12-*iso*-iPF$_{2\alpha}$-VI-d$_{11}$) is intended for use as an internal standard for the quantification of 8,12-*iso*-iPF$_{2\alpha}$-VI (Item No. 16310) by GC- or LC-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).

8,12-*iso*-iPF$_{2\alpha}$-VI-d$_{11}$ 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$_{2\alpha}$-VI-d$_{11}$ in these solvents is approxmately 100 mg/ml.

Description

Isoprostanes are non-enzymatic, non-cyclooxygenase prostanoid products of peroxidative damage to membrane lipids.[1] Among the many isoprostane isomers, 8,12-*iso*-iPF$_{2\alpha}$-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$_{2\alpha}$-VI-d$_{11}$ 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.* Antoixidants and atherosclerotic heart disease. *N. Engl. J. Med.* **337(6)**, 408-416 (1997).
2. Lawson, J.A., Li, H., Rokach, J., *et al.* Identification of two major F$_2$ isoprostanes, 8,12-*iso*- and 5-*epi*-8,12-*iso*-isoprostane F$_{2\alpha}$-VI, in human urine. *J. Biol. Chem.* **273(45)**, 29295-29301 (1998).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM