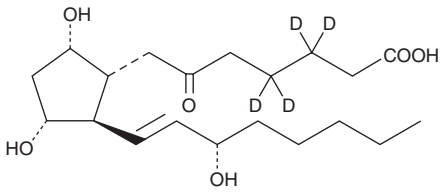
PRODUCT INFORMATION

6-keto Prostaglandin $F_{1\alpha}$-d_4

Item No. 315210

CAS Registry No.: 82414-64-0
Formal Name: 6-oxo-9α,11α,15S-trihydroxy-prost-13E-en-1-oic-3,3,4,4-d_4 acid
Synonym: 6-keto $PGF_{1\alpha}$-d_4
MF: $C_{20}H_{30}D_4O_6$
FW: 374.5
Chemical Purity: ≥95% (6-keto Prostaglandin $F_{1\alpha}$)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

6-keto Prostaglandin $F_{1\alpha}$-d_4 (6-keto $PGF_{1\alpha}$-d_4) is intended for use as an internal standard for the quantification of 6-keto $PGF_{1\alpha}$ (Item No. 15210) 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).

6-keto $PGF_{1\alpha}$-d_4 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 6-keto $PGF_{1\alpha}$-d_4 in these solvents is approximately 16, 50, and 100 mg/ml, respectively.

Description

6-keto $PGF_{1\alpha}$ is the inactive, non-enzymatic hydrolysis product of PGI_2.[1,2] 6-keto $PGF_{1\alpha}$ serves as a useful marker of PGI_2 biosynthesis *in vivo*.[3] When [^{3}H]-PGI_2 is injected into healthy human males, 6.6% of the radioactivity is recovered from urine as [^{3}H]-6-keto $PGF_{1\alpha}$.[3]

References

1. Pace-Asciak, C.R. Isolation, structure, and biosynthesis of 6-ketoprostaglandin $F_{1\alpha}$ in the rat stomach. *J. Am. Chem. Soc.* **98**, 2348-2349 (1976).
2. Johnson, R.A., Morton, D.R., Kinner, J.H., *et al.* The chemical structure of prostaglandin X (prostacyclin). *Prostaglandins* **12**, 915-928 (1976).
3. Brash, A.R., Jackson, E.K., Saggese, C.A., *et al.* Metabolic disposition of prostacyclin in humans. *J. Pharmacol. Exp. Ther.* **226**, 78-87 (1983).

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