

## Produktinformation



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# 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<sub>4</sub> acid

6-keto PGF<sub>1α</sub>-d<sub>4</sub> Synonym: MF:  $C_{20}H_{30}D_4O_6$ 

FW:

**Chemical Purity:** ≥95% (6-keto Prostaglandin F<sub>1a</sub>)

Deuterium

Incorporation:  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>);  $\leq$ 1% d<sub>0</sub>

Supplied as: A solution in methyl acetate

-20°C Storage:

As supplied, 1 year from the QC date provided on the Certificate of Analysis, when Stability:

stored properly

### **Laboratory Procedures**

6-keto Prostaglandin  $F_{1\alpha}$ - $d_4$  (6-keto  $PGF_{1\alpha}$ - $d_4$ ) 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 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  $PGF_{1a}$ - $d_4$  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<sub>10</sub>-d<sub>4</sub> 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  $PGI_2$ .<sup>1,2</sup> 6-keto  $PGF_{1\alpha}$  serves as a useful marker of  $PGI_2$  biosynthesis *in vivo*.<sup>3</sup> When [<sup>3</sup>H]- $PGI_2$  is injected into healthy human males, 6.6% of the radioactivity is recovered from urine as [3H]-6-keto PGF<sub>1g</sub>, 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).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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