

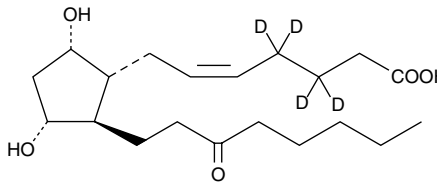
# Product Information



## 13,14-dihydro-15-keto Prostaglandin F<sub>2α</sub>-d<sub>4</sub>

Item No. 10007793

**CAS Registry No.:** 42932-59-2  
**Formal Name:** 9α,11α-dihydroxy-15-oxo-prost-5Z-en-1-oic-3,3,4,4-d<sub>4</sub> acid  
**Synonym:** PGFM-d<sub>4</sub>  
**MF:** C<sub>20</sub>H<sub>30</sub>D<sub>4</sub>O<sub>5</sub>  
**FW:** 358.5  
**Chemical Purity:** ≥98%  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

13,14-dihydro-15-keto Prostaglandin F<sub>2α</sub>-d<sub>4</sub> (13,14-dihydro-15-keto PGF<sub>2α</sub>-d<sub>4</sub>) 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 13,14-dihydro-15-keto PGF<sub>2α</sub> by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 13,14-dihydro-15-keto PGF<sub>2α</sub>-d<sub>4</sub> be stored as supplied at -20°C. It will be stable for at least one year.

13,14-dihydro-15-keto PGF<sub>2α</sub>-d<sub>4</sub> 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 13,14-dihydro-15-keto PGF<sub>2α</sub>-d<sub>4</sub> in these solvents is approximately 50 mg/ml.

13,14-dihydro-15-keto PGF<sub>2α</sub>-d<sub>4</sub> is used as an internal standard for the quantification of 13,14-dihydro-15-keto PGF<sub>2α</sub> 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).

13,14-dihydro-15-keto PGF<sub>2α</sub> is the first prominent plasma metabolite of PGF<sub>2α</sub> in the 15-hydroxy PGDH pathway.<sup>1</sup> Measurement of 13,14-dihydro-15-keto PGF<sub>2α</sub> in plasma can be used as a marker of the *in vivo* production of PGF<sub>2α</sub>.<sup>1-3</sup>

### References

1. Samuelsson, B., Goldyne, M., Granström, E., *et al.* Prostaglandins and thromboxanes. *Annu. Rev. Biochem.* **47**, 997-1029 (1978).
2. Del Vecchio, R.P., Maxey, K.M., and Lewis, G.S. A quantitative solid-phase enzymeimmunoassay for 13,14-dihydro-15-keto-prostaglandin F<sub>2α</sub> in plasma. *Prostaglandins* **43**, 321-330 (1992).
3. Meyer, H.H.D., Eisele, K., and Osaso, J. A biotin-streptavidin amplified enzyme immunoassay for 13,14-dihydro-15-keto-PGF<sub>2α</sub>. *Prostaglandins* **38**, 375-383 (1989).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10007793](http://www.caymanchem.com/catalog/10007793)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

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