

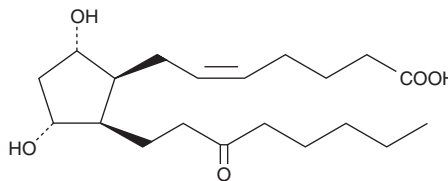
# PRODUCT INFORMATION



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

Item No. 16380

**CAS Registry No.:** 191919-02-5  
**Formal Name:** (8β)-9α,11α-dihydroxy-15-oxo-prost-5Z-en-1-oic acid  
**Synonyms:** 8-iso-13,14-dihydro-15-keto PGF<sub>2α</sub>  
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>5</sub>  
**FW:** 354.5  
**Purity:** ≥98%  
**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

8-iso-13,14-dihydro-15-keto Prostaglandin F<sub>2α</sub> (8-iso-13,14-dihydro-15-keto PGF<sub>2α</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 8-iso-13,14-dihydro-15-keto PGF<sub>2α</sub> in these solvents is approximately 100 mg/ml. The solubility of 8-iso-13,14-dihydro-15-keto PGF<sub>2α</sub> in 10 mM Na<sub>2</sub>CO<sub>3</sub> is approximately 6.5 mg/ml.

8-iso-13,14-dihydro-15-keto PGF<sub>2α</sub> is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 8-iso-13,14-dihydro-15-keto PGF<sub>2α</sub> should be diluted with the aqueous buffer of choice. The solubility of 8-iso-13,14-dihydro-15-keto PGF<sub>2α</sub> in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

8-iso-13,14-dihydro-15-keto PGF<sub>2α</sub> is a metabolite of the isoprostane, 8-isoprostane (8-iso PGF<sub>2α</sub>), in rabbits, monkeys and humans.<sup>1</sup> 8-iso PGF<sub>2α</sub> is a PG-like product of non-specific lipid peroxidation.<sup>2</sup> In both humans and monkeys, exogenously infused 8-isoprostane is converted primarily to metabolites having 2 or 4 carbon atoms removed from the top side chain by β-oxidation.<sup>1</sup> A similar pattern is observed when tritiated 8-isoprostane is infused into rabbits.<sup>3</sup> Early in the infusion (within 10 minutes) 8-iso-13,14-dihydro-15-keto PGF<sub>2α</sub> was a significant component of the metabolite profile, which was comprised mostly of dinor 8-isoprostane metabolites. 8-iso-13,14-dihydro-15-keto PGF<sub>2α</sub> weakly inhibits the U-46619 or collagen-induced aggregation of human platelets, although a number of the E-series isoprostanes are much more potent in this assay.<sup>4</sup>

### References

1. Chiabrando, C., Valagussa, A., Rivalta, C., *et al.* Identification and measurement of endogenous β-oxidation metabolites of 8-*epi*-prostaglandin F<sub>2α</sub>. *J. Biol. Chem.* **274**(3), 1313-1319 (1999).
2. Morrow, J.D., Hill, K.E., Burk, R.F., *et al.* A series of prostaglandin F<sub>2</sub>-like compounds are produced *in vivo* in humans by a non-cyclooxygenase, free radical-catalyzed mechanism. *Proc. Natl. Acad. Sci. USA* **87**(23), 9383-9387 (1990).
3. Basu, S. Metabolism of 8-*iso*-prostaglandin F<sub>2α</sub>. *FEBS Lett.* **428**(112), 32-36 (1998).
4. Cranshaw, J.H., Evans, T.W., and Mitchell, J.A. Characterization of the effects of isoprostanes on platelet aggregation in human whole blood. *Br. J. Pharmacol.* **132**(8), 1699-1706 (2001).

#### WARNING

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

#### SAFETY DATA

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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