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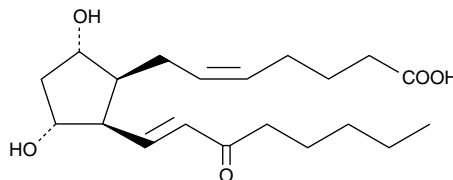
# Product Information



## 8-*iso*-15-keto Prostaglandin F<sub>2α</sub>

Item No. 16390

**CAS Registry No.:** 191919-01-4  
**Formal Name:** 9α,11α-dihydroxy-15-oxo-(8β)-prosta-5Z,13E-dien-1-oic acid  
**MF:** C<sub>20</sub>H<sub>32</sub>O<sub>5</sub>  
**FW:** 352.5  
**Purity:** ≥95%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in methyl acetate  
**UV/Vis.:** λ<sub>max</sub>: 230 nm ε: 17,000



### Laboratory Procedures

For long term storage, we suggest that 8-*iso*-15-keto Prostaglandin F<sub>2α</sub> (8-*iso*-15-keto PGF<sub>2α</sub>) be stored as supplied at -20°C. It should be stable for at least one year.

8-*iso*-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, or dimethyl formamide purged with an inert gas can be used. The solubility of 8-*iso*-15-keto PGF<sub>2α</sub> in these solvents is approximately 100 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free aqueous solution of 8-*iso*-15-keto PGF<sub>2α</sub> is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 8-*iso*-15-keto PGF<sub>2α</sub> in PBS (pH 7.2) is approximately 10 mg/ml. For greater aqueous solubility, 8-*iso*-15-keto PGF<sub>2α</sub> can be directly dissolved in 10 mM Na<sub>2</sub>CO<sub>3</sub> (6.5 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

8-*iso*-15-keto PGF<sub>2α</sub> is a metabolite of the isoprostane 8-*iso* PGF<sub>2α</sub> in rabbits, monkeys, and humans. 8-isoprostane (8-*iso* PGF<sub>2α</sub>) is a prostaglandin-like product of non-specific lipid peroxidation.<sup>1</sup> In both humans and monkeys, exogenously infused 8-*iso* PGF<sub>2α</sub> is converted primarily to metabolites having 2 or 4 carbon atoms removed from the top side chain by β-oxidation.<sup>2</sup> A similar pattern is observed when tritiated 8-*iso* PGF<sub>2α</sub> is infused into rabbits.<sup>3</sup> Early in the infusion (within 1-2 minutes) 8-*iso*-15-keto PGF<sub>2α</sub> was a major component of the metabolite profile, which was comprised mostly of unmetabolized 8-*iso* PGF<sub>2α</sub>. 8-*iso*-15-keto PGF<sub>2α</sub> is a vasoconstrictor when tested on the rat isolated thoracic aorta, acting *via* the TP (thromboxane) receptor.<sup>4</sup>

### References

1. 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**, 9383-9387 (1990).
2. 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**, 1313-1319 (1999).
3. Basu, S. Metabolism of 8-*iso*-prostaglandin F<sub>2α</sub>. *FEBS Lett.* **428**, 32-36 (1998).
4. Cracowski, J.-L., Camus, L., Durand, T., *et al.* Response of rat thoracic aorta to F<sub>2</sub>-isoprostane metabolites. *J. Cardiovasc. Pharmacol.* **39**, 396-403 (2002).

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