



# SZABO SCANDIC

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## Produktinformation



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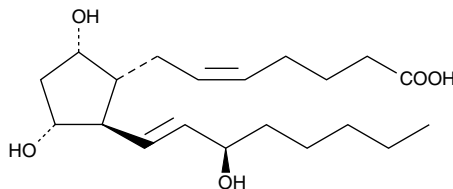
# Product Information



## 15(R)-Prostaglandin F<sub>2α</sub>

Item No. 16740

**CAS Registry No.:** 37658-84-7  
**Formal Name:** 9α,11α,15R-trihydroxy-prosta-5Z,13E-dien-1-oic acid  
**Synonyms:** 15(R)-PGF<sub>2α</sub>, 15-*epi* Prostaglandin F<sub>2α</sub>  
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>5</sub>  
**FW:** 354.5  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

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

15(R)-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 15(R)-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 15(R)-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 15(R)-PGF<sub>2α</sub> in PBS (pH 7.2) is approximately 10 mg/ml. To obtain higher aqueous concentrations, we suggest using basic buffers. We do not recommend storing the aqueous solution for more than one day.

15(R)-PGF<sub>2α</sub> is the C-15 epimer of the naturally occurring mammalian hormone PGF<sub>2α</sub>, which has the 15(S) configuration. 15(R)-PGF<sub>2α</sub> has only 25% of the potency of PGF<sub>2α</sub> in hamster antifertility studies.<sup>1</sup> This may be due to the near-loss of affinity to FP receptors. Compared to PGF<sub>2α</sub>, 15(R)-PGF<sub>2α</sub> has a binding affinity of 6.7% to ovine luteal cell receptors.<sup>2</sup> Similarly, the binding affinity to rat vascular smooth muscle cells is negligible as compared to PGF<sub>2α</sub>.<sup>3</sup>

### References

1. Miller, W.L. and Sutton, M.J. Relative biological activity of certain prostaglandins and their enantiomers. *Prostaglandins* **11**, 77-84 (1976).
2. Balapure, A.K., Rexroad, Jr., C.E., Kawada, K., *et al.* Structural requirements for prostaglandin analog interaction with the ovine corpus luteum prostaglandin F<sub>2</sub> receptor. *Biochem. Pharmacol.* **38**, 2375-2381 (1989).
3. Hanasaki, K., Kishi, M., and Arita, H. Phorbol ester-induced expression of the common, low-affinity binding site for primary prostanoids in vascular smooth muscle cells. *J. Biol. Chem.* **265**, 4871-4875 (1990).

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