

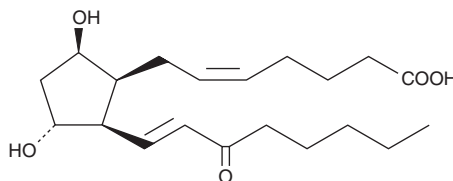
Product Information



8-*iso*-15-keto Prostaglandin F_{2β}

Catalog No. 10008539

Formal Name:	9β,11α-dihydroxy-15-oxo-(8β)-prosta-5Z,13E-dien-1-oic acid
MF:	C ₂₀ H ₃₂ O ₅
FW:	352.5
Purity:	≥95%
Stability:	≥1 year at -20°C
Supplied as:	A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that 8-*iso*-15-keto Prostaglandin F_{2β} (8-*iso*-15-keto-PGF_{2β}) be stored as supplied at -20°C. It should be stable for at least one year.

8-*iso*-15-keto PGF_{2β} 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*-15-keto PGF_{2β} in these solvents is approximately 50 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 solution of 8-*iso*-15-keto PGF_{2β} 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_{2β} in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

8-*iso* PGF_{2β} is an isomer of PGF_{2α} of non-enzymatic origin. It is one of 64 possible isomers of PGF_{2α} which can be produced by free radical peroxidation of arachidonic acid. 8-*iso* PGF_{2β} exhibits very weak contraction of human umbilical vein artery and does not promote aggregation of human whole blood.^{1,2} However, 8-*iso* PGF_{2β} moderately contracts both the canine and porcine pulmonary vein, although the effect is much weaker than that exhibited by other isoprostanes such as 8-*iso* PGE₁, 8-*iso* PGE₂, or 8-*iso* PGF_{2α}.^{3,4} 8-*iso*-15-keto PGF_{2β} is a potential metabolite of 8-*iso* PGF_{2β} via the 15-hydroxy PG dehydrogenase pathway. There are no published reports on the formation or biological activity of 8-*iso*-15-keto PGF_{2β}.

References

- Oliveira, L., Stallwood, N.A., and Crankshaw, D.J. Effects of some isoprostanes on the human umbilical artery *in vitro*. *Br. J. Pharmacol.* **129**, 509-514 (2000).
- 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**, 1699-1706 (2001).
- Janssen, L.J., Premji, M., Netherton, S., *et al.* Vasoconstrictor actions of isoprostanes via tyrosine kinase and Rho kinase in human and canine pulmonary vascular smooth muscles. *Br. J. Pharmacol.* **132**, 127-134 (2001).
- Janssen, L.J. and Tazzeo, T. Involvement of TP and EP3 receptors in vasoconstrictor responses to isoprostanes in pulmonary vasculature. *J. Pharmacol. Exp. Ther.* **301**(3), 1060-1066 (2002).

Related Products

8-*iso* Prostaglandin F_{2β} - Cat. No. 16370 • 8-*iso*-15-keto Prostaglandin F_{2α} - Cat. No. 16390 • 8-*iso*-17-phenyl Prostaglandin F_{2β} - Cat. No. 10008436

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

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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