

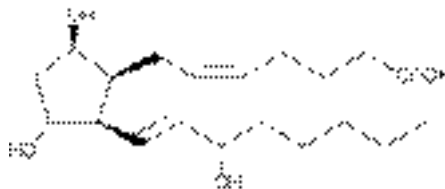
Product Information



8-iso Prostaglandin F_{2β}

Item No. 16370

CAS Registry No.: 177020-26-7
Formal Name: 9β,11α,15S-trihydroxy-(8β)-prosta-5Z,13E-dien-1-oic acid
Synonym: 8-*epi* PGF_{2β}, 8-*iso* PGF_{2β}, 8-*epi*-9β-PGF_{2α}, 8-*iso*-9β-PGF_{2α}
MF: C₂₀H₃₄O₅
FW: 354.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

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

8-*iso* 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, or dimethyl formamide purged with an inert gas can be used. The solubility of 8-*iso* PGF_{2β} in these solvents is approximately 100 mg/ml. 8-*iso* PGF_{2β} is stable for at least six months in these solvents if stored at -20°C.

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* 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* PGF_{2β} in PBS (pH 7.2) is approximately 10 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} with a non-enzymatic, non-COX 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 artery¹ 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}

References

1. 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).
2. 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).
3. 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).
4. Janssen, L.J. and Tazzeo, T. Involvement to TP and EP₃ receptors in vasoconstrictor responses to isoprostanes in pulmonary vasculature. *J. Pharmacol. Exp. Ther.* **301(3)**, 1060-1066 (2002).

Related Products

Prostaglandin F_{2α} - Item No. 16010 • 8-*iso* Prostaglandin F_{2α} - Item No. 16350 • Prostaglandin F_{2β} - Item No. 16410

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 under separate cover to the MSD supervisor at your institution.

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