

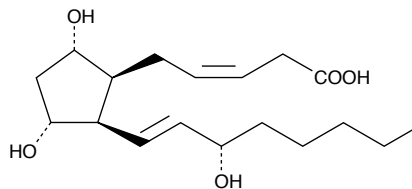
Product Information



2,3-dinor-8-iso Prostaglandin F_{2α}

Catalog No. 16290

CAS Registry No: 221664-05-7
Formal Name: 9α,11α,15S-trihydroxy-2,3-dinor-(8β)-prosta-5Z,13E-dien-1-oic acid
Synonyms: 2,3-dinor-iPF_{2α}-III
MF: C₁₈H₃₀O₅
FW: 326.4
Purity: ≥ 98%
Stability: ≥ 2 years at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that 2,3-dinor-8-*iso* Prostaglandin F_{2α} (2,3-dinor-8-*iso* PGF_{2α}) be stored as supplied at -20°C. It will be stable for at least two years.

2,3-dinor-8-*iso* PGF_{2α} 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 2,3-dinor-8-*iso* PGF_{2α} in these solvents is approximately 100 mg/ml. 2,3-dinor-8-*iso* PGF_{2α} 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 solution of 2,3-dinor-8-*iso* PGF_{2α} is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 2,3-dinor-8-*iso* PGF_{2α} 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_{2α} (8-isoprostane) is a prostaglandin-like product of non-specific lipid peroxidation.¹ 2,3-dinor-8-*iso* PGF_{2α} is a metabolite of 8-*iso* PGF_{2α} in humans and rats.² In these species, exogenously infused 8-*iso* PGF_{2α} is converted to 2,3-dinor-8-*iso* PGF_{1α} and 2,3-dinor-8-*iso* PGF_{2α}.^{2,3} Rat hepatocytes further metabolize 8-*iso* PGF_{2α} to another β-oxidation product, 2,3,4,5-tetranor-8-*iso* PGF_{2α}.² 2,3-dinor-8-*iso* PGF_{2α} is present in normal human urine at concentrations of 200-300 pg/ml.² Its concentration is increased in conditions of oxidative injury (i.e., smoking), and correlates well with that of the parent isoprostane, 8-*iso* PGF_{2α}.²

References

1. Morrow, J.D., Hill, K.E., Burk, R.F., *et al.* A series of prostaglandin F₂-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_{2α}. *J. Biol. Chem.* **274**, 1313-1319 (1999).
3. Roberts, L.J., II, Moore, K.P., Zackert, W.E., *et al.* Identification of the major urinary metabolite of the F₂-isoprostane 8-*iso*-prostaglandin F_{2α} in humans. *J. Biol. Chem.* **271**, 20617-20620 (1996).

Related Products

2,3-dinor-8-*iso* Prostaglandin F_{1α} - Cat. No. 15290 • 8-*iso* Prostaglandin F_{1α} - Cat. No. 15350 • 8-*iso* Prostaglandin F_{2α} - Cat. No. 16350

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

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 MSDS supervisor at your institution.

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