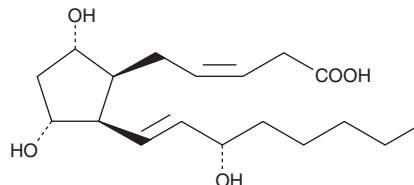


PRODUCT INFORMATION



2,3-dinor-8-iso Prostaglandin F_{2α} Item No. 16290

CAS Registry No.: 221664-05-7
Formal Name: (3Z)-5-[(1S,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-1-octen-1-yl]cyclopentyl]-3-pentenoic acid
Synonyms: 2,3-dinor-iPF_{2α}-III, 2,3-dinor-8-iso PGF_{2α}
MF: C₁₈H₃₀O₅
FW: 326.4
Purity: ≥95%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

2,3-dinor-8-iso Prostaglandin F_{2α} (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.

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.

Description

8-iso Prostaglandin F_{2α} (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 (for example, smoking), and correlates well with that of the parent isoprostane, 8-iso PGF_{2α}.²

Reference

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**(23), 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**(3), 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**(34), 20617-20620 (1996).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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