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- Trockeneiszuschlag
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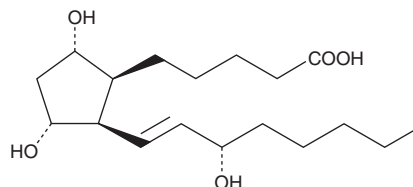
PRODUCT INFORMATION



2,3-dinor-8-iso Prostaglandin F_{1α}

Item No. 15290

CAS Registry No.: 221664-04-6
Formal Name: 3R,5S-dihydroxy-2R-[(1E,3S)-3-hydroxy-1S-octen-1-yl]-cyclopentanepentanoic acid
Synonyms: 2,3-dinor-5,6-dihydro-15-F_{2t}-IsoP, 2,3-dinor-5,6-dihydro-15-F_{2t}-Isoprostane, 2,3-dinor-iPF_{1α}-III, 2,3-dinor-8-iso PGF_{1α}
MF: C₁₈H₃₂O₅
FW: 328.4
Purity: ≥98%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥1 year



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_{1α} (2,3-dinor-8-iso PGF_{1α}) 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 (DMF) purged with an inert gas can be used. The solubility of 2,3-dinor-8-iso PGF_{1α} in ethanol is approximately 75 mg/ml and approximately 50 mg/ml in DMSO and DMF.

2,3-dinor-8-iso PGF_{1α} is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 2,3-dinor-8-iso PGF_{1α} should be diluted with the aqueous buffer of choice. The solubility of 2,3-dinor-8-iso PGF_{1α} in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2,3-dinor-8-iso PGF_{1α} is an isoprostane and active metabolite of arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) and the platelet aggregation inhibitor 8-iso PGF_{2α} (Item No. 16350).^{1,2} It is formed by the non-enzymatic, free radical peroxidation of arachidonic acid.¹ 2,3-dinor-8-iso PGF_{1α} induces vasoconstriction in isolated porcine retinal and brain microvessels (EC₅₀s = 12.8 and 18.5 nM, respectively) but does not induce contraction of isolated rat aortic rings when used at a concentration of 31 μM.^{1,3} It increases thromboxane B₂ (TXB₂; Item No. 19030) levels in isolated porcine brain slices when used at a concentration of 1 μM, an effect that can be reversed by the thromboxane A synthase inhibitor CGS 12970, the voltage-gated calcium channel inhibitor SKF 96365 (Item No. 10009312), or nicotinic acetylcholine receptor (nAChR) antagonist α-conotoxin.¹

References

- Hou, X., Roberts, L.J., 2nd., Taber, D.F., *et al.* 2,3-Dinor-5,6-dihydro-15-F_{2t}-isoprostane: A bioactive prostanoid metabolite. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* **281(2)**, R391-R400 (2001).
- 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).
- Cracowski, J.L., Camus, L., Durand, T., *et al.* Response of rat thoracic aorta to F₂-isoprostane metabolites. *J. Cardiovasc. Pharmacol.* **39(3)**, 396-403 (2002).

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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