

Produktinformation



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PRODUCT INFORMATION



8-iso Prostaglandin F_{2a}

Item No. 16350

CAS Registry No.: 27415-26-5

9α,11α,15S-trihydroxy-(8β)-prosta-Formal Name:

5Z,13E-dien-1-oic acid

Synonyms:

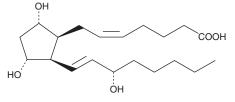
iPF $_{2\alpha}$ -III, 8-iso PGF $_{2\alpha}$, 8-iso-15(S)-Prostaglandin F $_{2\alpha}$, 8-Isoprostane, 8-epi PGF $_{2\alpha}$, 15-F2t-Isoprostane

MF: $C_{20}H_{34}O_5$ FW: 354.5 **Purity:** ≥99%

Supplied as: A crystalline solid

Storage: -20°C ≥2 years Stability:

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



Laboratory Procedures

8-iso Prostaglandin $F_{2\alpha}$ (8-iso $PGF_{2\alpha}$) is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-iso $PGF_{2\alpha}$ in the solvent of choice. 8-iso $PGF_{2\alpha}$ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 8-iso $PGF_{2\alpha}$ 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. Organic solvent-free aqueous solutions of 8-iso $PGF_{2\alpha}$ can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 8-iso $PGF_{2\alpha}$ in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

8-iso PGF_{2a} is an isoprostane produced by the non-enzymatic peroxidation of arachidonic acid in membrane phospholipids.¹⁻³ It is present in human plasma in two distinct forms - esterified in phospholipids and as the free acid. The ratio of these two forms is approximately 2:1, with a total plasma 8-iso PGF_{2a} level of about 150 pg/ml in normal volunteers. In normal human urine, 8-iso $PGF_{2\alpha}$ levels are about 180-200 pg/mg of creatinine. 1.2 8-iso $PGF_{2\alpha}$ is a weak TP receptor agonist in vascular smooth muscle. 4 Conversely, 8-iso PGF_{2a} inhibits platelet aggregation induced by U-46619 (10^{-6} M) and I-BOP (3×10^{-7} M) with IC₅₀ values of 1.6×10^{-6} M and 1.8×10^{-6} M, respectively.³

References

- Morrow, J.D., Hill, K.E., Burk, R.F., et al. Proc. Natl. Acad. Sci. U.S.A. 87(23), 9383-9387 (1990).
- 2. Morrow, J.D., Harris, T.M., and Roberts, L.J., II Anal. Biochem. 184(1), 1-10 (1990).
- 3. Morrow, J.D., Minton, T.A., and Roberts, L.J., II Prostaglandins 44(2), 155-163 (1992).
- 4. Kiriyama, M., Ushikubi, F., Kobayashi, T., et al. Br. J. Pharmacol. 122(2), 217-224 (1997).

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

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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