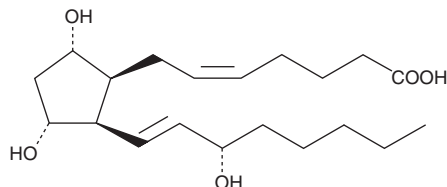


PRODUCT INFORMATION



8-iso Prostaglandin F_{2α} Item No. 16350

CAS Registry No.: 27415-26-5
Formal Name: 9α,11α,15S-trihydroxy-(8β)-prosta-5Z,13E-dien-1-oic acid
Synonyms: iPF_{2α}-III, 8-iso PGF_{2α}, 8-iso-15(S)-Prostaglandin F_{2α}, 8-Isoprostane, 8-epi PGF_{2α}, 15-F2t-Isoprostane
MF: C₂₀H₃₄O₅
FW: 354.5
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

8-iso Prostaglandin F_{2α} (8-iso PGF_{2α}) is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-iso PGF_{2α} in the solvent of choice, which should be purged with an inert gas. 8-iso PGF_{2α} is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 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. Organic solvent-free aqueous solutions of 8-iso PGF_{2α} can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 8-iso PGF_{2α} 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_{2α} 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_{2α} level of about 150 pg/ml in normal volunteers. In normal human urine, 8-iso PGF_{2α} levels are about 180-200 pg/mg of creatinine.^{1,2} 8-iso PGF_{2α} is a weak TP receptor agonist in vascular smooth muscle.⁴ Conversely, 8-iso PGF_{2α} inhibits platelet aggregation induced by U-46619 (10⁻⁶ M) and I-BOP (3 x 10⁻⁷ M) with IC₅₀ values of 1.6 x 10⁻⁶ M and 1.8 x 10⁻⁶ M, respectively.³

References

1. 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. Kiriya, 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.

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/21/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM