

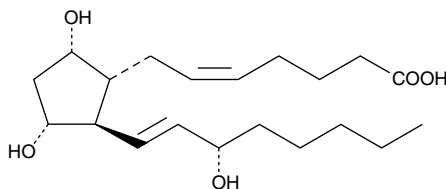
Product Information



Prostaglandin F_{2α}

Item No. 16010

CAS Registry No.: 551-11-1
Formal Name: 9α,11α,15S-trihydroxy-prosta-5Z,13E-dien-1-oic acid
Synonyms: Dinoprost, PGF_{2α}
MF: C₂₀H₃₄O₅
FW: 354.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

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

PGF_{2α} is supplied as a crystalline solid. A stock solution may be made by dissolving the PGF_{2α} in an organic solvent purged with an inert gas. PGF_{2α} is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 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 PGF_{2α} can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of 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.

PGF_{2α} is a widely distributed PG occurring in many species.¹⁻³ It causes contraction of vascular, bronchial, intestinal, and myometrial smooth muscle, and also exhibits potent luteolytic activity.¹ PGF_{2α} exhibits its receptor mediated physiological activity at 50-100 nM.¹ Maximal ovine myometrial contraction can be achieved at 125 nM PGF_{2α} *in vitro*.⁴

References

1. Samuelsson, B., Goldyne, M., Granström, E., *et al.* Prostaglandins and Thromboxanes. *Ann. Rev. Biochem.* **47**, 997-1029 (1978).
2. Speroff, L. and Ramwell, P.W. Prostaglandins in reproductive physiology. *Am. J. Obstet. Gynecol.* **107**, 1111-1130 (1970).
3. Watanabe, K., Iguchi, Y., Iguchi, S., *et al.* Stereospecific conversion of prostaglandin D₂ to (5Z,13E)-(15S)-9α,11β,15-trihydroxyprosta-5,13-dien-1-oic acid (9α,11β-prostaglandin F₂) and of prostaglandin H₂ to prostaglandin F_{2α} by bovine lung prostaglandin F synthase. *Proc. Natl. Acad. Sci. USA* **83**, 1583-1587 (1986).
4. Crankshaw, D.J. and Gaspar, V. Pharmacological characterization *in vitro* of prostanoid receptors in the myometrium of nonpregnant ewes. *J. Reprod. Fertil.* **103**, 55-61 (1995).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/16010

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY! NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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 Safety Data Sheet, which has been sent via email to your institution.

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