

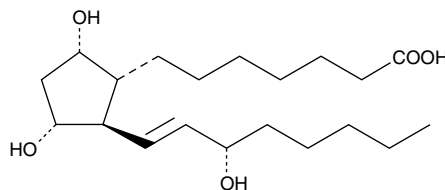
# Product Information



## Prostaglandin F<sub>1α</sub>

Item No. 15010

**CAS Registry No:** 745-62-0  
**Formal Name:** 9α,11α,15S-trihydroxy-prost-13E-en-1-oic acid  
**Synonym:** PGF<sub>1α</sub>  
**MF:** C<sub>20</sub>H<sub>36</sub>O<sub>5</sub>  
**FW:** 356.5  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

Prostaglandin F<sub>1α</sub> (PGF<sub>1α</sub>) is the putative product of dihomo-γ-linoleic acid. For long term storage, we suggest that PGF<sub>1α</sub> be stored as supplied at -20°C. It will be stable for at least two years.

PGF<sub>1α</sub> is supplied as a crystalline solid. A stock solution may be made by dissolving the PGF<sub>1α</sub> in an organic solvent purged with an inert gas. PGF<sub>1α</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PGF<sub>1α</sub> in these solvents is approximately 50 mg/ml. PGF<sub>1α</sub> will be stable for at least six months in these solvents if stored at -20°C.

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<sub>1α</sub> can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of PGF<sub>1α</sub> in PBS (pH 7.2) is approximately 2.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

PGF<sub>1α</sub> is the putative metabolite of dihomo-γ-linolenic acid (DGLA) via the COX pathway. Both PGF<sub>1α</sub> and PGF<sub>2α</sub> have been shown to act as priming pheromones for male Atlantic salmon with a threshold concentration of 10<sup>-11</sup> M.<sup>3</sup> PGF<sub>1α</sub> binds to the ovine corpus luteum FP receptor at only 8% of the relative potency of PGF<sub>2α</sub>.<sup>1</sup> It is only half as active as PGF<sub>2α</sub> in inducing human respiratory smooth muscle contractions in vitro.<sup>2</sup>

### References

- Balpure, A.K., Rexroad, C.E., Jr., Kawada, K., *et al.* Structural requirements for prostaglandin analog interaction with the ovine corpus luteum prostaglandin F<sub>2α</sub> receptor. Implications for development of a photoaffinity probe. *Biochem. Pharmacol.* **38**, 2375-2381 (1989).
- Karim, S.M.M., Adaikan, P.G., and Kottegoda, S.R. Prostaglandins and human respiratory tract smooth muscle: Structure activity relationship. *Adv. Prostaglandin Thromboxane Res.* **7**, 969-980 (1980).
- Moore, A. and Waring, C.P. Electrophysiological and endocrinological evidence that F-series prostaglandins function as priming pheromones in mature male Atlantic salmon (*Salmo salar*) PARR. *J. Exp. Biol.* **199**, 2307-2316 (1996).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/15010](http://www.caymanchem.com/catalog/15010)

**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.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 07/10/2014

### Cayman Chemical

#### Mailing address

1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

#### Phone

(800) 364-9897  
(734) 971-3335

#### Fax

(734) 971-3640

#### E-Mail

[custserv@caymanchem.com](mailto:custserv@caymanchem.com)

#### Web

[www.caymanchem.com](http://www.caymanchem.com)