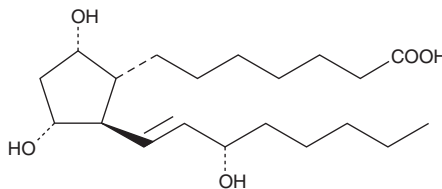


# PRODUCT INFORMATION



## 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%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Prostaglandin F<sub>1α</sub> (PGF<sub>1α</sub>) is supplied as a crystalline solid. A stock solution may be made by dissolving the PGF<sub>1α</sub> in the solvent of choice, which should be 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.

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 solid in aqueous buffers. The solubility of PGF<sub>1α</sub> in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Prostaglandin F<sub>1α</sub> (PGF<sub>1α</sub>) is the putative metabolite of dihomo-γ-linolenic acid (DGLA) via the cyclooxygenase (COX) pathway. Both PGF<sub>1α</sub> and PGF<sub>2α</sub> (Item Nos. 16010 | 10007221) have been shown to act as priming pheromones for male Atlantic salmon with a threshold concentration of 10<sup>-11</sup> M.<sup>1</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>2</sup> It is only half as active as PGF<sub>2α</sub> in inducing human respiratory smooth muscle contractions *in vitro*.<sup>3</sup>

### References

1. 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**(Pt 10), 2307-2316 (1996).
2. Balapure, 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. *Biochem. Pharmacol.* **38**(14), 2375-2381 (1989).
3. 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).

**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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### 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