

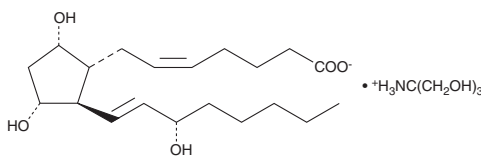
# PRODUCT INFORMATION



## Prostaglandin F<sub>2α</sub> (tromethamine salt)

Item No. 16020

**CAS Registry No.:** 38562-01-5  
**Formal Name:** 9α,11α,15S-trihydroxy-prosta-5Z,13E-dien-1-oic acid, tris(hydroxymethyl)aminomethane salt  
**Synonyms:** Dinoprost, PGF<sub>2α</sub>  
**MF:** C<sub>20</sub>H<sub>33</sub>O<sub>5</sub> • C<sub>4</sub>H<sub>12</sub>NO<sub>3</sub>  
**FW:** 475.6  
**Purity:** ≥99%  
**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>2α</sub> (tromethamine salt) (PGF<sub>2α</sub> (tromethamine salt)) is supplied as a crystalline solid. A stock solution may be made by dissolving the PGF<sub>2α</sub> (tromethamine salt) in the solvent of choice, which should be purged with an inert gas. PGF<sub>2α</sub> (tromethamine salt) is soluble in organic solvents such as ethanol, acetone, acetonitrile, methanol, and DMSO. The solubility of PGF<sub>2α</sub> (tromethamine salt) in ethanol and DMSO is approximately 50 mg/ml, approximately 5 mg/ml in acetone and acetonitrile, and approximately 100 mg/ml in methanol.

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>2α</sub> (tromethamine salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of PGF<sub>2α</sub> (tromethamine salt) in PBS (pH 7.2) is approximately 25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

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

### References

1. Speroff, L. and Ramwell, P.W. Prostaglandins in reproductive physiology. *Am. J. Obstet. Gynecol.* **107(7)**, 1111-1130 (1970).
2. Samuelsson, B., Goldyne, M., Granström, E., *et al.* Prostaglandins and thromboxanes. *Annu. Rev. Biochem.* **47**, 997-1029 (1978).
3. Watanabe, K., Iguchi, Y., Iguchi, S., *et al.* Stereospecific conversion of prostaglandin D<sub>2</sub> to (5Z,13E)-(15S)-9α,11α,15-trihydroxyprosta-5,13-dien-1-oic acid (9α,11α-prostaglandin F<sub>2</sub>) and of prostaglandin H<sub>2</sub> to prostaglandin F<sub>2α</sub> by bovine lung prostaglandin F synthase. *Proc. Nat. Acad. Sci. USA* **83(6)**, 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(1)**, 55-61 (1995).

#### 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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