

# PRODUCT INFORMATION



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

Item No. 16420

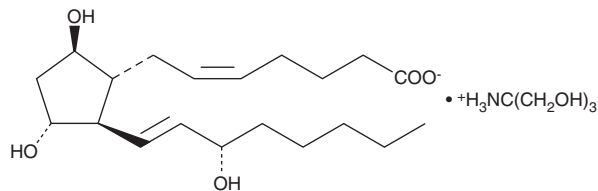
**CAS Registry No.:** 89847-02-9  
**Formal Name:** 9β,11α,15S-trihydroxy-prosta-5Z,13E-dien-1-oic acid, tris (hydroxymethyl) aminomethane salt

**Synonyms:** 9β-PGF<sub>2α</sub>, PGF<sub>2β</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

For long term storage, we suggest that prostaglandin F<sub>2β</sub> (PGF<sub>2β</sub>) (tromethamine salt) be stored as supplied at -20°C. It should be stable for at least two years.

PGF<sub>2β</sub> (tromethamine salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the PGF<sub>2β</sub> (tromethamine salt) in an organic solvent. PGF<sub>2β</sub> (tromethamine salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PGF<sub>2β</sub> (tromethamine salt) in these solvents is approximately 50 mg/ml. PGF<sub>2β</sub> (tromethamine salt) 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>2β</sub> (tromethamine salt) can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of PGF<sub>2β</sub> tromethamine salt in PBS is approximately 25 mg/ml, compared to 10 mg/ml for PGF<sub>2β</sub>. We do not recommend storing the aqueous solution for more than one day.

### Description

PGF<sub>2β</sub> (tromethamine salt) is a derivative of PGF<sub>2β</sub> (Item No. 16410) with increased water solubility. PGF<sub>2β</sub> is the 9β-hydroxy stereoisomer of PGF<sub>2α</sub> (Item No. 16010). It is much less active than PGF<sub>2α</sub> in antifertility and bronchoconstrictor activities.<sup>1-3</sup> PGF<sub>2β</sub> exhibits bronchodilating activity in guinea pigs and cats and antagonizes the bronchoconstrictor activity of PGF<sub>2α</sub>.<sup>3</sup>

### References

1. Miller, W.L. and Sutton, M.J. Relative biological activity of certain prostaglandins and their enantiomers. *Prostaglandins* **11**, 77-84 (1976).
2. Gardiner, P.J. and Collier, H.O.J. Specific receptors for prostaglandins in airways. *Prostaglandins* **19**, 819-841 (1980).
3. Rosenthale, M.E., Dervinis, A., Kassarich, J., et al. Bronchodilating properties of the prostaglandin F<sub>2β</sub> in the guinea pig and cat. *Prostaglandins* **3**, 767-772 (1973).

#### 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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