

17-phenyl trinor Prostaglandin F$_{2\alpha}$ ethyl amide

**Item No. 16820**

**CAS Registry No.:** 155206-00-1

**Formal Name:** N-ethyl-9α,11α,15S-trihydroxy-17-phenyl-18,19,20-trinor-prosta-5Z,13E-dien-1-ethyl amide

**Synonyms:** Bimatoprost, 15(S)-Bimatoprost, 17-phenyl trinor PGF$_{2\alpha}$ ethyl amide

**MF:** C$_{25}$H$_{37}$NO$_4$

**FW:** 415.6

**Purity:** ≥97%

**Stability:** ≥2 years at -20°C

**Supplied as:** A crystalline solid

**Laboratory Procedures**

For long term storage, we suggest that 17-phenyl trinor prostaglandin F$_{2\alpha}$ ethyl amide (17-phenyl trinor PGF$_{2\alpha}$ ethyl amide) be stored as supplied at -20°C. It should be stable for at least two years.

17-phenyl trinor PGF$_{2\alpha}$ ethyl amide is supplied as a crystalline solid. A stock solution may be made by dissolving the 17-phenyl trinor PGF$_{2\alpha}$ ethyl amide in an organic solvent purged with an inert gas. 17-phenyl trinor PGF$_{2\alpha}$ ethyl amide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 17-phenyl trinor PGF$_{2\alpha}$ ethyl amide in ethanol is approximately 50 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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 17-phenyl trinor PGF$_{2\alpha}$ ethyl amide can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of 17-phenyl trinor PGF$_{2\alpha}$ ethyl amide in PBS (pH 7.2) is approximately 300 μg/ml. We do not recommend storing the aqueous solution for more than one day.

17-phenyl trinor PGF$_{2\alpha}$ ethyl amide is an F-series PG analog which has been approved for use as an ocular hypotensive drug. Investigations in our lab have shown that 17-phenyl trinor PGF$_{2\alpha}$ ethyl amide is converted by an amidase enzymatic activity in the bovine and human cornea to yield the corresponding free acid, with a conversion rate of about 40 μg/g corneal tissue/24 hours. The free acid, 17-phenyl trinor PGF$_{2\alpha}$, is a potent FP receptor agonist. In human and animal models of glaucoma, FP receptor agonist activity corresponds very closely with intraocular hypotensive activity.

**References**


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