

PRODUCT INFORMATION

Prostaglandin F_{2α} diethyl amide

Item No. 16023

Formal Name: N,N-diethyl-9α,11α,15S-trihydroxy-prosta-5Z,13E-dien-1-amide

Synonyms: Dinoprost diethyl amide, PGF_{2α} diethyl amide, PGF_{2α}-NEt₂

MF: C₂₄H₄₃NO₄

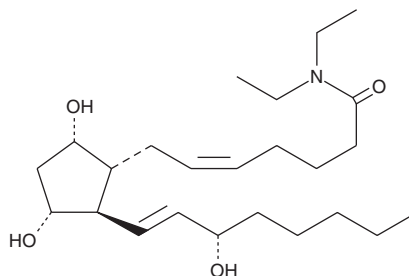
FW: 409.6

Purity: ≥98%

Supplied as: A solution in methyl acetate

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

Prostaglandin F_{2α} diethyl amide (PGF_{2α}-NEt₂) is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of PGF_{2α}-NEt₂ in these solvents is approximately 20, 15, and 30 mg/ml, respectively.

PGF_{2α}-NEt₂ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of PGF_{2α}-NEt₂ should be diluted with the aqueous buffer of choice. The solubility of PGF_{2α}-NEt₂ in PBS (pH 7.2) is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PGF_{2α}-NEt₂ is an analog of PGF_{2α} (Item No. 16010) in which the C-1 carboxyl group has been modified to an N-diethyl amide. PG esters have been shown to have ocular hypotensive activity.¹ PG N-ethyl amides were recently introduced as alternative PG hypotensive prodrugs.² Bovine and human corneal tissue converts the N-ethyl amides of various PGs to the free acids with a conversion efficiency of about 4 µg/g corneal tissue/hr.³ However, dialkyl amides such as PGF_{2α}-NEt₂ are inert to corneal amidase activity, and are not converted in any detectable amount to the corresponding free acids. These compounds may therefore be useful tools in elucidating the claim that PG amides have intrinsic intraocular hypotensive activity.

References

1. Bito, L.Z. Comparison of the ocular hypotensive efficacy of eicosanoids and related compounds. *Exp. Eye Res.* **38**(2), 181-184 (1984).
2. Woodward, D.F., Krauss, A.H.-P., Chen, J., *et al.* The pharmacology of Bimatoprost (Lumigan™). *Surv. Ophthalmol.* **45**(Suppl. 4), S337-S345 (2001).
3. Maxey, K.M., Johnson, J., Camras, C.B., *et al.* The hydrolysis of bimatoprost in corneal tissue generates a potent prostanoid FP receptor agonist. *Surv. Ophthalmol.* **47**(4), 34-40 (2002).

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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