



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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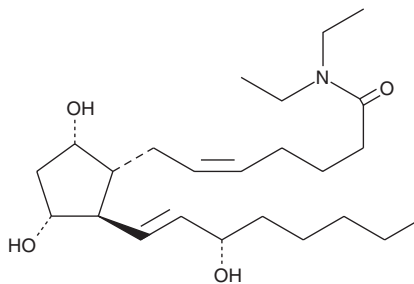
# PRODUCT INFORMATION



## Prostaglandin F<sub>2α</sub> 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<sub>2α</sub> diethyl amide, PGF<sub>2α</sub>-NEt<sub>2</sub>  
**MF:** C<sub>24</sub>H<sub>43</sub>NO<sub>4</sub>  
**FW:** 409.6  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

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

PGF<sub>2α</sub>-NEt<sub>2</sub> 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<sub>2α</sub>-NEt<sub>2</sub> in these solvents is approximately 20, 15, and 30 mg/ml, respectively.

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. If an organic solvent-free solution of PGF<sub>2α</sub>-NEt<sub>2</sub> is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of PGF<sub>2α</sub>-NEt<sub>2</sub> in PBS (pH 7.2) is approximately 100 µg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

PGF<sub>2α</sub>-NEt<sub>2</sub> is an analog of PGF<sub>2α</sub> (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.<sup>1</sup> PG N-ethyl amides were recently introduced as alternative PG hypotensive prodrugs.<sup>2</sup> 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.<sup>3</sup> However, dialkyl amides such as PGF<sub>2α</sub>-NEt<sub>2</sub> 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.

### Reference

1. Bito, L.Z. Comparison of the ocular hypotensive efficacy of eicosanoids and related compounds. *Exp. Eye Res.* **38**, 181-184 (1984).
2. Woodward, D.F., Krauss, A.H.-P., Chen, J., *et al.* The pharmacology of Bimatoprost (Lumigan™). *Survey of Ophthalmology* **45**, 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. *Survey of Ophthalmology* **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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