

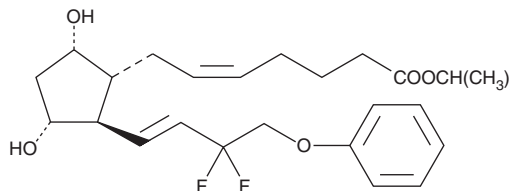
PRODUCT INFORMATION



Tafuprost

Item No. 10005440

CAS Registry No.: 209860-87-7
Formal Name: 15,15-difluoro-9 α ,11 α -dihydroxy-16-phenoxy-17,18,19,20-tetranor-prosta-5Z,13E-dien-1-oic acid, isopropyl ester
Synonyms: AFP-168
MF: C₂₅H₃₄F₂O₅
FW: 452.5
Purity: \geq 98%
Stability: \geq 2 years at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that tafuprost be stored as supplied at -20°C. It will be stable for at least two years.

Tafuprost 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 tafuprost in these solvents is at least 30 mg/ml.

Tafuprost is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of tafuprost should be diluted with the aqueous buffer of choice. Tafuprost has a solubility of 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

A number of 17-phenyl trinor prostaglandin F_{2 α} (Item No. 16810) derivatives have been approved for the treatment of glaucoma.¹⁻⁴ Of these, the ones wherein the 13,14-double bond has been hydrogenated retain relatively good potency, but show a significantly reduced incidence of local irritant side effects.⁵ Alternatively, it was recently reported that analogs incorporating a 15-deoxy-15,15-difluoro modification also had a favorable ophthalmic activity profile.⁶ Tafuprost is a 2-series, 16-phenoxy analog of PGF_{2 α} with the 15,15-difluoro substitution. Tafuprost free acid is a very potent FP receptor agonist, with a K_i value of 0.4 nM.⁶ The ester prodrug forms of tafuprost are also potent ocular hypotensives in monkeys.

References

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3. Sorbera, L.A. and Castañer, J. Travoprost. *Drugs of the Future* **25**, 41-45 (2000).
4. Maxey, K.M., Johnson, J., Camras, C.B., *et al. Survey of Ophthalmology* **47(4)**, 34-40 (2002).
5. Resul, B., Stjerschantz, J., No, K., *et al. J. Med. Chem.* **36**, 243-248 (1993).
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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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