

PRODUCT INFORMATION



Tafluprost ethyl ester

Item No. 11612

CAS Registry No.: 209860-89-9

Formal Name: 15,15-difluoro-9 α ,11 α -dihydroxy-16-phenoxyl-17,18,19,20-tetranor-prosta-5Z,13E-dien-1-oic acid, ethyl ester

Synonym: AFP 175

MF: C₂₄H₃₂F₂O₅

FW: 438.5

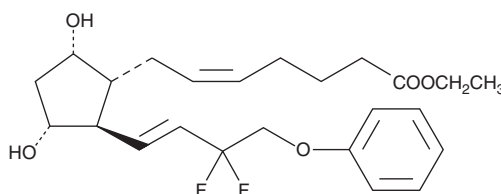
Purity: $\geq 98\%$

UV/Vis.: λ_{max} : 217 nm

Supplied as: 10% wt/wt in ethanol

Storage: -20°C

Stability: ≥ 2 years



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

Laboratory Procedures

Tafluprost ethyl ester is supplied as 10% wt/wt in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of tafluprost ethyl ester in these solvents is approximately 30 mg/ml.

Description

Analogues of prostaglandin F_{2 α} (PGF_{2 α}), which act primarily at the FP receptor, have been approved for the treatment of glaucoma.¹⁻⁴ Tafluprost (free acid) (Item No. 10005439) is a PGF_{2 α} analogue which acts as a potent FP receptor agonist (K_i = 0.4 nM).⁵ Tafluprost ethyl ester is a form of tafluprost which may have increased lipid solubility compared to the free acid. In addition, the ethyl ester form may demonstrate improved uptake into tissues and thus lower the effective concentration.

References

1. Parrish, R.K., Palmberg, P., and Sheu, W.-P. A comparison of latanoprost, bimatoprost, and travoprost in patients with elevated intraocular pressure: A 12-week, randomized, masked-evaluator multicenter study. *Am. J. Ophthalmol.* **135**(5), 688-703 (2003).
2. Ota, T., Murata, H., Sugimoto, E., et al. Prostaglandin analogues and mouse intraocular pressure: Effects of tafluprost, latanoprost, travoprost, and unoprostone, considering 24-hour variation. *Invest. Ophthalmol. Vis. Sci.* **46**(6), 2006-2011 (2005).
3. Hommer, A. and Kimmich, F. Switching patients from preserved prostaglandin-analog monotherapy to preservative-free tafluprost. *Clin. Ophthalmol.* **5**, 623-631 (2011).
4. Janulevičienė, I., Derkač, I., Grybauskienė, L., et al. Effects of preservative-free tafluprost on tear film osmolarity, tolerability, and intraocular pressure in previously treated patients with open-angle glaucoma. *Clin. Ophthalmol.* **6**, 103-109 (2012).
5. Takagi, Y., Nakajima, T., Shimazaki, A., et al. Pharmacological characteristics of AFP-168 (tafluprost), a new prostanoid FP receptor agonist, as an ocular hypotensive drug. *Exp. Eye Res.* **78**(4), 767-776 (2004).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY USE - 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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