

Produktinformation



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Product Information



Latanoprost

Item No. 16812

CAS Registry No.: 130209-82-4

Formal Name: 9α,11α,15R-trihydroxy-17-phenyl-18,

19,20-trinor-prost-5Z-en-1-oic acid,

isopropyl ester

Synonyms: CAY530500, 17-phenyl-13,14-dihydro

> trinor $PGF_{2\alpha}$ isopropyl ester, 17-phenyl 13,14-dihydro trinor Prostaglandin F_{2α}

isopropyl ester

MF: $C_{26}H_{40}O_5$ FW: 432.6 **Purity:** ≥98%

Stability: ≥2 years at -20°C

Supplied as: A solution in methyl acetate

COOCH(CH₃)₂ ÓН

Laboratory Procedures

For long term storage, we suggest that latanoprost be stored as supplied at -20°C. It will be stable for at least two years. Latanoprost 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 (DMF) purged with an inert gas can be used. Latanoprost is miscible in ethanol and has a solubility of approximately 50 mg/ml in DMSO and approximately 100 mg/ml in 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. If an organic solvent-free solution of latanoprost is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of latanoprost in PBS (pH 7.2) is approximately 50 µg/ml. For maximum solubility in aqueous buffers, latanoprost should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Latanoprost has a solubility of 400 µg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. In acidic or basic aqueous solutions latanoprost is stable for no more than 48 hours and in neutal aqueous solutions it has shown to be stable for up to one month at room temperture.

Latanoprost is the isopropyl ester of 17-phenyl-13,14-dihydro prostaglandin $F_{2\alpha}$ (17-phenyl-13,14-dihydro PGF_{2\alpha}). It is a prodrug form of the free acid, which is a potent agonist of the FP receptor in the eye. Latanoprost reduces intraocular pressure in glaucoma patients with few side effects.

- 1. Lindén, C., Nuija, E., and Alm, A. Effects on IOP restoration and blood-aqueous barrier after long term treatment with latanoprost in open angle glaucoma and ocular hypertension. Br. J. Ophthalmol. 81, 370-372 (1997).
- Camras, C.B., Alm, A., Watson, P., et al. Latanoprost, a prostaglandin analog, for glaucoma therapy. Efficacy and safety after 1 year of treatment in 198 patients. Ophthalmology 103, 1916-1924 (1996).
- 3. Alm, A., Villumsen, J., Törnquist, P., et al. Intraocular pressure-reducing effect of PhXA41 in patients with increased eye pressure. A one-month study. Ophthalmology 100, 1312-1317 (1993).
- Stjernschantz, J. and Resul, B. Phenyl substituted prostaglandin analogs for glaucoma treatment. Drugs of the Future 17, 691-704 (1992).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/16812

WARNING: This product is for laboratory research only: not for administration to humans. Not for human or veterinary DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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the time of delivery.

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