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 PGF₂α isopropyl ester, 17-phenyl 13,14-dihydro trinor Prostaglandin F₂α isopropyl ester
MF: C₂₆H₄₀O₅
FW: 432.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A solution in methyl acetate

Laboratory Procedures
For long term storage, we suggest that 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 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 neutral aqueous solutions it has shown to be stable for up to one month at room temperature.
Latanoprost is the isopropyl ester of 17-phenyl-13,14-dihydro prostaglandin F₂α (17-phenyl-13,14-dihydro PGF₂α). 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.

References

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.

MATERIAL SAFETY DATA
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 the time of delivery.

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