

# Produktinformation



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# **Product Information**



## 15-keto Latanoprost

Item No. 16816

CAS Registry No.: 135646-98-9

Formal Name:  $9\alpha$ ,  $11\alpha$ -dihydroxy-15-oxo-17-phenyl-

18,19,20-trinor-prost-5Z-en-1-oic acid,

isopropyl ester

MF:  $C_{26}H_{38}O_5$ FW: 430.6 **Purity:** ≥98%

Stability: ≥1 year at -20°C

Supplied as: A solution in methyl acetate

# OH COOCH(CH<sub>3</sub>)<sub>2</sub>

## **Laboratory Procedures**

For long term storage, we suggest that 15-keto latanoprost be stored as supplied at -20°C. It should be stable for at least one year.

15-keto 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 purged with an inert gas can be used. The solubility of 15-keto latanoprost in these solvents is approximately 100 mg/ml.

15-keto Latanoprost is sparingly soluble in aqueous buffers. Therefore, 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. For maximum solubility in aqueous buffers, 15-keto latanoprost should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 15-keto Latanoprost has a solubility of approximately 80 μg/ml in a 1:12 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Latanoprost is an F-series prostaglandin analog which has been approved for use as an ocular hypotensive drug. 1 Oxidation of the C-15 hydroxyl group without isopropyl ester hydrolysis produces 15-keto latanoprost. 15-keto Latanoprost is a potential metabolite of latanoprost when administered to animals. 15-keto Latanoprost is also one of the common minor impurities found in commercial preparations of the bulk drug compound.

Although much less potent that the parent compound latanoprost, 15-keto latanoprost still retains the ability to produce a small but measurable decrease (1 mm Hg) in the intraocular pressure of normal cynomolgus monkeys when administered at a dose of 1 µg/eye. 15-keto Latanoprost is also a miotic in the normal cat eye, causing an 8 mm reduction in pupillary diameter at 5  $\mu$ g/eye. Again, this is not as potent as many other F-type prostaglandins; for example, prostaglandin F<sub>2 $\alpha$ </sub> will produce this degree of miosis at a dose of less than 1 μg/eye. Products of β-oxidation account for most of the metabolites of latanoprost recovered in plasma and urine. However, 15-keto latanoprost is a minor metabolite, and one which could be enhanced in situations where β-oxidation is reduced.

## Reference

1. 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/16816

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