

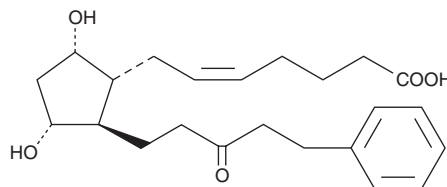
# PRODUCT INFORMATION



## 15-keto Latanoprost (free acid)

Item No. 16815

**CAS Registry No.:** 369585-22-8  
**Formal Name:** 9 $\alpha$ ,11 $\alpha$ -dihydroxy-15-oxo-17-phenyl-18,19,20-trinor-prost-5Z-en-1-oic acid  
**MF:** C<sub>23</sub>H<sub>32</sub>O<sub>5</sub>  
**FW:** 388.5  
**Purity:**  $\geq 95\%$   
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:**  $\geq 1$  year



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

### Laboratory Procedures

15-keto Latanoprost (free acid) 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. The solubility of 15-keto latanoprost (free acid) in ethanol and DMF is approximately 50 mg/ml and approximately 33 mg/ml in DMSO.

For maximum solubility in aqueous buffers, evaporate the methyl acetate and dissolve in DMSO. The solution of 15-keto latanoprost (free acid) should be diluted with the aqueous buffer of choice. 15-keto latanoprost (free acid) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method.

### Description

Latanoprost is an F-series prostaglandin analog which has been approved for use as an ocular hypotensive drug.<sup>1</sup> 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. Although much less potent than 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  $\mu$ g/eye.<sup>2</sup> 15-keto Latanoprost is also a miotic in the normal cat eye, causing an 8 mm Hg 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  $\mu$ g/eye.<sup>2</sup> Products of  $\beta$ -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  $\beta$ -oxidation is reduced.

### References

1. 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).
2. Stjernschantz, J. and Resul, B. Phenyl substituted prostaglandin analogs for glaucoma treatment. *Drugs of the Future* **17**, 691-704 (1992).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM