

PRODUCT INFORMATION



5-*trans* Latanoprost

Item No. 16813

CAS Registry No.: 913258-34-1
Formal Name: (5E)-7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(3R)-3-hydroxy-5-phenylpentyl]cyclopentyl]-5-heptenoic acid, 1-methylethyl ester

Synonym: 5,6-*trans* Latanoprost

MF: C₂₆H₄₀O₅

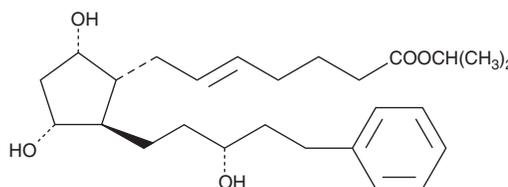
FW: 432.6

Purity: ≥98%

Supplied as: A solution in methyl acetate

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

5-*trans* 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 DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 5-*trans* latanoprost in these solvents is approximately 50 and 100 mg/ml, respectively. 5-*trans* Latanoprost is miscible in ethanol.

5-*trans* Latanoprost is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 5-*trans* latanoprost should be diluted with the aqueous buffer of choice. The solubility of 5-*trans* latanoprost in PBS (pH 7.2) is approximately 1.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Latanoprost is an F-series prostaglandin analog which has been approved for use as an ocular hypotensive drug.¹ 5-*trans* Latanoprost is an isomer of latanoprost wherein the double bond between carbons 5 and 6 has been changed from *cis* (Z) to *trans* (E). The *trans* isomer of latanoprost occurs as an impurity of between 2-5% in most commercial preparations of the bulk drug product. The present compound was prepared primarily as an analytical standard for detection and quantitation of this impurity. From what can be inferred from the study of other *trans* isomers of F-type prostaglandins, 5-*trans* latanoprost's biological activity is likely to be similar to that of the *cis* isomer. However, there are no specific published reports on the biological activity, and on the intraocular hypotensive activity in particular, of 5-*trans* latanoprost.

Reference

1. Stjernschantz, J. and Resul, B. Phenyl substituted prostaglandin analogs for glaucoma treatment. *Drug. 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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