

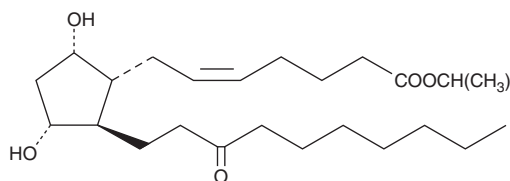
# PRODUCT INFORMATION



## Unoprostone isopropyl ester

Item No. 16681

**CAS Registry No.:** 120373-24-2  
**Formal Name:** 9 $\alpha$ ,11 $\alpha$ -dihydroxy-13,14-dihydro-15-oxo-20a,20b-dihomoprost-5Z-en-1-oic acid, isopropyl ester  
**Synonyms:** 13,14-dihydro-15-keto-20-ethyl Prostaglandin F<sub>2 $\alpha$</sub>  isopropyl ester, UF-021  
**MF:** C<sub>25</sub>H<sub>44</sub>O<sub>5</sub>  
**FW:** 424.6  
**Purity:**  $\geq$ 95%  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:**  $\geq$ 2 years



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

### Laboratory Procedures

Unoprostone isopropyl ester 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 unoprostone isopropyl ester in ethanol and DMSO is approximately 17 mg/ml and approximately 25 mg/ml in DMF.

### Description

Unoprostone isopropyl ester is an ocular hypotensive agent, a prodrug form of the FP receptor agonist unoprostone (Item No. 16680), and a derivative of prostaglandin F<sub>2 $\alpha$</sub>  (PGF<sub>2 $\alpha$</sub> ; Item Nos. 16010 | 16020).<sup>1</sup> It inhibits contractions induced by the peptide vasoconstrictor endothelin-1 (Item No. 24127) in isolated porcine retinal arterioles when used at a concentration of 1 nM. Topical application of unoprostone isopropyl ester (0.12% v/v) inhibits increased intraocular pressure induced by the non-selective COX inhibitor indomethacin (Item No. 70270) and increases PGE<sub>2</sub> levels in the aqueous humor and aqueous humor outflow in rabbits.<sup>2</sup> Formulations containing unoprostone isopropyl ester have been used in the treatment of open-angle glaucoma and ocular hypertension.

### References

1. Yu, D.Y., Su, E.N., Cringle, S.J., *et al.* Comparison of the vasoactive effects of the docosanoid unoprostone and selected prostanoids on isolated perfused retinal arterioles. *Invest. Ophthalmol. Vis. Sci.* **42(7)**, 1499-1504 (2001).
2. Taniguchi, T., Haque, M.S.R., Sugiyama, K., *et al.* Ocular hypotensive mechanism of topical isopropyl unoprostone, a novel prostaglandin metabolite-related drug, in rabbits. *J. Ocul. Pharmacol.* **12(4)**, 489-498 (1996).

#### 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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