

# PRODUCT INFORMATION



## Unoprostone

Item No. 16680

**CAS Registry No.:** 120373-36-6  
**Formal Name:** 9 $\alpha$ ,11 $\alpha$ -dihydroxy-13,14-dihydro-15-oxo-20a,20b-dihomoprost-5-en-1-oic acid

**Synonyms:** 13,14-dihydro-15-keto-20-ethyl Prostaglandin F<sub>2 $\alpha$</sub> , 13,14-dihydro-15-keto-20-ethyl PGF<sub>2 $\alpha$</sub> , Unoprostone (free acid)

**MF:** C<sub>22</sub>H<sub>38</sub>O<sub>5</sub>

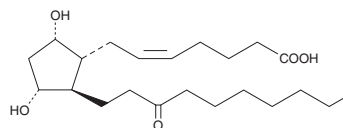
**FW:** 382.5

**Purity:**  $\geq$ 98%

**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 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 unoprostone in these solvents is approximately 12, 17, and 25 mg/ml, respectively.

Unoprostone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of unoprostone should be diluted with the aqueous buffer of choice. The solubility of unoprostone in PBS (pH 7.2) is approximately 90  $\mu$ g/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Unoprostone is an agonist of FP receptors (EC<sub>50</sub> = 4.12  $\mu$ M), an active metabolite the ocular hypotensive agent unoprostone isopropyl ester (Item No. 16681), and a derivative of prostaglandin F<sub>2 $\alpha$</sub>  (PGF<sub>2 $\alpha$</sub> ; Item Nos. 16010 | 16020).<sup>1</sup> It is formed from unoprostone isopropyl ester by hydrolysis. Intravitreal administered unoprostone (1.2, 3.6, or 6  $\mu$ g/ $\mu$ l) prevents constant light-induced degradation of photoreceptors in rats.<sup>2</sup>

### References

1. Sharif, N.A., Kelly, C.R., Crider, J.Y., *et al.* Ocular hypotensive FP prostaglandin (PG) analogs: PG receptor subtype binding affinities and selectivities, and agonist potencies at FP and other PG receptors in cultured cells. *J. Ocul. Pharmacol. Ther.* **19(6)**, 501-515 (2003).
2. Hayami, K., and Unoki, K. Photoreceptor protection against constant light-induced damage by isopropyl unoprostone, a prostaglandin F<sub>2 $\alpha$</sub>  metabolite-related compound. *Ophthalmic Res.* **33(4)**, 203-209 (2001).

#### 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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