

## Produktinformation



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Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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#### SZABO-SCANDIC HandelsgmbH

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# **PRODUCT** INFORMATION



#### Unoprostone isopropyl ester

Item No. 16681

| CAS Registry No.:<br>Formal Name:<br>Synonyms: | 120373-24-2<br>9 $\alpha$ ,11 $\alpha$ -dihydroxy-13,14-dihydro-<br>15-oxo-20a,20b-dihomoprost-<br>5Z-en-1-oic acid, isopropyl ester<br>13,14-dihydro-15-keto-20-ethyl<br>Prostaglandin F <sub>2<math>\alpha</math></sub> isopropyl ester, | ОН   | СООСН(СНа)а                  |
|--|--|------|------------------------------|
|  | Rescula  |      | ( J/2                        |
| MF:  | $C_{25}H_{44}O_5$  |      | $\searrow \bigcirc \bigcirc$ |
| FW:  | 424.6  | но Т | ~ ~ ~                        |
| Purity:  | ≥95%   | 0    |                              |
| 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

Rescula 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 Rescula in these solvents is approximately 17 mg/ml.

Rescula is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Rescula should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Rescula has a solubility of approximately 50 µg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. Store aqueous solutions of Rescula on ice and use within 12 hours of preparation. Although the aqueous solutions of Rescula may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

#### Description

Rescula is the clinically approved, prodrug form of unoprostone, which is a free acid analog of prostaglandin  $F_{2a}$  (PGF<sub>2a</sub>). Both Latanoprost and Rescula have been approved for the treatment of ocular hypotension. Both analogs of  $PGF_{2\alpha}$  are believed to act by increasing the rate of aqueous humor outflow through the uveoscleral pathway.<sup>1</sup> Both drugs are believed to act as prodrugs, with endogenous esterases within the eye releasing the free acid active form of the drug. The typical dose of Rescula (one drop of 0.12% solution) is nearly 100 times that of Latanoprost.<sup>2</sup> Rescula has very little activity on isolated DP or TP receptors, less than 0.0005 the activity of PGE<sub>2</sub> on EP<sub>3</sub> receptors, and about 3% of the activity of PGF<sub>20</sub> on FP receptors.<sup>3</sup>

#### References

- 1. 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, 489-498 (1996).
- 2. Haria, M. and Spencer, C.M. Unoprostone. Drugs Aging 9, 213-218 (1996).
- 3. Goh, Y. Pharmacological characterization of prostaglandin-related ocular hypotensive agents. Jpn. J. Ophthalmol. 38, 236-245 (1994).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFFTY 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.

#### WARRANTY AND LIMITATION OF REMEDY

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