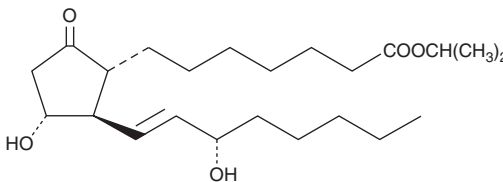


# PRODUCT INFORMATION



## Prostaglandin E<sub>1</sub> isopropyl ester Item No. 9001729

**CAS Registry No.:** 217182-28-0  
**Formal Name:** (11 $\alpha$ ,13E,15S)-11,15-dihydroxy-9-oxo-prost-13-en-1-oic acid, 1-methylethyl ester  
**Synonym:** PGE<sub>1</sub> isopropyl ester  
**MF:** C<sub>23</sub>H<sub>40</sub>O<sub>5</sub>  
**FW:** 396.6  
**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

Prostaglandin E<sub>1</sub> isopropyl ester is supplied as a solution in methyl acetate. To change the solvent, simply evaporate 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 prostaglandin E<sub>1</sub> isopropyl ester in these solvents is approximately 100, 2, and 75 mg/ml, respectively.

Prostaglandin E<sub>1</sub> isopropyl ester is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of prostaglandin E<sub>1</sub> isopropyl ester should be diluted with the aqueous buffer of choice. The solubility of prostaglandin E<sub>1</sub> isopropyl ester in PBS (pH 7.2) is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Prostaglandin E<sub>1</sub> isopropyl ester is an ester prodrug form of prostaglandin E<sub>1</sub> (PGE<sub>1</sub>; Item No. 13010) with enhanced lipid solubility.<sup>1,2</sup> The ester functional group on PGE<sub>1</sub> isopropyl ester is readily hydrolyzed in cells and *in vivo* to release active PGE<sub>1</sub>.<sup>1</sup> PGE<sub>1</sub> isopropyl ester exhibits a faster penetration flux than the free acid form of PGE<sub>1</sub> when applied topically to isolated mouse skin. Topical administration of PGE<sub>1</sub> isopropyl ester (1 mM) reduces fluid pressure within human dermal fibroblast cell aggregates.<sup>2</sup>

### References

1. Ho, H.O., Hwang, M.C., Tseng, S.L., *et al.* The percutaneous penetration of prostaglandin E<sub>1</sub> and its alkyl esters. *J. Control Release* **58(3)**, 349-355 (1999).
2. Stuhr, L.E., Reith, A., Lepsøe, S., *et al.* Fluid pressure in human dermal fibroblast aggregates measured with micropipettes. *Am. J. Physiol. Cell Physiol.* **285(5)**, C1101-1108 (2003).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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