

# PRODUCT INFORMATION



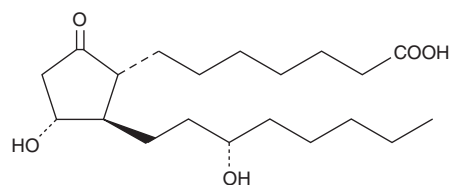
## 13,14-dihydro Prostaglandin E<sub>1</sub> Quant-PAK

Item No. 10006845

### 13,14-dihydro Prostaglandin E<sub>1</sub>

**CAS Registry No.:** 19313-28-1  
**Formal Name:** 9-oxo-11 $\alpha$ ,15S-dihydroxy-prostan-1-oic acid  
**Synonym:** Prostaglandin E<sub>0</sub>  
**MF:** C<sub>20</sub>H<sub>36</sub>O<sub>5</sub>  
**FW:** 356.5  
**Purity:** ≥98%  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:** ≥1 year

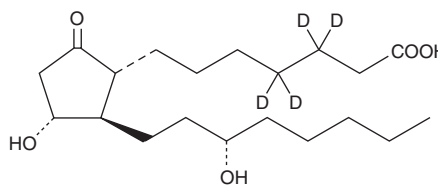
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



### 13,14-dihydro Prostaglandin E<sub>1</sub>-d<sub>4</sub>

**Formal Name:** 9-oxo-11 $\alpha$ ,15S-dihydroxy-prostan-1-oic-3,3,4,4-d<sub>4</sub> acid  
**Synonyms:** 13,14-dh PGE<sub>1</sub>-d<sub>4</sub>, Prostaglandin E<sub>0</sub>-d<sub>4</sub>  
**MF:** C<sub>20</sub>H<sub>36</sub>D<sub>4</sub>O<sub>5</sub>  
**FW:** 360.5  
**Chemical Purity:** ≥98% (13,14-dihydro Prostaglandin E<sub>1</sub>)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**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

This 13,14-dihydro Prostaglandin E<sub>1</sub> (13,14-dihydro PGE<sub>1</sub>) Quant-PAK contains 50  $\mu$ g of 13,14-dihydro PGE<sub>1</sub>-d<sub>4</sub> and 2-4 mg of 13,14-dihydro PGE<sub>1</sub> (please see the vial for exact amount and concentration).

Both vials are supplied as solutions 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 13,14-dihydro PGE<sub>1</sub> and 13,14-dihydro PGE<sub>1</sub>-d<sub>4</sub> in these solvents is approximately 50 mg/ml.

13,14-dihydro PGE<sub>1</sub>-d<sub>4</sub> contains four deuterium atoms at the 3, 3', 4, and 4' positions. It is intended for use as an internal standard for the quantification of 13,14-dihydro PGE<sub>1</sub> (Item No. 13610) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

### Description

13,14-dihydro PGE<sub>1</sub> is a biologically active metabolite of PGE<sub>1</sub> with comparable potency to the parent compound.<sup>1,2</sup> It is an inhibitor of ADP-induced platelet aggregation in human PRP and washed platelets with IC<sub>50</sub> values of 31 and 21 nM, respectively.<sup>3</sup> 13,14-dihydro PGE<sub>1</sub> is a slightly more potent inhibitor of ADP-induced human platelet aggregation than PGE<sub>1</sub> which has an IC<sub>50</sub> of 40 nM.<sup>4</sup> Also, 13,14-dihydro PGE<sub>1</sub> was shown to activate adenylate cyclase in NCB-20 hybrid cells with a K<sub>act</sub> of 668 nM.<sup>5</sup>

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

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## References

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2. Hamberg, M. and Samuelsson, B. *J. Biol. Chem.* **246**, 6713-6721 (1971).
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4. Kobzar, G., Mardla, V., Järving, I., et al. *Proc. Estonian Acad. Sci. Chem.* **40**, 179-180 (1991).
5. Blair, I.A., Hensby, C.N., and MacDermot, J. *Br. J. Pharmacol.* **69**, 519-525 (1980).

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