

# PRODUCT INFORMATION



## Prostaglandin E<sub>2</sub> Ethanolamide-d<sub>4</sub>

Item No. 9001412

**Formal Name:** N-(2-hydroxyethyl)-9-oxo-11 $\alpha$ ,15S-dihydroxy-prosta-5Z,13E-dien-1-amide-d<sub>4</sub>

**Synonyms:** Dinoprostone Ethanolamide-d<sub>4</sub>, PGE<sub>2</sub>-EA-d<sub>4</sub>, Prostaglandin E<sub>2</sub>-d<sub>4</sub>

**MF:** C<sub>22</sub>H<sub>33</sub>D<sub>4</sub>NO<sub>5</sub>

**FW:** 399.6

**Chemical Purity:** ≥98% (PGE<sub>2</sub>-EA)

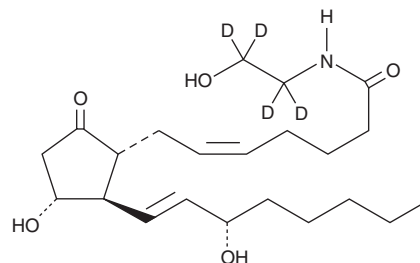
**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>

**Supplied as:** A solution in ethanol

**Storage:** -20°C

**Stability:** ≥2 years



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

### Laboratory Procedures

Prostaglandin E<sub>2</sub> ethanolamide-d<sub>4</sub> (PGE<sub>2</sub>-EA-d<sub>4</sub>) is intended for use as an internal standard for the quantification of PGE<sub>2</sub>-EA 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).

PGE<sub>2</sub>-EA-d<sub>4</sub> is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of PGE<sub>2</sub>-EA-d<sub>4</sub> in these solvents is approximately 100 mg/ml.

### Description

PGE<sub>2</sub>-EA is an analog of PGE<sub>2</sub> with improved water solubility and stability. PGE<sub>2</sub>-EA acts as an agonist with all four known EP receptor subtypes, but with an affinity that is significantly reduced compared to PGE<sub>2</sub>.<sup>1</sup> PGE<sub>2</sub>-EA is produced by HCA-7 cells treated with arachidonoyl ethanolamide.<sup>2</sup>

### References

1. Ross, R.A., Craib, S.J., Stevenson, L.A., *et al.* Pharmacological characterization of the anandamide cyclooxygenase metabolite: prostaglandin E<sub>2</sub> ethanolamide. *J. Phar. Exp. Ther.* **301(3)**, 900-907 (2002).
2. Kozak, K.R., Crews, B.C., Morrow, J.D., *et al.* Metabolism of the endocannabinoids, 2-arachidonoylglycerol and anandamide, into prostaglandin, thromboxane, and prostacyclin glycerol esters and ethanolamides. *J. Biol. Chem.* **277(47)**, 44877-44885 (2002).

#### 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.

Copyright Cayman Chemical Company, 02/22/2024

#### 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