



# SZABO SCANDIC

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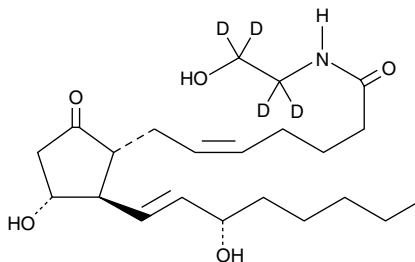
# Product Information



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

Item No. 9001412

<b>Formal Name:</b>	N-(2-hydroxyethyl)-9-oxo-11 $\alpha$ ,15S-dihydroxy-prosta-5Z,13E-dien-1-amide-d <sub>4</sub>
<b>Synonyms:</b>	Dinoprostone Ethanolamide-d <sub>4</sub> , PGE <sub>2</sub> -EA-d <sub>4</sub> , Prostamide E <sub>2</sub> -d <sub>4</sub>
<b>MF:</b>	C <sub>22</sub> H <sub>33</sub> D <sub>4</sub> NO <sub>5</sub>
<b>FW:</b>	399.6
<b>Chemical Purity:</b>	≥98% PGE <sub>2</sub> -EA
<b>Deuterium Incorporation:</b>	≥99% deuterated forms (d <sub>1</sub> -d <sub>4</sub> ); ≤1% d <sub>0</sub>
<b>Stability:</b>	≥1 year at -20°C
<b>Supplied as:</b>	A solution in ethanol



### Laboratory Procedures

Prostaglandin E<sub>2</sub> ethanolamide-d<sub>4</sub> (PGE<sub>2</sub>-EA-d<sub>4</sub>) contains four deuterium atoms. It is intended for use as an internal standard for the quantification of PGE<sub>2</sub>-EA by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that PGE<sub>2</sub>-EA-d<sub>4</sub> be stored as supplied at -20°C. It should be stable for at least one year.

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.

PGE<sub>2</sub>-EA-d<sub>4</sub> is used as an internal standard for the quantification of PGE<sub>2</sub>-EA by stable isotope dilution 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 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 compare 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

- 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).
- Kozak, K.R., Crews, B.C., Morrow, J.D., *et al.* Metabolism of the endocannabinoids, 2-arachidonylglycerol and anandamide, into prostaglandin, thromboxane, and prostacyclin glycerol esters and ethanolamides. *J. Biol. Chem.* **277(47)**, 44877-44885 (2002).

### Related Products

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