

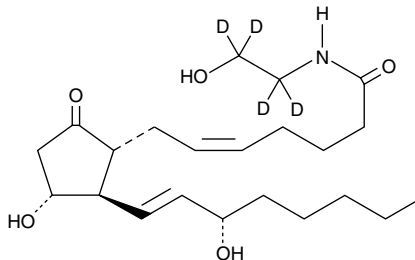
Product Information



Prostaglandin E₂ Ethanolamide-d₄

Item No. 9001412

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



Laboratory Procedures

Prostaglandin E₂ ethanolamide-d₄ (PGE₂-EA-d₄) contains four deuterium atoms. It is intended for use as an internal standard for the quantification of PGE₂-EA by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that PGE₂-EA-d₄ be stored as supplied at -20°C. It should be stable for at least one year.

PGE₂-EA-d₄ 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 PGE₂-EA-d₄ in these solvents is approximately 100 mg/ml.

PGE₂-EA-d₄ is used as an internal standard for the quantification of PGE₂-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).

PGE₂-EA is an analog of PGE₂ with improved water solubility and stability. PGE₂-EA acts as an agonist with all four known EP receptor subtypes, but with an affinity that is significantly reduced compare to PGE₂.¹ PGE₂-EA is produced by HCA-7 cells treated with arachidonoyl ethanolamide.²

References

- Ross, R.A., Craib, S.J., Stevenson, L.A., *et al.* Pharmacological characterization of the anandamide cyclooxygenase metabolite: prostaglandin E₂ 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

For a list of related products please visit: www.caymanchem.com/catalog/9001412

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

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