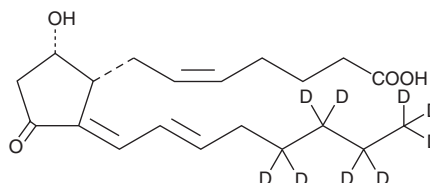


PRODUCT INFORMATION

15-deoxy- $\Delta^{12,14}$ -Prostaglandin D₂-d₉

Item No. 19344

CAS Registry No.: 2738376-68-4
Formal Name: 9 α -hydroxy-11-oxo-prosta-5Z,12E,14E-trien-1-oic-17,17,18,18,19,19,20,20,20-d₉ acid
Synonym: 15-deoxy- $\Delta^{12,14}$ -PGD₂-d₉
MF: C₂₀H₂₁D₉O₄
FW: 343.5
Chemical Purity: $\geq 99\%$ (15-deoxy- $\Delta^{12,14}$ -PGD₂)
Deuterium Incorporation: $\geq 99\%$ deuterated forms (d₁-d₉); $\leq 1\%$ d₀
Supplied as: A 1 mg/ml 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

15-deoxy- $\Delta^{12,14}$ -Prostaglandin D₂-d₉ is intended for use as an internal standard for the quantification of 15-deoxy- $\Delta^{12,14}$ -PGD₂ (Item No. 12700) 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).

15-deoxy- $\Delta^{12,14}$ -PGD₂ is supplied as a solution 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 15-deoxy- $\Delta^{12,14}$ -PGD₂ in these solvents is approximately 75, 20, and 100 mg/ml, respectively.

Description

15-deoxy- $\Delta^{12,14}$ -PGD₂ (15-deoxy- $\Delta^{12,14}$ -PGD₂) is a metabolite of PGD₂ (Item No. 12010).¹ It is an agonist of PGD₂ receptor 2 (DP₂) that binds DP₂ (K_i = 50 nM for the mouse receptor expressed in HEK293 cell membranes) and induces activation of eosinophils (EC₅₀ = 8 nM).^{2,3} It also stimulates the recruitment of steroid receptor coactivator-1 (SRC-1) to peroxisome proliferator-activated receptor γ (PPAR γ) and induces PPAR γ -mediated transcription in a reporter assay when used at a concentration of 5 μ M.¹ 15-deoxy- $\Delta^{12,14}$ -PGD₂ is cytotoxic to L1210 murine leukemia cells (IC₅₀ = 0.3 μ g/ml).⁴ It inhibits ADP-induced platelet aggregation (IC₅₀ = 320 ng/ml) less potently than PGD₂.⁵

References

1. Söderström, M., Wigren, J., Surapureddi, S., *et al.* Novel prostaglandin D₂-derived activators of peroxisome proliferator-activated receptor- γ are formed in macrophage cell cultures. *Biochim. Biophys. Acta* **1631**(1), 35-41 (2003).
2. Hata, A.N., Zent, R., Breyer, M.D., *et al.* Expression and molecular pharmacology of the mouse CRTH2 receptor. *J. Pharmacol. Exp. Ther.* **306**(2), 463-470 (2003).
3. Monneret, G., Li, H., Vasilescu, J., *et al.* 15-Deoxy- $\Delta^{12,14}$ -prostaglandins D₂ and J₂ are potent activators of human eosinophils. *J. Immunol.* **168**(7), 3563-3569 (2002).
4. Forman, B.M., Tontonoz, P., Chen, J., *et al.* 15-Deoxy- $\Delta^{12,14}$ -prostaglandin J₂ is a ligand for the adipocyte determination factor PPAR γ . *Cell* **83**(5), 803-812 (1995).
5. Bundy, G.L., Morton, D.R., Peterson, D.C., *et al.* Synthesis and platelet aggregation inhibiting activity of prostaglandin D analogues. *J. Med. Chem.* **26**(6), 790-799 (1983).

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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