

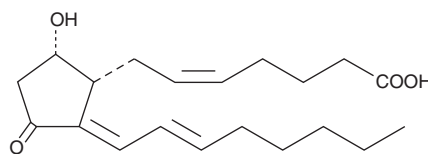
# PRODUCT INFORMATION



## 15-deoxy- $\Delta^{12,14}$ -Prostaglandin D<sub>2</sub>

Item No. 12700

**CAS Registry No.:** 85235-11-6  
**Formal Name:** 9 $\alpha$ -hydroxy-11-oxo-prosta-5Z,12E,14E-trien-1-oic acid  
**Synonym:** 15-deoxy- $\Delta^{12,14}$ -PGD<sub>2</sub>  
**MF:** C<sub>20</sub>H<sub>30</sub>O<sub>4</sub>  
**FW:** 334.5  
**Purity:**  $\geq$ 95%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 296 nm  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:**  $\geq$ 1 year



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

### Laboratory Procedures

15-deoxy- $\Delta^{12,14}$  PGD<sub>2</sub> 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 DMSO, dimethyl formamide, or ethanol purged with an inert gas can be used. The solubility of 15-deoxy- $\Delta^{12,14}$  PGD<sub>2</sub> in these solvents is approximately 50 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of 15-deoxy- $\Delta^{12,14}$  PGD<sub>2</sub> is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 15-deoxy- $\Delta^{12,14}$  PGD<sub>2</sub> in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

15-deoxy- $\Delta^{12,14}$  PGD<sub>2</sub> is a synthetic analog of PGD<sub>2</sub> and a potential precursor to the PPAR $\gamma$  ligand 15-deoxy- $\Delta^{12,14}$  PGJ<sub>2</sub>.<sup>3</sup> 15-deoxy- $\Delta^{12,14}$  PGD<sub>2</sub> possesses cytotoxic effects on L1210 mouse leukemia cells *in vitro* with an IC<sub>50</sub> of 0.3  $\mu$ g/ml. 15-deoxy- $\Delta^{12,14}$  PGD<sub>2</sub> is ten-fold more potent than PGD<sub>2</sub> in this activity.<sup>1</sup> However, 15-deoxy- $\Delta^{12,14}$  PGD<sub>2</sub> is a less effective inhibitor of ADP-induced platelet aggregation (IC<sub>50</sub> = 320 ng/ml) compared to PGD<sub>2</sub> (IC<sub>50</sub> = 3 ng/ml).<sup>2</sup>

### Description

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

### References

1. Söderström, M., Wigren, J., Surapureddi, S., *et al.* *Biochim. Biophys. Acta* **1631**(1), 35-41 (2003).
2. Hata, A.N., Zent, R., Breyer, M.D., *et al.* *J. Pharmacol. Exp. Ther.* **306**(2), 463-470 (2003).
3. Monneret, G., Li, H., Vasilescu, J., *et al.* *J. Immunol.* **168**(7), 3563-3569 (2002).
4. Forman, B.M., Tontonoz, P., Chen, J., *et al.* *Cell* **83**(5), 803-812 (1995).
5. Bundy, G.L., Morton, D.R., Peterson, D.C., *et al.* *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.

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