

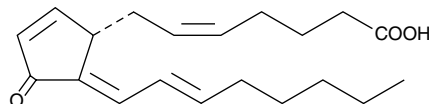
# Product Information



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

Item No. 18570

<b>CAS Registry No.:</b>	87893-55-8
<b>Formal Name:</b>	11-oxo-prosta-5Z,9,12E,14E-tetraen-1-oic acid
<b>Synonym:</b>	15-deoxy- $\Delta^{12,14}$ -PGJ <sub>2</sub>
<b>MF:</b>	C <sub>20</sub> H <sub>28</sub> O <sub>3</sub>
<b>FW:</b>	316.4
<b>Purity:</b>	≥95%
<b>Stability:</b>	≥1 year at -20°C
<b>Supplied as:</b>	A solution in methyl acetate
<b>UV/Vis.:</b>	$\lambda_{\max}$ : 229, 306 nm $\epsilon$ : 12,000 (at 306 nm)



### Laboratory Procedures

For long term storage, we suggest that 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> be stored as supplied at -20°C. It will be stable for at least one year.

15-deoxy- $\Delta^{12,14}$ -PGJ<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 ethanol, DMSO, or dimethyl formamide purged with an inert gas can be used. The solubility of 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> in these solvents is approximately 20 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 aqueous solution of 15-deoxy- $\Delta^{12,14}$ -PGJ<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- $\Delta^{12,14}$ -PGJ<sub>2</sub> in PBS (pH 7.2) is approximately 2.7 mg/ml. Avoid adding 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> to basic solutions (pH > 7.4), since base treatment may polymerize the 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>. Store aqueous solutions of 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> on ice and use within 12 hours of preparation. Although the aqueous solutions of 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> is formed from PGD<sub>2</sub> by the elimination of two molecules of water. It binds selectively to PPAR $\gamma$  with an EC<sub>50</sub> of 2  $\mu$ M in a murine chimera system.<sup>1,2</sup> 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> is more potent than PGD<sub>2</sub>,  $\Delta^{12}$ -PGJ<sub>2</sub>, and PGJ<sub>2</sub> in stimulating lipogenesis in C3H10T1/2 cells. The EC<sub>50</sub> for induction of adipocyte differentiation in cultured fibroblasts is 7  $\mu$ M.<sup>1</sup>

### References

1. Maxey, K.M., Hessler, E., MacDonald, J., *et al.* The nature and composition of 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>. *Prostaglandins and Other Lipid Mediators* **62**, 15-21 (2000).
2. Forman, B.M., Tontonoz, P., Chen, J., *et al.* 15-Deoxy- $\Delta^{12,14}$ -prostaglandin J<sub>2</sub> is a ligand for the adipocyte determination factor PPAR $\gamma$ . *Cell* **83**, 803-812 (1995).

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### Cayman Chemical

**Mailing address**  
1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

**Phone**  
(800) 364-9897  
(734) 971-3335

**Fax**  
(734) 971-3640

**E-Mail**  
custserv@caymanchem.com

**Web**  
[www.caymanchem.com](http://www.caymanchem.com)

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