

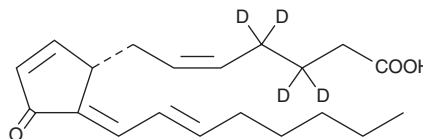
# PRODUCT INFORMATION



## 15-deoxy- $\Delta^{12,14}$ -Prostaglandin J<sub>2</sub>-d<sub>4</sub>

Item No. 318570

**CAS Registry No.:** 1542166-82-4  
**Formal Name:** 11-oxo-prosta-5Z,9,12E,14E-tetraen-1-  
oic-3,3,4,4-d<sub>4</sub> acid  
**Synonym:** 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-d<sub>4</sub>  
**MF:** C<sub>20</sub>H<sub>24</sub>D<sub>4</sub>O<sub>3</sub>  
**FW:** 320.5  
**Chemical Purity:**  $\geq 98\%$  (15-deoxy- $\Delta^{12,14}$ -Prostaglandin J<sub>2</sub>)  
**Deuterium Incorporation:**  $\geq 99\%$  deuterated forms (d<sub>1</sub>-d<sub>4</sub>);  $\leq 1\%$  d<sub>0</sub>  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 306 nm  
**Supplied as:** A 100  $\mu\text{g}/\text{ml}$  solution in methyl acetate  
**Storage:** -20°C  
**Stability:**  $\geq 4$  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 J<sub>2</sub>-d<sub>4</sub> (15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-d<sub>4</sub>) is intended for use as an internal standard for the quantification of 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> 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- $\Delta^{12,14}$ -PGJ<sub>2</sub>-d<sub>4</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, and dimethyl formamide purged with an inert gas can be used. The solubility of 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-d<sub>4</sub> in these solvents is approximately 75, 50, and 100 mg/ml, respectively.

### Description

15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> is a metabolite of PGJ<sub>2</sub>. 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  $\mu\text{M}$  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  $\mu\text{M}$ .<sup>1</sup>

### References

1. 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**(5), 803-812 (1995).
2. Kliewer, S.A., Lenhard, J.M., Willson, T.M., *et al.* A prostaglandin J<sub>2</sub> metabolite binds peroxisome proliferator-activated receptor  $\gamma$  and promotes adipocyte differentiation. *Cell* **83**(5), 813-819 (1995).

#### 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

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