

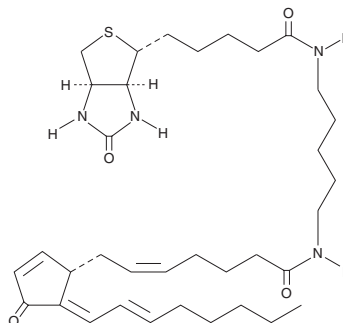
# PRODUCT INFORMATION



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

Item No. 10141

**Formal Name:** N-11-oxo-prosta-5Z,9,12E,14E-tetraen-1-oyl-N'-biotinoyl-1,5-diaminopentane  
**Synonym:** 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-biotin  
**MF:** C<sub>35</sub>H<sub>54</sub>N<sub>4</sub>O<sub>4</sub>S  
**FW:** 626.9  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in ethanol



### Laboratory Procedures

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

15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-biotin 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 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-biotin 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 solution of 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-biotin is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-biotin in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> (Item No. 18570) is one of the cyclopentenone PGs, which have documented metabolic (peroxisome proliferator-activated receptor  $\gamma$ -activating), antimitotic, and antiproliferative effects.<sup>1-3</sup> The activity of the compounds in this class, which includes PGs in both the A- and J-series, may result from changes in gene expression and the interaction with non-classical (*i.e.*, non-G protein-coupled receptor) pathways. 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-biotin is an affinity probe which allows 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> to be detected through an interaction with the biotin ligand. 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>-biotin was designed to allow 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> to be detected in complexes with nuclear receptors and/or nucleic acid or protein binding partners. It is thus a tool to be used in the general elucidation of the mechanism of action of the cyclopentenone PGs.

### References

1. Krakoff, L.R., Vlachakis, N., Mendlowitz, M., *et al.* Differential effect of prostaglandin A<sub>1</sub> in hypertensive patients with low, normal, and high renin. *Clin. Sci. Mol. Med.* **48**, 311s-313s (1975).
2. Kikuchi, Y., Kita, T., Hirata, J., *et al.* Preclinical studies of antitumor prostaglandins by using human ovarian cancer cells. *Cancer. Metast. Rev.* **13**, 309-315 (1994).
3. Mueller, E., Drori, S., Aiyer, A., *et al.* Genetic analysis of adipogenesis through peroxisome proliferator-activated receptor  $\gamma$  isoforms. *J. Biol. Chem.* **277**(44), 41925-41930 (2002).

#### 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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