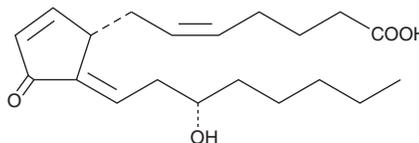


# PRODUCT INFORMATION



## $\Delta^{12}$ -Prostaglandin J<sub>2</sub> Item No. 18550

**CAS Registry No.:** 87893-54-7  
**Formal Name:** 15S-hydroxy-11-oxo-prosta-5Z,9,12E-trien-1-oic acid  
**Synonym:**  $\Delta^{12}$ -PGJ<sub>2</sub>  
**MF:** C<sub>20</sub>H<sub>30</sub>O<sub>4</sub>  
**FW:** 334.5  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 244 nm  
**Supplied as:** A solution in methyl acetate  
**Storage:** -80°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

$\Delta^{12}$ -Prostaglandin J<sub>2</sub> ( $\Delta^{12}$ -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, and dimethyl formamide purged with an inert gas can be used. The solubility of  $\Delta^{12}$ -PGJ<sub>2</sub> in these solvents is approximately 75, 50, and 100 mg/ml, respectively.

$\Delta^{12}$ -PGJ<sub>2</sub> is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of  $\Delta^{12}$ -PGJ<sub>2</sub> should be diluted with the aqueous buffer of choice. The solubility of  $\Delta^{12}$ -PGJ<sub>2</sub> in PBS (pH 7.2) is approximately 2.7 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

$\Delta^{12}$ -PGJ<sub>2</sub> is a decomposition product of PGD<sub>2</sub> in aqueous media in the presence of albumin.<sup>1</sup> It has antitumor and antiviral activity, inhibiting growth of cultured L1210 cells at with an IC<sub>50</sub> value of 0.7 μg/ml.<sup>2</sup>  $\Delta^{12}$ -PGJ<sub>2</sub> is present in normal human urine with a 24 hour excretion rate of 50-150 ng.<sup>3</sup> It is also a moderately potent PPAR<sub>γ</sub> ligand.<sup>4</sup>

### References

1. Fitzpatrick, F.A. and Wynalda, M.A. Albumin-catalyzed metabolism of prostaglandin D<sub>2</sub>. Identification of products formed *in vitro*. *J. Biol. Chem.* **258(19)**, 11713-11718 (1983).
2. Kato, T., Fukushima, M., Kurozumi, S., *et al.* Antitumor activity of  $\Delta^7$ -prostaglandin A<sub>1</sub> and  $\Delta^{12}$ -prostaglandin J<sub>2</sub> *in vitro* and *in vivo*. *Cancer Res.* **46(7)**, 3538-3542 (1986).
3. Hirata, Y., Hayashi, H., Ito, S., *et al.* Occurrence of 9-deoxy- $\Delta^9, \Delta^{12}$ -13,14-dihydroprostaglandin D<sub>2</sub> in human urine. *J. Biol. Chem.* **263(32)**, 16619-16625 (1988).
4. 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<sub>γ</sub>. *Cell* **83(5)**, 803-812 (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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