

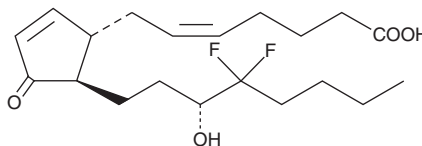
# Product Information



## 13,14-dihydro-16,16-difluoro Prostaglandin J<sub>2</sub>

Catalog No. 13635

**Formal Name:** 11-oxo-15S-hydroxy-16,16-difluoro-5Z,9-dien-1-oic acid  
**Synonym:** 13,14-dihydro-16,16-difluoro PGJ<sub>2</sub>  
**MF:** C<sub>20</sub>H<sub>30</sub>F<sub>2</sub>O<sub>4</sub>  
**FW:** 372.5  
**Purity:** ≥95%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

For long term storage, we suggest that 13,14-dihydro-16,16-difluoro prostaglandin J<sub>2</sub> (13,14-dihydro-16,16-difluoro PGJ<sub>2</sub>) be stored as supplied at -20°C. It should be stable for at least one year.

13,14-dihydro-16,16-difluoro 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 13,14-dihydro-16,16-difluoro PGJ<sub>2</sub> in these solvents is approximately 10 mg/ml.

13,14-dihydro-16,16-difluoro PGJ<sub>2</sub> is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 13,14-dihydro-16,16-difluoro PGJ<sub>2</sub> should be diluted with the aqueous buffer of choice. 13,14-dihydro-16,16-difluoro PGJ<sub>2</sub> has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Prostaglandin J<sub>2</sub> (PGJ<sub>2</sub>) is an analog of PGD<sub>2</sub> that can inhibit both platelet aggregation and cell growth.<sup>1-3</sup> However, it is not clear whether these effects are initiated by PGJ<sub>2</sub> or a derivative. 13,14-dihydro-16,16-difluoro PGJ<sub>2</sub> is an analog of PGJ<sub>2</sub>. While its biological activities have not been evaluated, it should be noted that the addition of two electron-withdrawing fluorine atoms has been used to stabilize prostanoids and significantly delay degradation *in vivo*.<sup>4</sup> Importantly, 13,14-dihydro PGE<sub>1</sub> has activity that is comparable to that of PGE<sub>1</sub>, suggesting that this analog of PGJ<sub>2</sub> could be biologically active.<sup>5,6</sup>

### References

1. Bundy, G.L., Morton, D.R., Peterson, D.C., *et al.* Synthesis and platelet aggregation inhibiting activity of prostaglandin D analogues. *J. Med. Chem.* **26**, 790-799 (1983).
2. Mahmud, I., Smith, D.L., Whyte, M.A., *et al.* On the identification and biological properties of prostaglandin J<sub>2</sub>. *Prostaglandins Leukot. Med.* **16**, 131-146 (1984).
3. Fukushima, M. Prostaglandin J<sub>2</sub> - antitumor and anti-viral activities and the mechanisms involved. *Eicosanoids* **3**, 189-199 (1990).
4. Hatano, Y., Kohli, J.D., Goldberg, L.I., *et al.* Vascular relaxing activity and stability studies of 10,10-difluoro-13,14-dehydroprostaglandin. *Proc. Natl. Acad. Sci. USA* **77**(11), 6846-6850 (1980).
5. Ånggård, E. The biological activities of three metabolites of prostaglandin E<sub>1</sub>. *Acta Physiol. Scand.* **66**, 509-510 (1966).
6. Hamberg, M. and Samuelsson, B. On the metabolism of prostaglandins E<sub>1</sub> and E<sub>2</sub> in man. *J. Biol. Chem.* **246**, 6713-6721 (1971).

### Related Products

Prostaglandin J<sub>2</sub> - Cat. No. 18500 • BW A868C - Cat. No. 12060 • 13,14-dihydro-16,16-difluoro Prostaglandin F<sub>2α</sub> - Cat. No. 13609 • 13,14-dihydro-16,16-difluoro Prostaglandin D<sub>2</sub> - Cat. No. 13612

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

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This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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