

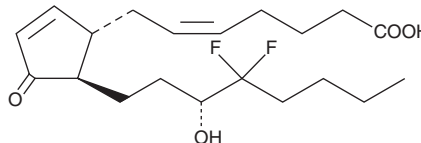
# PRODUCT INFORMATION



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

Item No. 13635

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



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

### Laboratory Procedures

13,14-dihydro-16,16-difluoro Prostaglandin J<sub>2</sub> (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 15, 20, and 14 mg/ml, respectively.

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 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.

### Description

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(6)**, 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(2)**, 131-146 (1984).
3. Fukushima, M. Prostaglandin J<sub>2</sub> - anti-tumor and anti-viral activities and the mechanisms involved. *Eicosanoids* **3(4)**, 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-dehydroprostacyclin. *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(4)**, 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(22)**, 6713-6721 (1971).

#### 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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