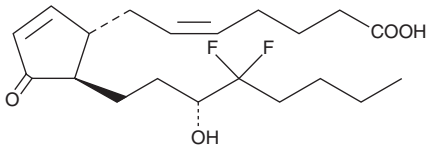
PRODUCT INFORMATION

13,14-dihydro-16,16-difluoro Prostaglandin J_2

Item 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_2
MF:	$C_{20}H_{30}F_2O_4$
FW:	372.5
Purity:	≥95%
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥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_2 (13,14-dihydro-16,16-difluoro PGJ_2) 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_2 in these solvents is approximately 15, 20, and 14 mg/ml, respectively.

13,14-dihydro-16,16-difluoro PGJ_2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 13,14-dihydro-16,16-difluoro PGJ_2 should be diluted with the aqueous buffer of choice. 13,14-dihydro-16,16-difluoro PGJ_2 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_2 is an analog of PGD_2 that can inhibit both platelet aggregation and cell growth.[1-3] However, it is not clear whether these effects are initiated by PGJ_2 or a derivative. 13,14-dihydro-16,16-difluoro PGJ_2 is an analog of PGJ_2. 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*.[4] Importantly, 13,14-dihydro PGE_1 has activity that is comparable to that of PGE_1, suggesting that this analog of PGJ_2 could be biologically active.[5,6]

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_2. *Prostaglandins Leukot. Med.* **16(2)**, 131-146 (1984).
3. Fukushima, M. Prostaglandin J_2 - 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. Änggård, E. The biological activities of three metabolites of prostaglandin E_1. *Acta Physiol. Scand.* **66(4)**, 509-510 (1966).
6. Hamberg, M. and Samuelsson, B. On the metabolism of prostaglandins E_1 and E_2 in man. *J. Biol. Chem.* **246(22)**, 6713-6721 (1971).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM