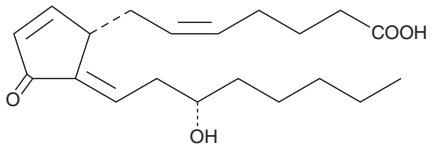
PRODUCT INFORMATION

Δ^{12}-Prostaglandin J_2

Item No. 18550

CAS Registry No.:	87893-54-7
Formal Name:	15S-hydroxy-11-oxo-prosta-5Z,9,12E-trien-1-oic acid
Synonym:	Δ^{12}-PGJ_2
MF:	$C_{20}H_{30}O_4$
FW:	334.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 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

Δ^{12}-Prostaglandin J_2 (Δ_{12}-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 Δ_{12}-PGJ_2 in these solvents is approximately 75, 50, and 100 mg/ml, respectively.

Δ_{12}-PGJ_2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of Δ_{12}-PGJ_2 should be diluted with the aqueous buffer of choice. The solubility of Δ_{12}-PGJ_2 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

Δ^{12}-PGJ_2 is a decomposition product of PGD_2 in aqueous media in the presence of albumin.[1] It has antitumor and antiviral activity, inhibiting growth of cultured L1210 cells at with an IC_{50} value of 0.7 µg/ml.[2] Δ^{12}-PGJ_2 is present in normal human urine with a 24 hour excretion rate of 50-150 ng.[3] It is also a moderately potent PPARγ ligand.[4]

References

1. Fitzpatrick, F.A. and Wynalda, M.A. Albumin-catalyzed metabolism of prostaglandin D_2. 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 Δ^7-prostaglandin A_1 and Δ^{12}-prostaglandin J_2 *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-Δ^9,Δ^{12}-13,14-dihydroprostaglandin D_2 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_2 is a ligand for the adipocyte determination factor PPARγ. *Cell* **83(5)**, 803-812 (1995).

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