

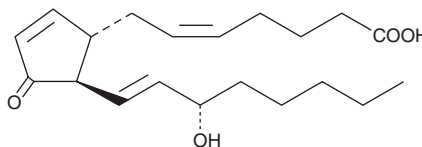
Product Information



Prostaglandin J₂

Item. 18500

CAS Registry No.: 60203-57-8
Formal Name: 11-oxo-15S-hydroxy-prosta-5Z,9,13E-trien-1-oic acid
Synonym: PGJ₂
MF: C₂₀H₃₀O₄
FW: 334.5
Purity: ≥95%
Stability: ≥6 months at -80°C
Supplied as: A solution in methyl acetate
UV/Vis.: λ_{max}: 216 nm



Laboratory Procedures

For long term storage, we suggest that prostaglandin J₂ (PGJ₂) be stored as supplied at -80°C. It should be stable for at least six months.

PGJ₂ 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, methanol, acetone, acetonitrile, or DMSO purged with an inert gas or nitrogen can be used. The solubility of PGJ₂ in these solvents is approximately 10 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. PGJ₂ is stable for several hours in neutral phosphate buffer. The half-life of PGJ₂ is about 10 minutes in PBS (pH 7.4 with 1% BSA) and is reduced to about 30 seconds in plasma.¹ All aqueous solutions of PGJ₂ should be maintained near pH 7.0, since both acid and base will accelerate decomposition to form Δ¹²-PGJ₂ and other by-products. Also, ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

PGJ₂ is formed from PGD₂ by the elimination of the C-9 hydroxyl group, a process which is accelerated by the presence of albumin.¹ PGJ₂ inhibits platelet aggregation with an IC₅₀ value of about 5-10 nM.^{2,3} PGJ₂ has been shown to have antimetabolic and antiproliferative effects on a variety of cultured normal cells and tumor cell lines.⁴ However, this activity has been attributed to further metabolites of PGJ₂ and not the parent compound itself.

References

1. Fitzpatrick, F.A. and Wynalda, M.A. Albumin-catalyzed metabolism of prostaglandin D₂. Identification of products formed *in vitro*. *J. Biol. Chem.* **258**, 11713-11718 (1983).
2. 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).
3. Mahmud, I., Smith, D.L., Whyte, M.A., *et al.* On the identification and biological properties of prostaglandin J₂. *Prostaglandins Leukot. Med.* **16**, 131-146 (1984).
4. Fukushima, M. Prostaglandin J₂ - antitumor and anti-viral activities and the mechanisms involved. *Eicosanoids* **3**, 189-199 (1990).

Related Products

15-deoxy-Δ^{12,14}-Prostaglandin J₂-biotinamide - Item No. 10141 • Δ¹²-Prostaglandin J₂ - Item No. 18550 • 15-deoxy-Δ^{12,14}-Prostaglandin J₂ - Item No. 18570 • 15-deoxy-Δ^{12,14}-Prostaglandin J₂ - Item No. 18570.1 • 15-deoxy-Δ^{12,14}-Prostaglandin J₂-d₄ - Item No. 318570 • Prostaglandin J₂ Lipid Maps MS Standard - Item No. 10007233 • 13,14-dihydro-15-keto Prostaglandin J₂ - Item No. 10008840

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

MATERIAL SAFETY DATA

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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